City of Leavenworth

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SHORELINE MASTER PROGRAM for Shorelines in the City of Leavenworth and its UGA of Chelan County

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Design and Management Standards

SHORELINE MASTER PROGRAM

THE CITY OF LEAVENWORTH AND ITS UGA OF CHELAN COUNTY

READER'S GUIDE

Chelan County and its Cities developed and adopted Shoreline Master Programs (SMPs) in 1975 for the purpose of "focusing comprehensive, coordinated planning attention at the critical land-water interface" (page 1). The current SMP (1975 SMP) was developed more than 30 years ago and since then much has changed along Chelan County shorelines. In addition, knowledge of best development and conservation practices has evolved. There have also been changes in State laws and rules.

This SMP has been prepared to meet the requirements of the Shoreline Management Act of 1971 (RCW 90.58), the implementing State rules codified as Chapter 173-26 of the Washington Administrative Code (WAC) "State Master Program Approval/Amendment Procedures and Master Program Guidelines" that were revised in 2003, and other applicable local, state, and federal laws. As was the case in 1975 and today, the SMP is developed locally, but must meet the Shoreline Management Act and implementing State rules, and is subject to approval by the Washington State Department of Ecology (Ecology) before it can be implemented.

The SMP has been prepared under a grant agreement with Ecology. For planning purposes and as part of the grant agreement, Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee conducted nine Vision Workshops in fall 2008 to capture citizen questions, concerns, goals and aspirations regarding County and City shorelines. The Vision Workshop results have factored into the development of this SMP as well (see brief summary in Appendix D). In addition, the Planning Commission held study session, an "Open House" with the final draft of the Leavenworth Shoreline Master Program on October 17, 2012, and public hearings.

The contents of this Shoreline Master Program are structured as follows:

- Chapter 1 Authority and Purpose
- Chapter 2 Goals and Objectives
- Chapter 3 Shoreline Jurisdiction and Environment Designations
- Chapter 4 General Policies and Regulations
- Chapter 5 Shoreline Modifications and Uses
- Chapter 6 Nonconforming Uses and Development Standards
- Chapter 7 Shoreline Permits, Procedures and Administration
- Chapter 8 Definitions

To guide the reader, most sections or provisions show the source of the goal, policy, or regulation either in the body of the text or in parentheses, which may include citations to: the Shoreline Management Act (RCW 90.58), State Shoreline Master Program Guidelines, (WAC 173-26), State Shoreline Management Permit and Enforcement Procedures (WAC 173-27), current Chelan County Shoreline Master Program provisions, current County or City comprehensive plan elements, or other example SMPs recently adopted and approved by the State.

When reading the SMP, it is useful to consider the definitions of the following terms that are based on definitions in the State Shoreline Master Program Guidelines (WAC 173-26-020):

- Shall or must: means a mandate; the action must be done.
- Should: means that the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and shoreline master program, against taking the action.
- May: means the action is acceptable, provided it conforms to the provisions of this shoreline master program and the Act.

In general, this SMP uses the word "should" in goals, objectives, and policies, and "shall" in the regulations. Additional definitions are located in Chapter 8.

The SMP has a high level of detail for the following reasons: 1) to allow for more shoreline applications to be approved administratively for an efficient and cost-effective process, 2) to cross-reference applicable state and federal laws to help consolidate requirements and be a resource for property owners and the City of Leavenworth staff, and 3) to provide some certainty of interpretation and application that benefits property owners and the City of Leavenworth staff over time.

1 AUTHORITY AND PURPOSE

1.1 The Shoreline Management Act

Washington State's citizens voted to approve the Shoreline Management Act of 1971 in November 1972. The adoption of the Shoreline Management Act (Act) recognized "that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation" and that "coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state while, at the same time, recognizing and protecting private property rights consistent with the public interest" (RCW 90.58.020). The Act seeks to provide environmental protection for shorelines, preserve and enhance shoreline public access, and encourage appropriate development that supports water-oriented uses as follows: (RCW 90.58.020)

> *The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. In addition it finds that ever increasing pressures of additional uses are being placed on the shorelines necessitating increased coordination in the management and development of the shorelines of the state. The legislature further finds that much of the shorelines of the state and the uplands adjacent thereto are in private ownership; that unrestricted construction on the privately owned or publicly owned shorelines of the state is not in the best public interest; and therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state while, at the same time, recognizing and protecting private property rights consistent with the public interest. There is, therefore, a clear and urgent demand for a planned, rational, and concerted effort, jointly performed by federal, state, and local governments, to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.*
>
> *It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.*
>
> *The legislature declares that the interest of all of the people shall be paramount in the management of shorelines of statewide significance. The department, in adopting guidelines for shorelines of statewide significance, and local government, in developing master programs for shorelines of statewide significance, shall give preference to uses in the following order of preference which:*
>
> *(1) Recognize and protect the statewide interest over local interest;*
>
> *(2) Preserve the natural character of the shoreline;*
>
> *(3) Result in long term over short term benefit;*

(4) Protect the resources and ecology of the shoreline;

(5) Increase public access to publicly owned areas of the shorelines;

(6) Increase recreational opportunities for the public in the shoreline;

(7) Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline. Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state. Alterations of the natural condition of the shorelines and shorelands of the state shall be recognized by the department. Shorelines and shorelands of the state shall be appropriately classified and these classifications shall be revised when circumstances warrant regardless of whether the change in circumstances occurs through man-made causes or natural causes. Any areas resulting from alterations of the natural condition of the shorelines and shorelands of the state no longer meeting the definition of "shorelines of the state" shall not be subject to the provisions of chapter 90.58 RCW.

Permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water.

Under the Act, shoreline master programs are created and implemented based on a "cooperative program of shoreline management between local government and the state" (RCW 90.58.050). The roles of local governments and the state are:

"Local government shall have the primary responsibility for initiating the planning required by this chapter and administering the regulatory program consistent with the policy and provisions of this chapter. The department [of Ecology] shall act primarily in a supportive and review capacity with an emphasis on providing assistance to local government and on insuring compliance with the policy and provisions of this chapter." (RCW 90.58.050)

In recognition of the Act and citizen ideas collected through a local shoreline planning process the City of Leavenworth has developed this Shoreline Master Program (SMP), and will continually implement and administer it through shoreline permits and reviews. The Washington State Department of Ecology (Ecology) reviews and approves local master programs and certain local permit decisions.

1.2 Authority

This SMP is enacted and administered according to the following state law and rules:

A. The Shoreline Management Act of 1971, Chapter 90.58 RCW;

B. State master program approval/amendment procedures and master program guidelines, WAC 173-26; and

C. Shoreline management permit and enforcement procedures, Chapter 173-27 WAC.

1.3 Applicability

A. All proposed uses and development occurring within shoreline jurisdiction must conform to the intent and requirements of the laws and rules cited in Section 1.2 and this SMP whether or not a permit or other form of authorization is required. See Chapter 3 for the definition of shoreline jurisdiction and Chapter 8 for definitions of uses, activities, and development. (RCW 90.58.140(1) and WAC 173-26-191)

B. This SMP does not apply to the following activities:

1- Interior building improvements that do not change the use or occupancy;

2. Exterior structure maintenance activities, including painting and roofing, as long as it does not expand the existing footprint of the structure;

3. Routine landscape maintenance of established, ornamental landscaping, such as lawn mowing, pruning and weeding; and

4. Maintenance of the following existing facilities that does not expand the affected area: septic tanks (routine cleaning), wells, and individual utility service connections

C. The shoreline permit procedures, policies and regulations established in this SMP shall apply to all nonfederal uses, activities, and development.

D. This SMP applies to lands subject to nonfederal ownership, lease or easement, even though such lands may fall within the external boundaries of a federal ownership. Federal lands include, but are not limited to, National Forests, National Parks, National Wilderness Areas, and lands owned by the Federal Bureau of Land Management (BLM). (WAC 173-27-060).

E. The following subsections shall guide the determination of SMP applicability on federal lands:

1. Federal development on federally owned land is not subject to this SMP nor required to obtain a Shoreline permit unless otherwise required by federal law, or unless the state by statute has ceded all regulatory authority over the federal ownership;

2. Federal development on a federally owned lease is not subject to this SMP nor required to obtain a Shoreline permit, unless otherwise required by federal law, or unless the state by statute has ceded all regulatory authority over the federal ownership as long as the development is consistent with the purpose of the lease;

3. Development on federally owned land under a federal lease or easement for a non-federal activity is subject to this SMP and must obtain a

Shoreline permit; for example, the SMP applies to private activities on federal land such as leases where the private citizen owns the structure but the federal government owns the land;

4. Non-federal development or use on federally owned land is subject to this SMP and must obtain a Shoreline permit;

5. Development on non-federal land is subject to this SMP and must obtain a Shoreline permit, even if it is leased, rented, etc. to the federal government, or it is within the boundaries of federal ownership unless the state by statute has ceded all regulatory authority over the federal ownership.

F. As recognized by RCW 90.58.350, the provisions of this SMP shall not affect treaty rights of Indian Nations or tribes.

G. Where this Program makes reference to any RCW, WAC, or other state or federal law or regulation, the most recent amendment or current edition shall apply.

1.4 Purpose and Intent

The purposes of this SMP are:

A. To promote the public health, safety, and general welfare of the community by providing comprehensive policies and effective, reasonable regulations for development, use and protection of jurisdictional shorelines; and (WAC 173-26-241(2)(a)(ii))

B. To further assume and carry out the local government responsibilities established by the Act in RCW 90.58.050 including planning and administering the regulatory program consistent with the policy and provisions of the Act in RCW 90.58.020; and

C. Promote reasonable and appropriate use of the shorelines considering State and local interests defined in laws, rules, and plans as well as private property rights; and (1975 SMP Overall Goal 1)

D. Protect against significant adverse effects to the land, its vegetation and wildlife, and the waters and their aquatic life within jurisdictional shorelines; and (1975 SMP Overall Goal 2) (WAC 173-26-241(2)(a)(ii))

E. To give preference to those uses that are consistent with the control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon uses of the state's shoreline areas, as illustrated in use allowances of this SMP; and (WAC 173-26-241(2)(a)(i))

F. Reduce use conflicts by including provisions to prohibit or apply special conditions to those uses which are not consistent with the control of pollution and prevention of damage to the natural environment or are not unique to or dependent upon use of the state's shoreline, such as through application of vegetation management, water quality, restoration and similar standards. In implementing this provision, preference shall be given first to water-dependent uses, then to water-related uses and water-enjoyment uses in assigning permit types; and (WAC 173-26-241(2)(a)(iii))

G. Assure no net loss of ecological functions associated with the shoreline; and (WAC 173-26-241(2)(a)(iv))

H. Protect rights of navigation; and (1975 SMP Overall Goal 3)

I. Recognize private property rights and constitutional limitations on the regulation of private property and protect those rights while implementing this SMP; and (1975 SMP Overall Goal 4)

J. Maintain or recreate a high quality of environment along jurisdictional shorelines; and (1975 SMP Overall Goal 5)

K. Preserve and protect fragile natural resources and cultural significant features; and (1975 SMP Overall Goal 6)

L. Increase public access to publicly owned areas of the shorelines where increased use levels are desirable; and (1975 SMP Overall Goal 7)

M. Protect public and private properties from adverse effects of improper development in hazardous shoreline areas; and (1975 SMP Overall Goal 8)

N. Recognize the importance of an informed and responsible public observing basic rules of good behavior in the use and enjoyment of all shorelines; and (1975 SMP Overall Goal 9)

O. Recognize that this SMP does not alter existing law on access to or trespass on private property and does not give the general public any right to enter private property without the owner's permission.

1.5 Relationship to Other Codes, Ordinances and Plans

A. All applicable federal, state, and local laws shall apply to properties in the shoreline jurisdiction.

B. At the time of application or initial inquiry, the Shoreline Administrator shall inform the applicant/proponent of other local laws and rules that may be applicable to the project. The responsibility for determining applicable federal, state or special district statutes and regulations and complying with the same rests with the applicant/proponent or responsible person carrying out the activity, use, or development in question.

C. Consistent with RCW 36.70A.480, the goals and policies of this SMP approved under chapter 90.58 RCW shall be considered an element Leavenworth's comprehensive plans. All regulatory elements of this SMP, including, but not limited to definitions and use regulations, shall be considered a part of e Leavenworth's development regulations. The County shall apply City regulations in unincorporated urban growth areas.

D. All local development regulations including, but not limited to, zoning and subdivision rules shall apply in addition to this SMP. -This SMP includes critical areas regulations (Appendix B) that are applicable only in the shoreline jurisdiction, and shall control within shoreline jurisdiction over other - critical area regulations adopted pursuant to the Growth Management Act. Amendments to the Critical Areas Ordinance (LMC 16.08) are separate and distinct from Appendix B of this SMP, and do not require amendment to the SMP.

E. In the event provisions of this SMP conflict with provisions of Federal, State, County or City regulations, the provision that is most protective of shoreline resources shall prevail, when consistent with policies set out in the Act. (RCW 90.58.900; WAC 173-26-221(6)(b)(ii))

1.6 Liberal Construction

As provided for in RCW 90.58.900, the Act is exempted from the rule of strict construction; the Act and this SMP shall therefore be liberally construed to give full effect to the purposes, goals, objectives, and policies for which they were enacted. (1975 SMP Section 40; RCW 90.58.900)

1.7 Severability

Should any section or provision of this SMP be declared invalid, such decision shall not affect the validity of this SMP as a whole. (Common ordinance construction; RCW 90.58.910)

1.8 Effective Date

The SMP is hereby adopted on the 22nd day of January, 2013. This SMP and all amendments thereto shall become effective 14 days after final approval by Ecology. (RCW 90.58.090(7))

2 GOALS AND OBJECTIVES

Per WAC 173-26-186(3), all relevant policy goals must be addressed in the planning policies of master programs. This section contains shoreline goals and objectives. Goals express the ultimate aim of the County, Cities and citizens along their shorelines. An objective identifies a measurable step that moves toward achieving a long-term goal. Goals and objectives provide a framework upon which the more detailed SMP shoreline use environments, policies, regulations, and administrative procedures are based in subsequent chapters.

2.1 Economic Development Element (RCW 90.58.100(2)(a))

Goal ED-1. Permit those commercial, industrial, recreational, and other developments requiring a shoreline location which may contribute to the economic well-being of Leavenworth. (1975 SMP Goal A)

Objective ED-1.1. Encourage shoreline development that has a positive effect upon community economic and social activities.

Objective ED-1.2. Promote new water-dependent, water-related, and water-enjoyment economic development. (WAC 173-26-241(2)(a)(iii)

Goal ED-2. Encourage the protection and restoration of unique, fragile, and scenic elements in shoreline areas as a means to promote long-term economic well-being. **90.58.020**

Objective ED-2.1. Promote environmental education.

Objective ED-2.2: Develop incentives for protection and restoration in shoreline areas without loss of economic development such as by allowing transfer of development rights to less sensitive areas.

2.2 Public Access Element (RCW 90.58.100(2)(b))

Goal PA-1. Ensure public access to shorelines:

- Is safe, convenient and diversified; (1975 SMP Goal B)
- Makes provisions for public access to publicly owned shoreline jurisdiction areas; (WAC 173-26-176(3), WAC 173-26-191(1)(b); based on 90.58.100(2))
- Avoids endangering life or adverse effects on property or fragile natural features; (1975 SMP Goal B)
- Minimizes conflicts between the public and private property; (1975 SMP Goal B)
- Enables the public to enjoy the physical and aesthetic qualities of natural shorelines of the state which shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally; (WAC 173-26-176(3)(b) from RCW 90.58.020)
- Is designed for persons with disabilities, where feasible, consistent with federal standards; and
- Limits development that alters the natural conditions of the shorelines of the state to instances where development provides an opportunity for substantial numbers of people to enjoy the shorelines of the state. (WAC 173-26-176(3)(b) from RCW 90.58.020)

Objective PA-1.1. Increase public access to shorelines, particularly on public properties, by developing and implementing parks, recreation, and trails plans. (WAC 173-26-221(4)(c))

Objective PA-1.2. Require public access as part of public shoreline development where appropriate. (WAC 173-26-221(4)(d)(ii))

Objective PA-1.3. Require and/or encourage public access as part of private shoreline development in accordance with adopted -shoreline public access plans, where appropriate and in compliance with constitutional limitations. (WAC 173-26-221(4)(d)(iii))

Objective PA-1.4. Protect and enhance visual and physical access to shorelines. (WAC 173-26-221(4)(d)(iv))

Objective PA-1.5. Assure that public access improvements do not result in a net loss of shoreline ecological functions.

Objective PA-1.6. Encourage development of public access by using tools such as acquisition of land, incentives, enhancement of existing public land where public access could be developed, etc.

Goal PA -2. Maintain current access. The City encourages maintenance of existing access prior to and/or as a preference to establishing and constructing new access points.

2.3 Recreation Element (RCW 90.58.100(2)(c))

Goal REC-1. Promote diverse, convenient, and adequate recreational opportunities along public shorelines for local residents and visitors. (1975 SMP Goal D)

Objective REC-1.1. Encourage cooperation among public agencies, non-profit groups, and private landowners and developers to increase and diversify recreational opportunities. (WAC 173-26-241(3)(i))

Objective REC-1.2. Ensure shoreline recreation facilities are preserved and enlarged as necessary to serve projected County and City growth in accordance with adopted levels of service. (WAC 173-26-241(3)(i))

Objective REC-1.3. Ensure recreation facilities are designed for persons with disabilities, where feasible, consistent with federal standards.

2.4 Circulation Element (RCW 90.58.100(2)(d))

Goal CIRC-1. Since major transportation and utility systems pre-exist near many shorelines, minimize conflicts between these systems and shoreline uses when considering circulation additions or modifications. (1975 SMP Goal C)

Objective CIRC-1.1. Encourage multiple modes of transportation. (WAC 173-26-241(3)(k))

Objective CIRC-1.2. Promote non-motorized travel and public access opportunities. (WAC 173-26-241(3)(k))

Objective CIRC-1.4. Promote the design of new or expanded road corridors for motorized vehicles outside of shoreline jurisdiction unless there is no reasonably feasible alternative or location. (WAC 173-26-241(3)(k))

Objective CIRC-1.5. Promote the design of new utilities outside shoreline jurisdiction unless water crossings are unavoidable or utilities are required for authorized shoreline uses consistent with this SMP.

2.5 Shoreline Use Element (RCW 90.58.100(2)(e))

Goal LU-1. Assure an appropriate pattern of sound development in suitable locations without diminishing the quality of the environment along shorelines. (1975 SMP Goal E)

Objective LU-1.1. Give preference along the shoreline to water-oriented and single-family residential uses, consistent with the control of pollution and prevention of damage to the natural environment. (RCW 90.58.020)

Objective LU-1.2. Encourage shoreline uses and development that enhance and/or increase public access to the shoreline or provide significant public benefit. (WAC 173-26-241(3) (d), (f), (i), (j) and WAC 173-26-221(4))

Goal LU-2. Consider irrigated agriculture as a water-related use and a key factor in the economy of Chelan County and the Cities. Agricultural lands should be conserved and protected from incompatible uses. Other shoreline uses should not jeopardize production on designated agricultural lands. (1975 SMP Goal H).

Objective LU-2.1. Protect current agricultural activities occurring on agricultural land. Provide for new agricultural uses that are located and designed to assure no net loss of ecological functions and that do not have a significant adverse impact on other shoreline resources and values.
(WAC 173-26-241(3)(a)(ii))

2.6 Conservation Element (RCW 90.58.100(2)(f))

Goal CONS-1. Protect shoreline resources by:

- Preserving unique and fragile environments, and scenic elements such as views of natural features that support area tourism;
- Conserving non-renewable natural resources; and
- Managing renewable resources such as timber, water, and wildlife. (1975 SMP Goal G)

Objective CONS-1.1. Provide for no net loss of shoreline ecological function.

Goal CONS-2. Encourage the restoration of shoreline areas which have been modified, blighted, or otherwise disrupted by natural or human activities. (1975 SMP Goal I)

Objective CONS-2.1. Ensure restoration and enhancement is consistent with and prioritized based on adopted watershed and basin plans. (Recognizes County and City restoration plans; WAC 173-26-186 (8)(c))

2.7 Historic, Cultural, Scientific, and Educational Element (RCW 90.58.100(2)(g))

Goal HIST-1. Protect and restore areas having documented significant historic, cultural, educational or scientific values. (1975 SMP Goal F)

Objective HIST-1.1. Work with property owners to encourage the preservation of significant historic, cultural, educational or scientific values.

Goal HIST-2. Protect shoreline features to prevent the destruction of, or damage to, any site having archaeological, historic, cultural, or scientific value through coordination and consultation with the appropriate local, state, tribal and federal authorities.

(Recommendations by State Department of Archaeology and Historic Preservation (DAHP))

Objective HIST-2.1. Protect sites in collaboration with appropriate tribal, state, federal, and local governments and affected property owners. Encourage cooperation among public and private parties in the identification, protection, and management of historic cultural resources.

Objective HIST-2.2. When and/or where appropriate, make access to such sites available to parties of interest. Design and manage access to such sites in a manner that gives maximum protection to the historic resource.

Objective HIST-2.3. Provide opportunities for education related to archaeological, historical and cultural features when and/or where appropriate and incorporate into public and private management efforts, programs and development.

2.8 Flood Hazard Prevention Element (RCW 90.58.100(2)(h))

Goal FLOOD-1. Recognize the hydrologic functions of floodplains, and protect frequently flooded areas. (WAC 173-26-241(4) and Comprehensive Plans, including Chelan County Policy LU-4; Leavenworth Policy LU-1)

Objective FLOOD-1.1. Avoid or mitigate land use practices that may impede the flow of floodwater or cause danger to life or property. Mitigate the loss of floodplain storage capacity to avoid greater impact of flooding downstream. (WAC 173-26-221(3) and Comprehensive Plans, including Chelan County Policy LU-5 and; Leavenworth Policy LU-2; Cashmere Frequently Flooded Areas Policies; -)

Objective FLOOD-1.2. Implement the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program. (Comprehensive Plans: Chelan County Policy LU-4; Leavenworth Policy LU-1)

Objective FLOOD-1.3. Seek to map areas that are potential flood hazard areas and/or have experienced historical flooding events, but are not currently included in the Federal Emergency Management Agency's mapping efforts. Work with the Federal Emergency Management Agency to correct maps that are inaccurate.

Objective FLOOD-1.4. Prepare and implement channel migration zone plans. (Based on WAC 173-26-221(3) and prepared CMZ plans)

Objective FLOOD-1.5. Coordinate shoreline jurisdiction flood hazard prevention policies and regulations with Growth Management Act provisions to protect critical areas including frequently flooded areas.

Objective FLOOD-1.7. Monitor stream flows and consider any trends or changes in stream flow regimes due to climatic changes.

3 SHORELINE JURISDICTION AND ENVIRONMENT DESIGNATIONS

3.1 Shoreline Jurisdiction

As defined by the Shoreline Management Act of 1971, shorelines include certain waters of the State plus their associated "shorelands." The waterbodies designated as shorelines of the State are streams whose mean annual flow is 20 cubic feet per second (cfs) or greater and lakes whose area is greater than 20 acres. Certain shoreline waterbodies and their associated shorelands have elevated status under the Act if they are lakes equal to or larger than 1,000 acres or they are streams and rivers in Eastern Washington that are "…downstream of a point where the annual flow is measured at two hundred cubic feet per second or more, or those portions of rivers east of the crest of the Cascade range downstream from the first three hundred square miles of drainage area, whichever is longer" (RCW 90.58.030(2)(e)(v)(B)). These waterbodies are considered to be "shorelines of statewide significance," and have unique supplemental provisions outlined in Section 3.4.

Shorelands are minimally defined as:

> *"those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter…." (RCW 90.58.030)*

The upstream extent of shoreline jurisdiction for streams and those lakes that meet shoreline criteria are indicated on the Official Shoreline Maps included in Appendix A. The purpose of the Official Shoreline Maps is to identify Environment Designations (Section 3.2 below). The maps only approximately identify or depict the lateral extent of shoreline jurisdiction. The actual lateral extent of the shoreline jurisdiction shall be determined on a case-by-case basis based on the location of the ordinary high water mark (OHWM), floodway, and presence of associated wetlands.

The City of Leavenworth contains two shorelines: the Wenatchee River, a Shoreline of Statewide Significance, and Chumstick Creek. See Section 3.1 of this SMP.

In circumstances where shoreline jurisdiction does not include an entire parcel, only that portion of the parcel within shoreline jurisdiction and any use, activity or development proposed within shoreline jurisdiction on that portion of the parcel is subject to this Shoreline Master Program. The other portions of the parcel are still subject to all County or City planning and zoning ordinances. County and City planning shall include concurrency planning with this SMP.

3.2 Environment Designations

3.2.1 Environment Designation System

This SMP is intended to meet the requirements in WAC 173-26-211. It states that:

> *Master programs shall contain a system to classify shoreline areas into specific environment designations. This classification system shall be based on the existing use pattern, the biological and physical character of the shoreline, and the goals and aspirations of the community as expressed through comprehensive plans as well as the criteria in this section. Each master program's classification system shall be consistent with that described in WAC 173-26-211 (4) and (5)*

unless the alternative proposed provides equal or better implementation of the act.

This SMP is consistent with these requirements, deviating from WAC 173-26-211 (4) and (5) with respect only to some environment designation names, or the addition of new environment designations where such provides local government with opportunity to provide further, but complementary, designations consistent with existing land management plans. Each environment designation contains a purpose statement, designation criteria, and management policies components.

3.2.2 Official Shoreline Maps and Unmapped or Undesignated Shorelines

A. Appendix A (Shoreline Jurisdiction Boundaries and Environment Designations Maps) includes a hard copy of the Official Shoreline Maps at the time of SMP adoption, which illustrate the delineation of shoreline jurisdiction and environment designations in City of Leavenworth and UGA. The electronic files of the Official Shoreline Maps will be considered the official version and may be updated administratively or through an SMP amendment as indicated in 3.2.2.B, C and D below. The Department of Ecology will be provided with electronic files of the Official Shoreline Maps when any updates are made.

B. Any areas within shoreline jurisdiction that are not mapped and/or designated due to minor mapping inaccuracies in the lateral extent of shoreline jurisdiction from the shoreline waterbody related to site-specific surveys of ordinary high water mark, floodway, and/or floodplain are automatically assigned the category of the contiguous waterward shoreline environment designation. Where the mapping inaccuracy results in inclusion of an unmapped associated wetland, that wetland shall be assigned an Urban Park environment designation, or the most protective environment designation of the City of Leavenworth. Correction of these minor mapping inaccuracies may be made and incorporated into the Official Shoreline Maps without an SMP amendment. These minor mapping errors corrected administratively shall not be greater than 1.0 acres in size. If greater than 1.0 acres in size a SMP amendment shall be completed within 3 years of finding the mapping error.

C. All other areas of shoreline jurisdiction that were not assigned an environment designation shall be assigned an Urban Park designation in the City and its Urban Growth Area until the shoreline can be redesignated through an SMP amendment.

3.2.3 Urban Park

A Purpose

The purpose of the "Urban Park" environment is to:

1. Ensure appropriate management and development of existing and future public parks and recreation areas.
2. Protect and restore ecological functions of open space, floodplain and other sensitive, public or protected lands where they exist in urban and developed settings, while allowing a variety of compatible uses.

B Designation Criteria

"Urban Park" environment designation will be assigned to shorelines that:

1. Are within existing or planned public parks intended to accommodate public access and recreational developments that are compatible with maintaining or restoring the ecological functions of the area, and that are not generally suitable for commercial or industrial water-dependent uses;
2. Are suitable for water-related or water-enjoyment uses;
3. May be designated as open space, floodplain or other sensitive or protected areas that should not be more intensively developed; or
4. Retain important ecological functions, even though partially developed.

C Management Policies

Development within the “Urban Park” environment shall be consistent with the following policies:

1. Public access and public recreation objectives should be implemented in parks or other public lands located within the City or its UGA whenever feasible and when any significant ecological impacts can be mitigated.
2. When considering park and urban recreational development proposals, water-oriented uses and their accessory uses should be given priority over nonwater-oriented uses. Nonwater-oriented uses should be allowed when located upland of other water-oriented uses or when the nonwater oriented use would not conflict with or preclude implementation of planned water-oriented uses. Where a public shoreline recreational development or use is established, it should be primarily related to access to, enjoyment and use of the water. Non-water oriented uses may be allowed in such situations where they do not conflict with or limit opportunities for water oriented uses.
3. Uses that result in restoration of ecological functions should be allowed if the use is otherwise compatible with the purpose of this environment and the setting.
4. Standards should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the "Urban Park" designation. These standards shall ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values.

3.2.4. Shoreline Residential

A Purpose

The purpose of the "Shoreline Residential" environment is to accommodate residential development and appurtenant structures that are consistent with this chapter. An additional purpose is to provide appropriate public access and recreational uses.

B Designation Criteria

A "Shoreline Residential" environment designation will be assigned to shorelands if they are predominantly single-family or multi-family residential development or are planned for residential development.

C Management Policies

Development within the “Shoreline Residential” environment shall be consistent with the following policies:

1. Non-residential development should be limited to water-oriented uses and not conflict with the residential character of lands in the “Shoreline Residential” environment.
2. Water-oriented recreational uses should be allowed.
3. Adequate land area and services should be provided.
4. Land division and development should be permitted only 1) when adequate buffers are provided to protect ecological functions and 2) where there is adequate access, water, sewage disposal, and utilities systems, and public services available and 3) where the environment can support the proposed use in a manner which protects or restores the ecological functions.
5. Development standards for buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality should be established to protect and, where significant ecological degradation has occurred, restore ecological functions over time.
6. Multi-family and multi-lot residential and recreational developments should provide public access to the shoreline and joint-use community recreational facilities.
7. New residential development should be located and designed so that future shoreline stabilization is not required.

3.2.5 High Intensity

A Purpose

The purpose of the "High Intensity" environment is to provide for high-intensity commercial, transportation, and industrial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded.

B Designation Criteria

A "High Intensity" environment designation will be assigned to shorelands designated for commercial or industrial use if they currently support or are suitable and planned for high-intensity commercial, industrial, or institutional uses that either include, or do not detract from, the potential for water-oriented uses, shoreline restoration, and/or public access.

C Management Policies

Development within the “High Intensity” environment shall be consistent with the following policies:

1. In the High Intensity environment, first priority should be given to water-dependent uses. Second priority should be given to water-related and water-enjoyment uses. Nonwater-oriented uses should not be allowed except as part of mixed-use developments. Nonwater-oriented uses may also be allowed in limited situations where they do not conflict with or limit opportunities for water-oriented uses or on sites where there is no direct access to the shoreline.
2. Developments in the High Intensity environment should be managed so that they enhance and maintain the shorelines for a variety of urban uses, with priority given to water-dependent, water-related, and water-enjoyment uses.

3. Where feasible, visual and physical public access should be required as provided for in Section 4.4 of this SMP.

4. Aesthetic objectives should be actively implemented in development proposals and should be in compliance with sign control regulations, appropriate development siting, screening and architectural standards, and maintenance of natural vegetative buffers.

5. No net loss of shoreline ecological functions shall occur as a result of new development. Where applicable, new development shall include environmental cleanup and restoration of the shoreline to comply with any relevant state and federal law.

6. Full utilization of existing urban areas should be achieved before considering expanding this environment designation through future SMP amendments. Reasonable long-range projections of regional economic need should guide the amount of shoreline designated "high-intensity." During an analysis of shoreline uses, consideration should be given to the potential for displacement of nonwater-oriented uses with water-oriented uses when analyzing full utilization of urban waterfronts and before considering expansion of such areas. In order to make maximum use of the available shoreline resource and to accommodate future water-oriented uses, shoreline restoration and/or public access, the redevelopment and renewal of substandard, degraded, obsolete urban shoreline areas is encouraged.

3.2.6 Aquatic

A Purpose

The purpose of the "Aquatic" environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the OHWM.

B Designation Criteria

An "Aquatic" environment designation will be assigned to shoreline areas waterward of the OHWM.

C Management Polices

Development within the “Aquatic” environment shall be consistent with the following policies:

1. New over-water structures should be prohibited except for water-dependent uses, public access, necessary shoreline crossings, or ecological restoration.

2. The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use.

3. In order to reduce the impacts of shoreline development and increase effective use of water resources, multiple uses of over-water facilities should be encouraged.

4. All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation, to consider impacts to public views, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.

5. Uses that adversely impact the ecological functions of critical freshwater habitats should not be allowed. Where those uses are necessary to achieve the objectives

of RCW 90.58.020, their impacts shall be mitigated according to the sequence defined in Section 4.2, Ecological Protection and Critical Areas.

6. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

3.2.7 Use Matrix and Development Standards

A. Table 1 indicates which uses and modifications may be allowed or are prohibited in shoreline jurisdiction within each shoreline environment. Accessory uses shall be subject to the same shoreline permit process and SMP Provisions as their primary use. Where there is a conflict between the chart and the written provisions in this SMP, the written provisions shall apply.

B. An accessory use shall not be established on a property prior to the establishment of its primary use.

C. Authorized uses and modifications are only allowed in shoreline jurisdiction where the underlying zoning allows for it and subject to the policies and regulations of this SMP.

D. Any use, development or modification not classified in the Shoreline Master Program or listed below shall require a Conditional Use Permit except similar use when found consistent with this SMP.

E. Uses and modifications identified as "Permitted" require either a Substantial Development Permit or may be exempt from the requirement to obtain a Substantial Development Permit, as outlined in the definition of *Substantial Development* included in Chapter 8, Definitions. Exempted uses and modifications, however, are not exempt from the Act or this SMP, and must be consistent with the applicable policies and provisions.

F. If any part of a proposed development is not eligible for exemption, then a Shoreline Permit is required for the entire proposed development project.

G. A development or use that is listed as a conditional use pursuant to this SMP or is an unlisted use, must obtain a Conditional Use Permit even though the development or use does not require a Substantial Development Permit.

H. To preserve the existing and planned character of the shoreline consistent with the purposes of the shoreline environment designations, shoreline development standards regarding shoreline buffers, lot frontage, side setbacks, and height are provided in Table 2. In addition, shoreline developments shall comply with all density, lot area, setback and other dimensional requirements of the responsible local government zoning and subdivision codes

I. When a development is proposed that does not comply with the shoreline buffer, lot frontage, side yard setback, and other dimensional performance standards of this SMP not otherwise allowed by administrative reduction or administrative modification, such development can only be authorized by approval of a Variance. In addition, a variance from the maximum height limit shall be subject to approval of a view corridor analysis and demonstration that criteria are met consistent with Section 7.7.

J. Except as otherwise stated, in addition to this SMP, the City's comprehensive plan, zoning regulations, subdivision regulations, health regulations, and other adopted regulatory provisions apply within shoreline jurisdiction. In the event the

provisions of this SMP conflict with provisions of other responsible local government regulations, the more protective of shoreline ecological functions and processes shall prevail.

K. Where a use or modification may occur in the Aquatic environment as indicated in Table 1 and in the corresponding regulations for that use, the more restrictive permit process or prohibition on that use as may be indicated for the adjacent shoreland environment applies to that use in the Aquatic environment.

L. The permit processes indicated below for each use or modification apply to new, expanded, modified or replacement uses and modifications. For those uses and modifications that meet one of the exemptions outlined in Section 7.6.3, Exemptions, a Shoreline Permit is not required if Table-2 indicates "SD/E." However, if "CU" is listed for the use or modification, that use or modification is not eligible for an exemption.

Table 1. Shoreline Use and Modification Matrix.

The chart is coded according to the following legend. SD/E = Permitted, may be subject to Shoreline Substantial Development Permit or shoreline exemption requirements CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit (-) = Subject to use limitations in Chapter 4 & 5; otherwise prohibited	**Urban Parks**	**Shoreline Residential**	**High Intensity**	**Aquatic**
Agriculture	X	CU	CU	X
Agricultural-Commercial	X	X	X	X
Aquaculture	CU	X	CU	CU
Boating Facilities: Marinas and Boat Launches				
Community docks/piers	X	X	X	X
Marinas and commercial docks/piers	X	X	X	X
Public boat launch facility	SD/E	CU	SD/E	SD/E
Breakwaters/jetties/rock weirs/groins	CU	CU	CU	CU[1]
Commercial Uses				
Water-dependent uses	CU	X	SD/E	CU
Water-related	CU	X	SD/E	X
Water-enjoyment uses	CU	CU	SD/E	X
Nonwater-oriented uses	X	X	SD/E(-)	X
Mixed use	CU	X	SD/E(-)	X
Dredging and dredge materials disposal				

The chart is coded according to the following legend. SD/E = Permitted, may be subject to Shoreline Substantial Development Permit or shoreline exemption requirements CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit (-) = Subject to use limitations in Chapter 4 & 5; otherwise prohibited	**Urban Parks**	**Shoreline Residential**	**High Intensity**	**Aquatic**
Dredging	X	X	X	SD/E(-)
In-water disposal	X	X	X	CU
Upland disposal outside of CMZ/ floodplain	CU	SD/E	SD/E	X
Upland disposal inside of CMZ/ floodplain	CU	CU	CU	X
Fill				
Upland outside of CMZ/ floodplain	SD/E	SD/E	SD/E	X
Upland inside of CMZ/ floodplain	CU	CU	CU	X
In-water restoration	n/a	n/a	n/a	SD/E
In-water non-restoration	n/a	n/a	n/a	CU
Forest Practices	CU	X	X	X
Industrial Uses				
Water-dependent uses	X	X	SD/E	CU
Water-related uses	X	X	SD/E	X
Nonwater-oriented uses	X	X	SD/E(-)	X
Institutional[2]				
Water-oriented	SD/E	CU	SD/E	CU
Nonwater-oriented	CU(-)	CU(-)	CU(-)	X
In-Water Structures (not otherwise listed), Major	X	CU	CU	CU
In-Water Structures, Minor	SD/E	SD/E	SD/E	SD/E
Mining				
Upland mining outside of CMZ	X	X	X	X
Upland mining inside of CMZ	X	X	X	X
In-water mining (commercial)	n/a	n/a	n/a	CU
In-water mining (recreational)	n/a	n/a	n/a	CU
Private Moorage Facilities (docks, launches)	X	X	X	X

The chart is coded according to the following legend. SD/E = Permitted, may be subject to Shoreline Substantial Development Permit or shoreline exemption requirements CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit (-) = Subject to use limitations in Chapter 4 & 5; otherwise prohibited	**Urban Parks**	**Shoreline Residential**	**High Intensity**	**Aquatic**
Recreational Uses[2]				
Water-dependent	SD/E	SD/E	SD/E	SD/E
Water-related	SD/E	SD/E	SD/E	SD/E
Water-enjoyment	SD/E	SD/E	SD/E	SD/E
Nonwater-oriented	CU	CU	CU	X
Residential Uses				
Single-family/Duplex	X	SD/E	SD/E	X
Multi-family	X	SD/E	SD/E	X
Over-water/ Floating/ Liveaboards	X	X	X	X
Shoreline habitat and natural systems enhancement projects	SD/E	SD/E	SD/E	SD/E
Shoreline Stabilization				
Hard structural shoreline stabilization	CU	CU	CU	CU
Soft structural shoreline stabilization/ Bioengineering	SD/E	SD/E	SD/E	SD/E
Dikes, levees	CU	CU	CU	X
Transportation and Parking				
Local	SD/E(-)	SD/E(-)	SD/E(-)	CU
Regional	CU	CU	CU	CU
Utilities				
Small	SD/E	SD/E	SD/E	CU
Large	CU	CU	CU	CU

[1] Those structures installed to protect or restore ecological functions, such as woody debris installed in streams, may be processed as a Substantial Development Permit.

[2] When the use is also commercial, it is also subject to Commercial use standards and matrix allowances

[3] See regulations for exceptions and limitations.

Table 2. Shoreline Development Standards Matrix for the City of Leavenworth.

Standard Note: All dimensions are in feet. n/a = not applicable	**Urban Park**	**Shoreline Residential**	**High Intensity**	**Aquatic**
Shoreline Buffer – All Uses	See Section 4.5 of this SMP.			
Shoreline Lot Frontage Minimum – Residential	NA	60	0	n/a
Side Yard Setback Minimum – Residential	NA	5	0	n/a
Height Limit Maximum	35	35	35 (50*)	35

* 50 with view analysis

3.2.8 The actual location of the OHWM, floodplain, floodway, and wetland boundaries must be determined at the time a development is proposed. Wetland boundary and ordinary high water mark determinations are valid for five years from the date the determination is made. Floodplain and floodway boundaries should be assessed using the jurisdiction's FEMA maps (February, 1981). -In addition, any property shown in shoreline jurisdiction that does not meet the criteria for shoreline jurisdiction (e.g., is more than 200 feet from the OHWM or floodway, is no longer in floodplain as documented by a Letter of Map Revision from FEMA, and does not contain associated wetlands) shall not be subject to the requirements of this SMP. Revisions to the Official Shoreline Maps may be made as outlined in this Section 3.2.2 without an SMP amendment.

3.2.9 Interpretation of Environment Designation Boundaries

A. If disagreement develops as to the exact location of an environment designation boundary line, the Official Shoreline Maps shall prevail consistent with the following rules:

1. Boundaries indicated as approximately following lot, tract, or section lines shall be so construed.
2. In cases where boundary line adjustments or subdivisions occur, the designation applied to the parent parcel prior to the boundary line adjustment or subdivision shall not change as a result. The shoreline designation can be redesignated through an SMP amendment.
3. Boundaries indicated as approximately following roads or railways shall be respectively construed to follow the nearest right-of-way edge.
4. Boundaries indicated as approximately parallel to or extensions of features indicated in (1), (2), or (3) above shall be so construed.

B. In the event of an environment designation mapping error where the SMP update or amendment record, including the public hearing process, is clear in term of the correct environment designation to apply to a property, the Shoreline Administrator shall apply the environment designation approved through the SMP Update or Amendment process and correct the map. Appeals of such interpretations may be filed pursuant to Section 7.13 and City of Leavenworth's appeal procedures. If the use environment criteria were misapplied, but the map

does not show an unintentional error, a SMP amendment may be obtained consistent with WAC 173-26-100 and Section 7.16.

C. All shoreline areas waterward of the OHWM shall be designated Aquatic.

D. Upland environment designations shall apply to shorelands.

E. Only one environment designation shall apply to a given shoreland area. In the case of parallel designations, designations shall be divided along an identified linear feature and the boundary shall be clearly noted on the map (for example: "boundary is 100 feet upland from the OHWM"). Application of parallel designation's buffer features are explained in section 4.5.2.

3.3 Shoreline Use Preferences

When determining allowable uses and resolving use conflicts on shorelines within shoreline jurisdiction the following preferences and priorities as listed in WAC 173-26-201(2)(d) shall be applied in the order presented below:

(i) Reserve appropriate areas for protecting and restoring ecological functions to control pollution and prevent damage to the natural environment and public health.

(ii) Reserve shoreline areas for water-dependent and associated water related uses … Local governments may prepare master program provisions to allow mixed-use developments that include and support water-dependent uses and address specific conditions that affect water-dependent uses.

(iii) Reserve shoreline areas for other water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives.

(iv) Locate single-family residential uses where they are appropriate and can be developed without significant impact to ecological functions or displacement of water-dependent uses.

(v) Limit non-water-oriented uses to those locations where the above described uses are inappropriate or where non-water-oriented uses demonstrably contribute to the objectives of the Shoreline Management Act.

3.4 Shorelines of Statewide Significance

In the City of Leavenworth, the Wenatchee River is a Shoreline of Statewide Significance. In addition, Chumstick Creek is a shoreline of the State.

3.4.1 Designation Criteria

In the City of Leavenworth, shorelines of statewide significance include those lakes, whether natural, artificial, or a combination thereof, with a surface area greater than or equal to 1,000 acres measured from the OHWM, and natural rivers or segments thereof downstream of a point where the annual flow is measured at two hundred (200) cubic feet per second or more, or those portions of rivers downstream from the first three hundred (300) square miles of drainage area, whichever is longer.

3.4.2 Use Preferences

In accordance with RCW 90.58.020, the following management and administrative policies are hereby adopted for all shorelines of statewide significance in Leavenworth, as defined in RCW 90.58.030(2)(e) and listed in this SMP. Consistent with the policy contained in RCW 90.58.020, preference shall be given to the uses in the following order of preference that are consistent with the statewide interest in such shorelines. These are uses that:

(1) Recognize and protect the statewide interest over local interest;

(2) Preserve the natural character of the shoreline;

(3) Result in long term over short term benefit;

(4) Protect the resources and ecology of the shoreline;

(5) Increase public access to publicly owned areas of the shorelines;

(6) Increase recreational opportunities for the public in the shoreline;

(7) Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary. (WAC 173-26-251(2))

Uses that are not consistent with these preferences should not be permitted on shorelines of statewide significance.

3.4.3 Policies

Consistent with the use preferences for shorelines of statewide significance contained in RCW 90.58.020 and identified in Section 3.4.2, City of Leavenworth will base decisions administering this SMP on the following policies in order of decreasing priority: (WAC 173-26-251(3)(a-e) and WAC 173-26-251(2))

A. Recognize and protect the state-wide interest over local interest.

1. Solicit comments and opinions from groups and individuals representing state-wide interests by circulating amendments to the Master Program, and any proposed amendments affecting Shorelines of Statewide Significance, to state agencies, affected Tribes, adjacent local governments' land areas, citizen's advisory committees and local officials, and state-wide interest groups.

2. Recognize and take into account state agencies' policies, programs and recommendations in developing and administering use regulations and in approving shoreline permits.

3. Solicit comments, opinions and advice from individuals with expertise in ecology and other scientific fields pertinent to shoreline management.

B. Preserve the natural character of the shoreline.

1. Designate and administer shoreline environments and use regulations to protect and restore the ecology and environment of the shoreline as a result of human intrusions on shorelines.

2. Restore, enhance, and/or redevelop those areas where intensive development already exists in order to reduce adverse impact on the environment and to accommodate future growth rather than allowing

high-intensity uses to extend into low-intensity use or underdeveloped areas.

3. Protect and restore existing diversity of vegetation and habitat values, wetlands, and riparian corridors associated with shoreline areas.

4. Protect and restore habitats for State-listed "priority species."

C. Support actions that result in long-term benefits over short-term benefits.

1. Evaluate the short-term economic gain or convenience of developments relative to the long-term and potentially costly impairments to the natural shoreline.

2. Preserve resources and values of shorelines of statewide significance for future generations and restrict or prohibit development that would irretrievably damage shoreline resources.

3. Ensure the long-term protection of ecological resources of statewide importance, such as anadromous fish habitats, forage fish spawning and rearing areas, and unique environments.

D. Protect the resources and ecology of the shoreline.

1. All shoreline development should be located, designed, constructed and managed consistent with mitigation sequencing provisions outlined in Section 4.2.2 to minimize adverse impacts to regionally important wildlife resources, including spawning, nesting, rearing and habitat areas, and migratory routes and result in no net loss of shoreline ecosystems and ecosystem-wide processes.

2. Actively promote aesthetic considerations when contemplating new development, redevelopment of existing facilities, or general enhancement of shoreline areas.

E. Increase public access to publicly owned areas of the shoreline.

1. Give priority to developing paths and trails to shoreline areas and linear access along the shorelines, especially those trail corridors that would be a regional recreational and transportation resource.

2. Locate development landward of the OHWM so that access is enhanced and opportunities for access are not precluded.

3. Increase public access opportunities for those with disabilities consistent with the Americans with Disabilities Act.

4. Provide incentives to landowners that provide shoreline public access, such as development incentives, tax reductions, or other measures.

F. Increase recreational opportunities for the public on the shoreline.

1. Plan for and encourage development of facilities for public recreational use of the shoreline, including facilities for boating, swimming, fishing, and other water-oriented activities.

2. Reserve areas for lodging and related facilities on uplands with provisions for appropriate public access to the shoreline.

4 GENERAL POLICIES AND REGULATIONS

Chapter 4 presents general policies and regulations that apply to any developments, uses, or activities in any environment designation in order to protect environmental and cultural resources, reduce likelihood of harm to life or property from hazardous conditions, and promote access to shorelines.

Policies are statements of principles that guide and determine present and future decisions. Regulations are rules that govern developments, uses, or activities.

4.1 Archaeological and Historic Resources

4.1.1 Policies

A. Preservation, Restoration, Education. Whenever possible, archeological or historic sites should be permanently preserved for scientific study and public observation. In areas known to contain significant archaeological and historic data, a condition should be placed on shoreline permits which would allow for site inspection and evaluation by a professional archaeologist in coordination with affected Indian tribes to ensure proper salvage of such data. (1975 SMP Policy 16.a)

B. Impact Avoidance. Due to the limited and irreplaceable nature of the resource(s), prevent the destruction of or damage to any site having historic, cultural, scientific, or educational value as identified by the appropriate authorities, including affected Indian tribes and the Washington State Department of Archaeology and Historic Preservation, or that have been inadvertently uncovered.

Any proposed site development and/or associated site demolition work should be planned and carried out so as to avoid impacts to the cultural resource or to provide appropriate mitigation. (Recommended by DAHP)

C. Consultation. Consultation with professional archaeologists and historians is encouraged to identify areas containing potentially valuable archaeological data, and to establish procedures for salvaging data. Appropriate agencies to consult include, but are not limited to, the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Colville Reservation, and the Washington State Department of Archaeology and Historic Preservation (DAHP). (1975 SMP Policy 16.b)

D. Adjacent Cultural Site. If development or demolition is proposed abutting an identified historic, cultural or archaeological site, then the proposed development should be designed and operated so as to be compatible with continued protection of the historic, cultural or archaeological site. (Recommended by DAHP)

4.1.2 Regulations

A. Known Archaeological Resources. City of Leavenworth shall require that permits issued in areas documented to contain archaeological resources require a site inspection or evaluation by a professional archaeologist in coordination with affected Indian tribes. (WAC 173-26-221(1)(c))

B. Uncovered Archaeological Resources**.** Developers and property owners shall immediately stop work and notify City of Leavenworth, the Washington State Department of Archaeology and Historic Preservation, and affected Indian tribes if archaeological resources are uncovered during excavation. (WAC 173-26-221(1)(c))

C. Historic Resources. Where a professional archaeologist or historian, recognized by the State of Washington, has identified an area or site as having significant value, or where an area or site is listed in national, state or local historical registers, City of Leavenworth may require an evaluation of the resource, and appropriate conditions, which may include preservation and/or

retrieval of data, proposal modifications to reduce impacts, or other mitigation authorized through the State Environmental Policy Act, or other local, state, or federal laws. Archaeological sites located both in and outside shoreline jurisdiction are subject to chapter 27.44 RCW (Indian graves and records) and chapter 27.53 RCW (Archaeological sites and records) and development or uses that may impact such sites shall comply with chapter 25-48 WAC, as well as the provisions of this Master Program. (Based on 1975 SMP Section 27.1 and WAC 173-26-221(1))

4.2 Ecological Protection and Critical Areas

4.2.1 Policies (based on WAC 173-26-201(2)(c) and 173-26-221(2))

A. No net loss of ecological functions. Shoreline use and development should be carried out in a manner that prevents or mitigates adverse impacts, both on site and to the extent that impacts may propagate up- or downstream, so that the resulting ecological condition does not become worse than the current condition. For each development, this means assuring no net loss of ecological functions and processes relative to the existing condition, protecting critical areas designated in Appendix B of this SMP, and protecting additional established shoreline buffers in a manner consistent with all relevant constitutional and other legal limitations on the regulation of private property. Shoreline ecological functions that should be protected include, but are not limited to, fish and wildlife habitat, food chain support, and water temperature maintenance. Shoreline processes that should be protected include, but are not limited to, water flow; erosion and accretion; infiltration; ground water recharge and discharge; sediment delivery, transport, and storage; large woody debris recruitment; organic matter input; nutrient and pathogen removal; and stream channel formation/maintenance.

B. Evaluating potential for adverse impacts. In assessing the potential for new uses and developments to cause adverse impacts on ecological functions or processes, City of Leavenworth should take into account all of the following:

1. Effects on ecological functions and ecosystem processes; and
2. Effects that occur on-site and effects that may occur off-site; and
3. Immediate effects and long-term effects; and
4. Direct effects of the project and indirect effects; and
5. Individual effects of the project and the incremental or cumulative effects resulting from the project added to other past, present, and reasonably foreseeable future actions; and
6. Compensatory mitigation actions that offset adverse impacts of the development action and/or use.

C. Development standards should protect functions**.** Development standards for density, frontage, buffers, impervious surface, shoreline stabilization, vegetation conservation, buffers, critical areas, and water quality should protect existing shoreline ecological functions and processes. During permit review, the Shoreline Administrator should consider the expected impacts associated with proposed shoreline development when assessing compliance with this policy.

4.2.2 Regulations (based on WAC 173-26-201(2)(c and e) and 173-26-221(2))

A. Applicability. The provisions of this Section and Appendix B, Critical Areas Regulations, shall apply to any use, alteration or development within shoreline jurisdiction, whether or not a shoreline permit or written letter of exemption is required.

B. Mitigation sequencing. Applicants shall demonstrate all reasonable efforts have been taken to avoid, minimize and then mitigate potential adverse impacts to ecological function resulting from

new development and redevelopment in shorelines in the following sequence of steps listed in prioritized order: (WAC 173-26-201(2)(e)(i))

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
6. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.

C. Mitigation required for impacts. Mitigation shall be required for all projects within shoreline jurisdiction that have adverse impacts resulting in net loss of ecological functions, including those waterward of the OHWM. As part of the analysis of potential impacts, the applicant shall also evaluate whether the project may adversely affect existing hydrologic connections between streams and/or wetlands, and either modify the project or mitigate any impacts as needed. Mitigation must be designed to result in no net loss of ecological functions to the extent feasible. Except where mitigation ratios are otherwise identified for specific critical areas impacts in Appendix B, mitigation for adverse impacts to shoreline ecological functions shall be required at a ratio of one unit of mitigation for one unit of impact by area (1 sq. foot of impact:1sq foot mitigation). However, depending on the nature and extent of adverse impacts and proposed mitigation, a reduction in the ratio may be allowed to meet the no net loss of ecological functions standard if justified in a critical areas report per Appendix B or a habitat management plan per Section E below submitted to City of Leavenworth. (WAC 173-26-201(2)(e))

D. Cumulative effects.

1. In review of applications for Shoreline Use-and development proposals, City of Leavenworth shall consider the cumulative impacts of individual uses and developments, including preferred uses and uses that are exempt from permit requirements, when determining whether a proposed use or development could cause a net loss of ecological functions. The geographic scope of the analysis shall include the shoreline waterbody potentially affected by the proposal within the bounds of City of Leavenworth's geographic authority, unless the Shoreline Administrator determines that a larger or smaller area of analysis is appropriate.
2. City of Leavenworth shall have the authority to require the applicant/proponent to prepare special studies, assessments and analyses as necessary to identify and address cumulative impacts including, but not limited to, impacts on fish and wildlife habitat, public access/use, aesthetics, and other shoreline attributes.
3. Proponents of shoreline use and development shall take the following factors into account when assessing cumulative impacts:

a. Current ecological functions and human factors influencing shoreline natural processes; and

b. Reasonably foreseeable future use and development of the shoreline; and

c. Beneficial effects of any established regulatory programs under other local, state, and federal laws; and

d. Mitigation measures implemented in conjunction with the proposed project to avoid, reduce and/or compensate for adverse impacts.

4. City of Leavenworth shall add conditions as needed based on the findings of D.1 – D.3 above to address any adverse cumulative effects, and may prohibit any use or development that would result in unmitigated adverse cumulative impacts.

E. Restoration is not required. Developments shall not be required to provide mitigation in excess of that necessary to assure that development will result in no net loss of shoreline ecological functions and will not have a significant adverse impact on other shoreline functions fostered by the policy of the Act.

F. Alternative design and mitigation**.** For any development proposal, applicants shall comply with relevant design and mitigation standards found in this SMP. Provided, applicants may submit a habitat management plan that demonstrates how an alternative design or mitigation approach meets the no net loss of ecological functions standard. At a minimum, habitat management plans must contain information about existing and anticipated post-project conditions with a discussion of how the alternative design or mitigation approach is consistent with the SMA and this SMP.

G. Location of mitigation. When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, alternative compensatory mitigation within Water Resource Inventory Area (WRIA) 45, the Wenatchee watershed, that addresses limiting factors or identified critical needs for shoreline resource conservation based on the Shoreline Restoration Plan, or WRIA or comprehensive resource management plans applicable to the area of impact may be authorized if it would have a greater positive impact on ecological function. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions. (WAC 173-26-201(2)(e)(ii)(B))

H. Protection of critical areas and buffers**.** Any critical areas found within shoreline jurisdiction, such as wetlands, frequently flooded areas, geologically hazardous areas, fish and wildlife habitat conservation areas (which include shoreline buffers), and critical aquifer recharge areas, shall be regulated by Appendix B, Critical Areas Regulations. Unless otherwise stated, critical area buffers and shoreline buffers located within shoreline jurisdiction shall be protected and/or enhanced pursuant to Section 4.5, Vegetation Conservation and Shoreline Buffers, applicable provisions of Appendix B, Critical Areas Regulations, and all other applicable provisions of this SMP. Critical areas and - their buffers located outside of shoreline jurisdiction are not regulated by this SMP-they shall be regulated under the City's GMA critical area ordinance. See Appendix B for information about City-specific treatment and regulation of shoreline buffers.

4.3 Flood Hazard Reduction

The following provisions apply only in shoreline jurisdiction to actions taken to reduce flood damage or hazard and to uses, development, and shoreline modifications that may increase flood hazards. Flood hazard reduction measures may consist of nonstructural measures, such as shoreline buffers, land use controls, wetland restoration, dike removal, use relocation, biotechnical measures, and storm water

management programs, and of structural measures, such as dikes, levees, revetments, floodwalls, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.

Although some flood hazard reduction measures may serve a dual function as shoreline stabilization, their primary purpose is to control the location of flood waters directly. Alternatively, the primary purpose of shoreline stabilization measures is to prevent erosion of land from currents and waves originating in the shoreline waterbody (rather than upland sources of erosion), which is a more indirect control of the location of flood and non-flood water. Shoreline stabilization is addressed in Section 5.18.

The City of Leavenworth implements flood hazard reduction through the following means:

- Plans and Policies: Growth Management Act comprehensive plans, Multi-Jurisdiction Natural Hazard Mitigation Plan, watershed plans, and channel migration zone plans have been developed by Chelan County, Leavenworth's, and other agencies and address flood hazard reduction policies, programs, restoration actions, and other capital improvements.
- Regulations: critical area, floodplain and stormwater regulations.

4.3.1 Policies

A. Implement flood hazard plans and regulations. The City of Leavenworth should ensure public and private development applications site and design flood control measures consistent with appropriate engineering principles, including guidelines of the Natural Resource Conservation Service, the U.S. Army Corps of Engineers, and adopted LMC Chapter 16.08 in order to prevent flood damage, maintain the natural hydraulic capacity of floodways, and conserve limited resources such as fish habitat, water, and soil. (WAC 173-26-221(3)(b)(ii) and (iii))

B. No net loss of ecological functions. Flood protection measures should result in no net loss of ecological functions and ecosystem-wide processes associated with rivers, streams and lakes. Cumulative impacts associated with flood protection measures should be considered. (WAC 173-26-221(3)(b)(iv))

C. Non-structural methods preferred. Where feasible, non-structural methods to protect, enhance, and restore shoreline ecological functions and processes and other shoreline resources should be encouraged as an alternative to structural flood control works. Non-structural methods may include, but are not limited to, shoreline buffers, land use controls, use relocation, wetland restoration, dike removal, biotechnical measures, stormwater management programs, land or easement acquisition, voluntary protection and enhancement projects, or incentive programs. (WAC 173-26-221(3)(b)(i) and (vi))

D. Avoid structural flood control works. New or expanding development or uses in shoreline jurisdiction, including subdivision of land, that would likely require structural flood control works, such as dikes, levees, revetments, floodwalls, channel realignment, gabions or rip-rap, within a river, channel migration zone, floodway, or lake should not be allowed. (WAC 173-26-221(3)(c)(i))

E. When non-structural flood control is infeasible. New structural flood control works should only be allowed in shoreline jurisdiction when it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development - that impacts to ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss, that appropriate vegetation conservation actions are undertaken, and where non-structural flood hazard reduction measures are infeasible. (WAC 173-26-221(3)(c)(ii))

F. Bioengineered flood control works. The City of Leavenworth should facilitate returning river and stream corridors to more natural hydrological conditions. Unless otherwise determined infeasible by federal or state agencies with permit authority or by the Shoreline Administrator, flood control

works should be bioengineered to enhance ecological functions, create a more natural appearance, improve ecological processes, and provide more flexibility for long-term shoreline management. (WAC 173-26-221(3)(b)(v) and (vii))

G. Avoid damage to other properties. Flood control works and shoreline uses, development, and modifications should be located, designed, constructed and maintained so their resultant effects on geo-hydraulic shoreline processes will not cause significant damage to other properties or shoreline resources, and so that the physical integrity of the shoreline corridor is maintained. (WAC 173-26-221(3)(b)(v))

H. SEPA, the SMP, flood hazard reduction, and critical areas policies and regulations should be utilized to ensure protection of the natural environment and critical resources. (Comprehensive Plan Natural Systems and Critical Areas, Goal 1, Policy 1)

I. Development in natural hazard areas such as those susceptible to landslide, flood, avalanche, unstable soils, and excessive slopes should be discouraged. (Comprehensive Plan Natural Systems and Critical Areas, Goal 1, Policy 2)

J. The development of floodplains should be regulated in order to help mitigate the loss of floodplain storage capacity. (Comprehensive Plan Natural Systems and Critical Areas, Goal 1, Policy 2)

K. Flood hazard protection should, where feasible, give preference to nonstructural flood hazard reduction measures over structural measures.

L. Flood hazard protection measures should not result in a net loss of ecological functions associated with the rivers and streams.(WAC 173-26-221(3)(b)(iv))

M. Development proposals and restoration projects should evaluate alternative flood control measures, and are encouraged to:

1. Plan for and facilitate returning river and stream corridors to more natural hydrological conditions, (WAC 173-26-221(3)(b)(v))
2. Recognize that seasonal flooding is an essential natural process, and (WAC 173-26-221(3)(b)(v))
3. Consider removal or relocation of structures in flood prone areas .(WAC 173-26-221(3)(b)(vi))

4.3.2 Regulations

A. Avoid increase in flood hazards. Development in floodplains - shall, consistent with applicable flood hazard plans and regulations, avoid significantly or cumulatively increasing flood hazards. Development shall be consistent with all the City of Leavenworth regulations including critical areas regulations (SMP Appendix B), stormwater regulations (Section 4.6 of this SMP), in-water structure regulations (Section 5.12 of this SMP), as well as guidelines of the Natural Resource Conservation Service, the U.S. Army Corps of Engineers, and City of Leavenworth's comprehensive flood hazard management plan and/or Multi-Jurisdiction Natural Hazard Mitigation Plan. (WAC 173-26-221(3)(c)(i))

B. Channel migration zone (CMZ) Maps**.**

1. Channel migration zone maps prepared consistent with WAC 173-26-221(3)(b) are included in Appendix F of this SMP. These maps provide complete coverage of shoreline waterbodies in Chelan County that have potential for channel migration within shoreline jurisdiction. City of Leavenworth shall utilize these maps in shoreline application reviews.

2. Applicants for shoreline development or modification may submit a site-specific channel migration zone study if they do not agree with the mapping in Appendix F.

C. Documentation. Documentation of alternate channel migration zone boundaries must be prepared consistent with WAC 173-26-221(3)(b), and may include, but is not limited to, historic aerial photographs, topographic mapping, flooding records, and field verification. (based on WAC 173-26-221(3)(b)) and comments by U.S. Fish and Wildlife Service)

D. Uses and activities authorized in floodway or CMZ. The following uses and activities may be authorized in shoreline jurisdiction where appropriate and/or necessary within the channel migration zone (CMZ) or floodway: (WAC 173-26-221(3)(c)(i))

1. Actions that protect or restore the ecosystem-wide processes or ecological functions or development with a primary purpose of protecting or restoring ecological functions and ecosystem-wide processes.

2. Forest practices in compliance with the Washington State Forest Practices Act and its implementing rules.

3. Existing and ongoing agricultural practices provided that no new restrictions to channel movement occur.

4. Mining when conducted in a manner consistent with Section 5.13 Mining, and the shoreline environment designation.

5. Bridges, utility lines, public stormwater facilities and outfalls, and other public utility and transportation structures where no other feasible alternative exists or the alternative would result in unreasonable and disproportionate costs and the long-term maintenance or repair costs are not significantly different between options inside or outside of the floodway or channel migration zone. For the purposes of this section “unreasonable and disproportionate” means that locations outside of the floodway or channel migration zone would add more than 20% to the total project cost. Other methods to determine unreasonable and disproportionate cost may be used on a case-by-case basis with approval of the Shoreline Administrator. Where such structures are allowed, mitigation shall address impacted functions and processes in the affected shoreline. New transportation facilities shall be designed so that no significant loss of floodway capacity or measurable increase in predictable flood levels will result based on studies submitted by applicants as required by Appendix B, critical areas regulations for frequently flooded areas.

6. Repair and maintenance of an existing legally established use or structure, provided that channel migration is not further limited, or flood hazards to other uses increased, and provided that such actions do not cause significant ecological impacts.

7. New development in incorporated municipalities and designated urban growth areas, as defined in Chapter 36.70A RCW, located upland of existing structures that prevent active channel movement and flooding .

8. Modifications or additions to an existing nonagricultural legal use, provided that channel migration is not further limited and provided that such actions do not cause significant ecological impacts.

9. Measures to reduce shoreline erosion, provided that it is demonstrated that the erosion rate exceeds that which would normally occur in a natural condition, that the measures do not interfere with fluvial hydrological and geo-morphological processes normally acting in natural conditions, and that the measures include appropriate mitigation of impacts to ecological functions associated with the river or stream.

E. Structural flood hazard reduction measures. New structural flood hazard reduction measures in shoreline jurisdiction shall be allowed only when it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development, that nonstructural measures are not feasible, that impacts on ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss, and that appropriate vegetation conservation actions are undertaken consistent with SMP Section 4.5, Vegetation Conservation and Shoreline Buffers. (WAC 173-26-221(3)(c)(ii)) Structural flood hazard reduction measures shall be consistent with City of Leavenworth's comprehensive flood hazard management plan and/or Multi-Jurisdiction Natural Hazard Mitigation Plan.

F. Placement of structural flood hazard reduction measures. New structural flood hazard reduction measures in shoreline jurisdiction shall be placed landward of associated wetlands and designated shoreline buffers, except for actions that increase ecological functions, such as wetland restoration; provided no other alternative to reduce flood hazard to existing development is feasible. The need for, and analysis of feasible alternatives to, structural improvements shall be documented through a geotechnical analysis. (WAC 173-26-221(3)(c)(iii))

G. Public access. See Section 4.4.2. (WAC 173-26-221(3)(c)(iv))

H. Gravel removal. The removal of gravel for flood management purposes shall be consistent with Section 5.8, Dredging and Dredge Material Disposal and Section 5.13, Mining, and be allowed only after a biological and geo-morphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions, and is part of a comprehensive flood management solution. (WAC 173-26-221(3)(c)(v))

I. New development and subdivisions. New development or subdivisions in shoreline jurisdiction shall only be approved when it can be reasonably foreseeable that the development or use would not require structural flood hazard reduction measures - within the channel migration zone or floodway during the life of the development or use consistent with the following: (WAC 173-26-221(3)(c)(i))

1. Floodway: New development and subdivisions shall be subject to applicable floodway regulations in Appendix B.

2. Channel Migration Zone: New development and subdivision in shoreline jurisdiction on lots containing channel migration zones shall also be subject to Appendix B, Critical Areas Regulations for geologically hazardous areas, and Appendix F, Channel Migration Zone Maps.

   a. New development in the channel migration zone within shoreline jurisdiction is allowed subject to:

      (1) Structures are located on an existing legal lot created prior to adoption of this SMP;

      (2) A feasible alternative location outside of the channel migration zone is not available on-site, if is demonstrated that the structure is certified as safe as designed by a qualified engineer or geologist, licensed in the state of Washington and the structure will not increase the hazard risk.

      (3) To the extent feasible, the structure and supporting infrastructure is located the farthest distance from the OHWM, unless the applicant can demonstrate that an alternative location is the least subject to risk.

   b. New subdivisions, within shoreline jurisdiction, of lots on which a - channel migration zone has been mapped may be approved subject to the following design standards:

(1) Each lot created within the subdivision shall contain five-thousand square feet or more of buildable land either outside of the channel migration zone or inside the channel migration zone but outside of areas that might require new structural flood hazard protection measures; for the purposes of this section, buildable means capable of supporting a dwelling and necessary associated accessory structures and improvements such as access and septic facilities. Channel migration zone areas can be included in total lot area required by zoning provided the buildable area meets the criteria specified above.

(a) Open Space Lots or Tracts: Open space lots or tracts are not subject to the minimum lot size in Section (1) above.

(b) Boundary Line Adjustments: Boundary line adjustments in a channel migration zone shall not result in a lot, tract or parcel smaller than the minimum size required by the zoning and subdivision code and this SMP; provided that whenever any one or more lots involved in the proposed adjustment are smaller than the allowable minimum size- and the division does not create any lot, tract, parcel, site, or division which contains insufficient area and dimension to meet minimum requirements for width and area for a building site, unless that lot, tract or parcel is dedicated as open space, the change may be approved so long as the adjustment does not increase the existing nonconformity in consideration of applicable regulations and standards.

(2) Access to all lots that must cross the channel migration zone in shoreline jurisdiction shall be consolidated in a single location, and shall be accomplished using measures that have the least adverse impact on channel migration, such as a bridge; and

(3) All other infrastructure is located outside the channel migration zone except that an on-site septic system is allowed in the channel migration zone if (except as allowed by LMC): approved by the Chelan-Douglas Health Department for County jurisdiction and UGA areas; a feasible alternative location is not available on-site; and to the maximum extent practical, the septic system is located the farthest distance from the OHWM. Accessory utility development within Leavenworth's jurisdiction must comply with 4.6.2(E).

4.4 Public Access

4.4.1 Policies

A. Types of public access**.** Public access includes both physical and visual approaches to shorelines. Scattered, small access points with low levels of alteration are preferred by some recreators for certain uses (e.g., fishing), but not others (e.g., RV camping, swim beaches, picnicking, event facilities).

B. Increase public access where appropriate. The City of Leavenworth should seek to increase the amount and diversity of public access to shorelines consistent with shoreline public access plans, the natural shoreline character, property rights, public rights under the Public Trust Doctrine, and public safety.

C. Priorities. Public access should be maintained, enhanced, and increased in accordance with the following priorities unless found infeasible or unconstitutional:

1. Maintain existing public access sites and facilities, rights of way, and easements.
2. Provide new or enhance existing public access opportunities on existing public lands and easements.
3. Acquire property or easements to add public access opportunities to implement adopted public access plans and/or to recognize opportunities to protect areas that hold unique value for public enjoyment.
4. Encourage public access to shorelines as part of shoreline development activities.

D. Findings. City of Leavenworth should require public access in private development projects where City of Leavenworth can demonstrate nexus, proportionality and reasonable necessity for the public access requirement.

E Public access planning standards.

1. The City of Leavenworth should, in partnership with other federal, state, special district, and municipal agencies, aim for a shoreline public access system that results in:

   a. More than 90% of resident population within 15 miles of regional boating, fishing, trails, parks, and open space facilities.

   b. More than 50% of resident population within 1.5 miles of local/community shoreline parks and trails.

   See Appendix G for current and future levels of service.

2. Cities should implement planning standards that are consistent with their adopted parks and recreation plans as identified in Appendix G.

F. Implementation. The City of Leavenworth should implement their shoreline public access plans contained in Appendix G to meet growing resident and tourist populations. Implementation strategies should address public access and recreation standards and a capital improvement program. The City of Leavenworth should periodically review the shoreline public access plans, at a minimum every eight years. (RCW 90.58.080)

G. Public access exceptions. Public access should not be required where it is demonstrated to be infeasible due to reasons of incompatible uses, safety, security, or impact to the shoreline environment or due to constitutional or other legal limitations that may be applicable.

H. Willing property owners. Local governments and other agencies should seek willing property owners to participate in public access projects, such as through voluntary agreements such as conservation easements and trail easements. Where purchase of property is negotiated, local governments, agencies, or private parties seeking off-site mitigation areas are obligated to pay fair market value for private properties included in public access projects.

I. Respect private property. Public access does not include the right to enter upon or cross private property, except on dedicated public rights-of-way or easements or where development is specifically designed to accommodate public access. The design of public access should minimize potential impacts to private property and individual privacy. This may include providing a physical separation to reinforce the distinction between public and private space, and may be achieved by providing signage, adequate space, and/or through screening with landscape planting or fences.

J. Safety and environment. Public access should be designed consistent with public safety objectives. Public access design should also conserve or protect natural amenities. Where public access is determined to be incompatible due to reasons of safety, security, or impact to the shoreline, the proponent should consider alternate methods of providing public access, such as offsite improvements, viewing platforms, separation of uses through site planning and design and restricting hours of public access. Off-site public access improvements may be allowed if such improvements would provide a greater public benefit and reduce safety and environmental impacts.

K. Visual access. Views to shorelines contribute to the City and County's quality of life, tourism economy, and property values. City of Leavenworth should consider the following sub-policies when considering new development:

1. Views from Public Properties and Significant Numbers of Single Family Dwellings: Flexible development standards, such as height, bulk, scale, setbacks, lighting, and view corridors, should be established to assure preservation of unique, fragile, and scenic elements and to protect existing views from public property or large numbers of residences, particularly where development would exceed three stories in height.

2. Private views of the shoreline although considered during the shoreline permit review process, are not expressly protected, particularly when development is less than 35 feet in height. Property owners concerned with the protection of views from private properties are encouraged to obtain view easements, purchase intervening property, or seek other means of minimizing view obstruction.

L. Roads, streets, and alleys abutting bodies of water. Roads, streets, and alleys abutting bodies of water should be preserved, maintained, consolidated enhanced, and/or created for public access. Vacations of roads, streets, and alleys should be discouraged and only allowed in strict compliance with RCW 35.79.035 (Streets and Alleys) or RCW 36.87.130 (County Roads).

M. Fishing easements**.** In consultation with the Washington Department of Fish and Wildlife, The City of Leavenworth should review fishing easements on the Wenatchee River and other shoreline waterbodies to improve public access to the fishing easements. Actions may include adding identifiable signage, improving access on unused sites, consolidating access points for maintenance purposes, or land surplus, exchanges or purchases, etc.

N. Accessibility. Public access should be provided - to the water's edge without causing significant ecological impacts -Conserve open space and encourage open space considerations in future development. (Land Use Element, Open Space/Recreation, Goal 1)

O. Enhance public recreational opportunities by providing a variety of year-round active and passive recreational activities for both residents and visitors. (Land Use Element, Open Space/Recreation, Goal 2)

P. Develop and maintain parks and recreational facilities capable of serving the anticipated needs of Leavenworth, including the urban growth area. (Capital Facilities Element, General Goal 3)

Q. Where appropriate for recreation or open space purposes, the City of Leavenworth should encourage recreational use of derelict land, easements, tax delinquent land, surplus roadway/highway rights-of-way, and other land not presently in productive use where such land can be used for land exchange, purchase, or long-term leases for recreation purposes. (Parks and Recreation Comprehensive Plan Policy 1, bullet 2)

R. The City of Leavenworth should encourage the planning, development and full utilization of trails and recreation facilities. (Parks and Recreation Comprehensive Plan Policy 3)

S. Facilitate the development of an interconnecting trail system for the Upper Valley of Chelan County, consisting of sidewalks, bike lanes, and non-motorized shared-use paths for variety of trail users including bicyclists, equestrians, cross-country skiers, and pedestrians of all ages and skill levels. (Connectivity: 2009 Upper Valley Regional Trails Plan)

T. Increase access to local and regional recreational opportunities for people of all ages and levels of mobility. Provide a variety of trail experiences by locating trails of varying lengths and difficulty through diverse terrain, scenery, and points of attraction to draw users and maintain their interest. (Recreational Opportunities: 2009 Upper Valley Regional Trails Plan)

4.4.2 Regulations

A. The City's shoreline public access plan provides for a connected network of parks and open space connected by trails. The City's public access planning process provided in Appendix G provides more effective public access than individual project requirements for public access, as provided for in WAC 173-26-221(4)(d)(iii)(A). The City shall review shoreline developments for consistency with the Shoreline Public Access Plan in Appendix G.

B. Public and recreation shoreline uses and activities. Shoreline public access shall be required for the following public and recreation shoreline uses and activities:

1. Shoreline recreation pursuant to Section 5.15; (WAC 173-26-241(3)(i))
2. New structural public flood hazard reduction measures, such as dikes and levees; and (WAC 173-26-221 (3) (c) (iv))
3. Shoreline development by public entities, including local governments, port districts, state agencies, and public utility districts(WAC 173-26-221 (4) (d) (ii)).

C. Where commercial use is proposed on land in public ownership

D. Private development. Shoreline development along designated trail routes per Appendix G shall be located and designed to the standards and specifications within the 2011 City of Leavenworth Park and Recreation Plan and 2009 Upper Valley Regional Trails Plan, as amended.

E. Exceptions: Public access shall not be required if an applicant/proponent demonstrates at least one of the criteria "1" through "7" are met and that alternatives have been considered per criteria "8." (based on WAC 173-26-221(4)(d)(iii))

1. The development consists of less than five lots;
2. Unavoidable health or safety hazards to the public exist and cannot be prevented by any practical means;
3. Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;
4. Significant environmental impacts will result from the public access that cannot be mitigated;
5. Significant undue and unavoidable conflict between any access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated;
6. The subject site is separated from the shoreline waterbody by developed intervening public or private ownership;
7. Based on the shoreline public access plan in Appendix G, adequate public access has been installed in the Gap areas since the effective date of the SMP already exists along the subject shoreline, the proposed development is outside the Gap areas identified, in

adopted local government shoreline public access plans and there are no gaps or enhancements required to be addressed;

8. In making a determination, except in the case of E1 and E7, all feasible alternatives have been exhausted, including, but not limited to:

   a. where physical access is not feasible, providing for visual access instead;

   b. regulating access by such means as limiting hours of use to daylight hours;

   c. designing separation of uses and activities, i.e., fences, terracing, hedges, landscaping, signage, etc; or

   d. provision of an off-site public access or a fee-in-lieu pursuant to Subsection 5 that allows public access at a site physically separated from, but capable of serving the proposal.

F. Off-site Public Access or Fee-in-Lieu**.**

1. Off-site public access may be permitted by the City where it results in an equal or greater public benefit than on-site public access, or when on-site limitations of security, environment, or feasibility are present. Off-site public access may be visual or physical in nature. Off-site public access may include, but is not limited to, enhancing a nearby public property (e.g. existing public recreation site; existing public access; road, street or alley abutting a body of water; or similar) in accordance with the 2011 City of Leavenworth Park and Recreation Plan and 2009 Upper Valley Regional Trails Plan, as amended; providing, improving or enhancing public access on another property under the control of the applicant/proponent; or another equivalent measure.

2. Instead of on-site or off-site public access improvements, the City may require or an applicant may propose a fee-in-lieu. A fee-in-lieu may be assessed through the SEPA process or RCW 82.02.020, where appropriate, such as where the off-site improvement is best accomplished by the City at a later date or better implements the City's Shoreline Public Access Plan in Appendix G. The cost of providing the off-site public access shall be proportionate to the total long-term cost of the proposed development. The fee-in-lieu agreements or mitigation measures shall address the responsibility and cost for operation and maintenance. (based on WAC 173-26-221(4)(d)(iii))

3. Design Standards. Trail widths shall be in conformance with the 2009 Upper Valley Trails Plan except as may be modified due to geographic limitations.

4. Buffering Private Property. Public access facilities shall be compatible with adjacent private properties through the use of buffering or other techniques to define the separation between public and private space, including by not limited to: natural elements such as logs, vegetation, and elevation separations.

5. Connectivity. Physical public access shall be designed to connect to existing or future public access features on adjacent or abutting properties, or shall connect to existing public rights-of-way, consistent with design and safety standards.

6. Roads, Streets, and Alleys. The City may not vacate any platted road, street, or alley abutting a body of water except as provided under RCW 35.79.035.

7. Environmental Protection. Public access shall be designed to achieve no net loss of ecological functions. Where impacts are identified, mitigation shall be required. (WAC 173-26-221(4)(d)(iv))

8. Conditions of Approval. The City may condition public access proposals to ensure compatibility with the Shoreline Public Access Plan in Appendix G, compatibility with existing public access or transportation facilities, address environmental conditions or environmental impacts, compatibility with adjacent properties. Conditions may include but are not limited to the following:

    a. Use materials appropriate to the character and environmental condition;

    b. Include barrier free designs to meet Americans with Disabilities Act or Forest Service Trail Accessibility Guidelines/ Forest Service Outdoor Recreation Accessibility Guidelines;

    c. Provide auxiliary facilities such as parking, restrooms, refuse containers or other amenities;

    d. Provide landscaping;

    e. Provide signage with the appropriate State, County or City logo and hours of access as allowed by LMC;

    f. Establish operation and maintenance responsibilities;

    g. Identify dedication and recording requirements;

    h. Determine timing of public access installation in relation to the construction of the proposal; and

    i. Determine ongoing availability to the public or community for which it is designed

View Corridors. The City may condition shoreline development to avoid impacts to view corridors. See Section 5.1 of this SMP. Developments proposing to exceed height limits are subject to a conditional use permit, a view corridor analysis, and demonstration of criteria per Section 7.7.

4.5 Vegetation Conservation and Shoreline Buffers

4.5.1 Policies

A. Conserve shoreline vegetation. Where new developments, uses and/or redevelopments are proposed, shoreline vegetation, both upland and waterward of the OHWM, should be conserved to maintain shoreline ecological functions and processes. Vegetation conservation and restoration should be used to mitigate the direct, indirect and cumulative impacts of shoreline development, wherever feasible. Important functions of shoreline vegetation include, but are not limited to:

1. Providing shade necessary to maintain water temperatures required by salmonids and other organisms that require cool water for all or a portion of their life cycles.

2. Regulating microclimate in riparian and nearshore areas.

3. Providing organic inputs necessary for aquatic life, including providing food in the form of various insects and other benthic macroinvertebrates.

4. Stabilizing banks, minimizing erosion and sedimentation, and reducing the occurrence and severity of landslides.

5. Reducing fine sediment input into the aquatic environment by minimizing erosion, aiding infiltration, and retaining runoff.

6. Improving water quality through filtration and vegetative uptake of nutrients and pollutants.

7. Providing a source of large woody debris to moderate flows, create hydraulic roughness, form pools, and increase structural diversity for salmonids and other species.

8. Providing habitat elements for riparian-associated and aquatic species, including downed wood, snags, migratory corridors, breeding and rearing sites, food, and/or cover. (list based on WAC 173-26-221(5)(b))

B. Shoreline buffers. Regulations for shoreline buffers should be developed for the County and each City consistent with SMA objectives to protect existing ecological functions, accommodate water-oriented and preferred uses, recognize existing development patterns, and minimize creation of non-confirming uses and developments.

C. Native plant list. The City of Leavenworth with Chelan County maintains a list of suggested native plants to be utilized in restoration or mitigation plantings. Property owners may choose species from this list when native plants are desired or required, or may use other native species identified by the Washington Native Plant Society, Washington Department of Natural Resources Natural Heritage Program, Washington Department of Fish and Wildlife, or other agency or entity that has expertise.

D. Noxious and invasive weeds. Encourage management and control of noxious and invasive weeds. Control of such species should be done in a manner that retains onsite native vegetation, provides for erosion control, and protects water quality. Use of mechanical, non-toxic or natural controls is preferred. (WAC 173-26-221(5)(c)(i))

4.5.2 Regulations (based on extensive "Principles" [WAC 173-26-221(5)(b)] and "Standards" [WAC 173-26-221(5)(c)])

A. Conserve vegetation. Shoreline developments shall address conservation and maintenance of vegetation through compliance with this Section, the critical area standards in Appendix B, and Vegetation Conservation and Shoreline Buffers sections found in this SMP. Uses and modifications must be designed and located to ensure that the development will not result in a net loss of shoreline ecological functions or have significant adverse impacts to shoreline uses, resources, and values provided for in RCW 90.58.020.

B. Existing uses may continue. Vegetation conservation standards shall not apply retroactively to existing, legally established uses and developments. Existing structures, uses and developments, including residential appurtenances, may be maintained, repaired, and operated within shoreline jurisdiction and within shoreline and critical area buffers established in this SMP. In the absence of a development proposal, existing, lawfully established landscaping and gardens within shoreline jurisdiction may be maintained in their existing condition including but not limited to, mowing lawns, weeding, removal of noxious and invasive species, harvesting and replanting of garden crops, pruning and replacement planting of ornamental vegetation or indigenous native species to maintain the condition and appearance of such areas as they existed prior to adoption of this SMP, provided this does not apply to areas previously established as native growth protection areas, mitigation sites, or other areas protected via conservation easements or similar restrictive covenants.

C. Adverse impacts on vegetation. Adverse impacts to shoreline vegetation are considered to occur when vegetation is removed that would reduce the performance of any of the functions listed in SMP Section 4.5.1.A.

1. For example, the following actions would be considered an adverse impact:

a. Removal or alteration of native plant communities in shoreline jurisdiction, except when the alteration is part of an approved restoration plan;

b. Removal of native or non-native trees that overhang the stream, river or lake shoreline waterbody;

c. Removal of native or non-native vegetation on slopes if that vegetation supports maintenance of slope stability and prevents surface erosion; or

d. Removal of vegetation, followed by supplemental grading and alteration of existing drainage patterns.

2. For example, the following vegetation alteration actions would not be considered an adverse impact when they occur outside of a shoreline buffer as established in this SMP:

a. Removal of existing lawn, landscaping or other non-native vegetation associated with existing residential, commercial, industrial or other regulated uses provided that any impervious surfaces that may replace removed vegetation are infiltrated, treated, and/or detained as necessary to control potential adverse impacts to water quality or quantity;

b. Removal of native shrub or groundcover vegetation on lots upland of an improved road, railroad or other development that prevents vegetation on the subject property from providing functions identified in SMP Section 4.5.2.A, provided that the development is sited to minimize native vegetation removal and that new impervious surfaces that may replace removed vegetation are infiltrated, treated, and/or detained as necessary to control potential adverse impacts to water quality or quantity; or

c. Removal of invasive or noxious plant species, if replaced with species that provide similar ecological functions such as soil retention and water quality improvement.

D. Tree Pruning and Removal for Safety and Development.

1. Selective pruning of trees for safety is allowed if consistent with the provisions of Section 4.2, Ecological Protection and Critical Areas; and Appendix B, Critical Areas Regulations.

2. Where trees pose a significant safety hazard as indicated in a written report by a certified arborist or other qualified professional, they may be removed if the hazard cannot be removed by topping or other technique that maintains some habitat function. Stumps should be retained in the ground to provide soil stabilization unless another soil stabilization technique, which may trigger additional review by regulatory agencies, is utilized immediately after stump removal.

3. All other tree removal in shoreline jurisdiction proposed as part of an approved use or development shall be minimized through site design, and mitigated if the tree removal has an adverse impact as outlined in SMP Section 4.5.2.C. When required, tree replacement shall occur minimally at a 1:1 ratio, with native trees replaced with a similar native tree. Non-native trees may be replaced with a native tree or another non-native tree, provided that no invasive or noxious trees are allowed.

E. Buffers. Table 3 establishes buffers to be measured landward in a horizontal direction perpendicular to the OHWM of the shoreline waterbody.

Table 3. Shoreline Buffers by Environment Designation.

Environment Designation	Standard Buffer	Standard Reduced Buffer	Maximum Reduced Buffer

Urban Park	150’	112.5’	75’
Shoreline Residential	80’	60’	40’
High Intensity	60’	40’	25’

Note: When environment designations are parallel, the buffer of the waterward environment extends only to the upland edge of that environment. The buffer for the landward environment would apply to uses and modifications in that upland environment. See 1-3 below for criteria guiding buffer reductions.

F. Filling, clearing and grading. Filling, clearing and grading in shoreline jurisdiction shall be limited to the minimum necessary to accommodate approved shoreline development and shall also be in conformance with the provisions of Section 5.9, Fill; in addition to Section 4.2, Ecological Protection and Critical Areas; and Appendix B, Critical Areas Regulations. All earth-altering activities shall utilize best management practices to minimize and control erosion.

G. Mitigation required. The following standards apply specifically to projects that may adversely impact ecological functions provided by vegetation. See also the requirements of Section 4.2 of this SMP, which more generally address mitigation requirements for impacts to all ecological functions.

1. Where adverse impacts to shoreline ecological functions provided by vegetation are proposed, and after mitigation sequencing has been applied as outlined in Section 4.2.2.A, new developments or site alterations shall be required to develop and implement a mitigation plan.

2. When required, mitigation plans shall be prepared by a qualified professional and shall be consistent with the relevant mitigation plan requirements of the appropriate responsible government in Appendix B, including a three-year monitoring plan, or other monitoring timeframe specified by local, state or federal permitting agencies, and scaled drawings of existing and proposed conditions.

3. Mitigation plans shall describe actions that will ensure no net loss of ecological functions to the maximum extent practicable at the site scale, and shall describe the functions impacted per the list of potential functions provided in SMP Section 4.5.1.A above, and how the mitigation plan addresses those specific functions. For example, if vegetation removal results in loss of overhanging vegetation that provides shade, detritus and insects, the mitigation plan shall include supplemental overhanging vegetation where feasible. If the vegetation removal could destabilize a slope and increase erosion, the mitigation plan -shall include re-vegetation in combination with erosion control measures to protect water quality and include other measures that help stabilize slopes.

4. Mitigation plans shall include a performance standard of 100 percent survival for the first year of growth post installation, with no less than 80 percent survival at the end of the third year.

5. Mitigation measures specified in the mitigation plan shall be maintained over the life of the use and/or development and recorded on appropriate document which can be passed to future owners.

H. Unauthorized vegetation removal. Vegetation removal within shoreline jurisdiction that is not allowed under this Section and is conducted without the appropriate review and approvals is subject to enforcement provisions in Section 7.15 and requires the submittal and approval of a restoration plan prepared by a qualified professional, and shall be consistent with the provisions of Section 4.2, Ecological Protection and Critical Areas and appropriate requirements of

Appendix B, Critical Areas Regulations. The restoration plan shall utilize only native vegetation, and shall be designed to compensate for temporal loss of function and address the specific functions adversely impacted by the unauthorized vegetation removal.

I. Non-native vegetation. With the exception of hand removal or spot-spraying of invasive or noxious weeds, the determination of whether non-native vegetation removal may be allowed in a shoreline buffer or critical area buffer must be evaluated in conformance with Section 4.2, Ecological Protection and Critical Areas and appropriate requirements of Appendix B, Critical Areas Regulations. Such removal of noxious weeds and/or invasive species shall be incorporated in mitigation plans, as necessary, to prevent erosion and facilitate establishment of a stable community of native plants. Non-native vegetation removal outside of shoreline buffers or critical area buffers does not require mitigation, except as noted under Subsections B and E above, but must incorporate necessary erosion control measures.

J. New structures or developments prohibited. New structures or developments, including, but not limited to, pools, decks, patios, residence additions, sheds, fences, or other residential appurtenances, are not permitted in shoreline buffers except as specifically allowed in this section, or as determined in the Nonconforming Uses and Development Standards sections of this Master Program.

K. Water-dependent uses. Consistent with the use allowances for each environment designation, water-dependent uses and activities may be located at the water's edge, or as prescribed by conditions added to a permit. Uses, developments and activities accessory to water-dependent uses should be located outside any applicable standard or reduced shoreline buffer unless at least one of the following is met:

1. A location in the buffer is necessary for operation of the water-dependent use or activity (e.g., a road to a boat launch facility);
2. In parks or on other public lands that are already legally established and whose use is primarily related to access to, enjoyment and use of the water, they do not conflict with or limit opportunities for other water-oriented uses; or
3. The applicant's lot/site has topographical constraints where no other location of the development is feasible (e.g., the water-dependent use or activity is located on a parcel entirely or substantially encumbered by the required buffer).

In these circumstances, uses and modifications accessory to water-dependent uses must be designed and located to minimize intrusion into the buffer and should also be consistent with Section 4.2, Ecological Protection and Critical Areas and Section 4.4, Public Access. All other accessory uses, developments and activities proposed to be located in a shoreline buffer must obtain a Shoreline Variance unless otherwise allowed by other regulations in this section or in this SMP. Applicants are encouraged to consider the options of buffer averaging or buffer reduction and optimally implement mitigation sequencing prior to applying for a Shoreline Variance.

L. Essential Public facilities. Consistent with the use allowances for each environment designation, other essential public facilities as defined by RCW 36.70A.200, pre-existing public access and pre-existing recreation facilities and their accessory uses and developments may be located and minimally expanded in the shoreline buffer if the use or activity cannot be reasonably accommodated or accomplished outside of the standard or reduced shoreline buffer. Essential public facilities must - demonstrate that alternative sites are not available. These uses and modifications must be designed and located to minimize intrusion into the buffer and should also be consistent with Section 4.2, Ecological Protection and Critical Areas and Section 4.4, Public Access.

M. Modifications Necessary for Agency Compliance or Court Compliance: Modifications to existing development that are necessary to comply with environmental requirements of any State or Federal agency or court, when otherwise consistent with the Shoreline Master Program, may be located in and expanded in the shoreline buffer if the use or activity cannot be reasonably accommodated or accomplished outside of the standard or reduced shoreline buffer provided that the reviewing official determines that:

1. The facility cannot meet the dimensional standard and accomplish the state, federal or court ordered modification necessary to bring it into compliance;
2. The facility's modification are located, designed, and constructed to meet specified required modification standards necessary while complying with mitigation sequencing, and minimizing damage to ecological function and values of critical area and or shoreline; and
3. The modification follows necessary provisions for non-conforming development and uses.

N. Passive allowed activities. Education, scientific research, and passive recreational activities, including, but not limited to: fishing, bird watching, hiking, hunting, boating, horseback riding, snowshoe or cross-country skiing, swimming, canoeing, and bicycling, are allowed within shoreline jurisdiction and within established shoreline and critical area buffers without a shoreline permit, provided the activity does not include elements that meet the definition of "development." For example, hiking through the woods or along a shoreline is allowed outright and does not require a permit; however, construction of a new trail on which to hike would constitute a development that must be permitted and may be allowed subject to all the provisions of this SMP.

O. Site investigation allowed. Site investigative work necessary for land use application submittals such as surveys, soil logs, drainage tests and other related activities, may occur within shoreline jurisdiction and within shoreline and critical area buffers established in this SMP. In every case, buffer impacts should be avoided and/or minimized and disturbed areas shall be immediately restored.

P. Siting of roads. Where other options are available and feasible, new roads or road expansions shall not be built within shoreline jurisdiction. Crossings, where necessary, shall cross shoreline and critical area buffers as near perpendicular as possible, unless an alternate path would minimize disturbance of native vegetation or result in avoidance of other critical areas such as wetlands or geologically hazardous areas. If no alternative exists to placing a roadway in shoreline jurisdiction, a mitigation plan prepared by a qualified professional must be submitted, and must be consistent with the provisions of Section 4.2, Ecological Protection and Critical Areas and appropriate requirements of Appendix B, Critical Areas Regulations.

Q. Utilities. Where no other practical alternative exists to the excavation for and placement of wells, tunnels, utilities, or on-site septic systems in a shoreline and critical area buffer, these uses may be permitted if also allowed under Section 5.20, Utilities. A mitigation plan must be prepared by a qualified professional, and must be consistent with the provisions of Section 4.2, Ecological Protection and Critical Areas, and appropriate requirements of Appendix B.

R. Trails. Trails and associated facilities may be permitted in shoreline buffers, but should conform to design guidelines found in Public Access sections of this SMP. A mitigation plan must be prepared by a qualified professional, and must be consistent with the provisions of Section 4.2, Ecological Protection and Critical Areas, and appropriate requirements of Appendix B, Critical Areas Regulations.

S. Shoreline Buffer Width Reduction.

1. Standard Buffer Reduction. Reductions of up to twenty-five (25) percent of the standard buffer may be approved if the applicant demonstrates to the satisfaction of the Shoreline Administrator that:

    a. Modification of building height or setback standards pursuant to Subsection A.3 would not allow the standard buffer to be achieved and either criteria 1.b or 1.c is applicable.

    b. A mitigation plan pursuant to Subsection A.4 indicates that enhancing the buffer (by removing invasive plants, planting native vegetation, installing habitat features such as downed logs or snags, or other means) will result in a reduced buffer that functions at a higher level than the existing standard buffer; or

    c. Conditions unique to the site, including legally existing uses, developments(established prior to the effective date of this SMP), or naturally existing topographic barriers, exist between the proposed development and the OHWM, which substantially prevent or impair delivery of most riparian functions from the subject upland property to the waterbody.

2. Maximum Buffer Reduction.

    a. If the applicant can demonstrate that a use cannot be accommodated or accomplished outside of the standard or standard reduced buffer, a reduction in the buffer width not exceeding fifty (50) percent may be approved administratively. The applicant must demonstrate need for any buffer reduction greater than 25 percent by submitting the following:

        i. A site plan showing clearly the boundaries of the parcel, shoreline jurisdiction, the standard buffer, the standard reduced buffer, and the proposed reduced buffer side yard setbacks, and road setbacks.

            (1) A narrative description of the design alternatives considered as part of each mitigation sequencing step outlined in Section 4.2.2.A, and how the applicant's proposal incorporates mitigation sequencing to the maximum extent practicable.

            (2) A narrative description of the spatial needs of the proposed use. Adequate space for a single-family residence and associated yard is considered to be available when the buildable lot depth after application of either the standard buffer or standard reduced buffer and after front yard setbacks are maximally reduced is seventy fifty (50)feet or greater. For other uses, the Shoreline Administrator will decide what the minimum space requirements are based on the information provided by the applicant. -A mitigation plan as outlined in Section A.4 below.

        ii. The Shoreline Administrator may approve a maximum buffer reduction according to the following review criteria:

            (1) Modification of building height or setback standards pursuant to Subsection A.3 including reduction LMC road setbacks would not allow the standard buffer to be achieved.

            (2) The applicant has demonstrated a hardship whereby the proposed use could not be accommodated without a reduced buffer, and the approved buffer reduction is no more than that necessary to accommodate the proposed shoreline use.

(3) The applicant's mitigation plan demonstrates that the selected mitigation options in Subsection A.4 achieve an equal or greater protection of ecological functions than the standard buffer.

3. Modification of height or other setback standards. The City may allow an increase in height above applicable SMP height standards (as allowed by Section 5.1.2.E) or property setback standards if those actions will reduce or eliminate the need for the buffer reduction. These modifications of standards may be approved without a Shoreline Conditional Use Permit or a Shoreline Variance if the modification is consistent with underlying zoning regulations and is not anticipated to have adverse impacts on adjacent properties.

4. Mitigation Plan. For use of either the standard reduced buffer or the maximum reduced buffer, the applicant must submit a mitigation plan that addresses the specific habitat components and/or ecological functions that may be lost as a result of either reduction mechanism. Mitigation plan elements, including monitoring and maintenance, shall be included in the plan consistent with mitigation plan requirements outlined in the City of Leavenworth critical areas regulations (see Appendix B). Plan elements may include one or more of the mitigation options provided in the chart below to achieve an equal or greater protection of ecological functions:

Table 4. Shoreline Setback Reduction Options

Shoreline Setback Reduction Options		**Reduction Allowance**
Water Related Conditions or Actions		
1	Presence of non-structural or soft structural shoreline stabilization measures located at, below, or within 5 feet landward of the OHWM along at least 75 percent of the linear shoreline frontage of the subject property. This can include the removal of an existing hard structural shoreline stabilization measure and subsequent restoration of the shoreline to a natural or semi-natural state, including restoration of topography, and substrate composition. This option cannot be used in conjunction with Option 2 below.	35 percent
2	Presence of non-structural or soft structural shoreline stabilization measures located at, below, or within 5 feet landward of the OHWM along at least 25 percent of the linear shoreline frontage of the subject property. This may include the removal of an existing hard structural shoreline stabilization measure and subsequent restoration of the shoreline to a natural or semi-natural state, including creation or enhancement of nearshore shallow-water habitat, beach/substrate composition. This option cannot be used in conjunction with Option 1 above.	20 percent
3	Opening of previously piped on-site watercourse to allow potential rearing opportunities for native fish for a minimum of 25 feet in length. Opened watercourses must be provided with a native planted buffer at least 10 feet wide on both side of the stream, and must not encumber adjacent properties without express written permission of the adjacent property owner. A qualified professional must design opened watercourses. The opened watercourse shall be exempt from the buffer requirements and standards of Appendix B.	15 percent
4	Existing hard structural shoreline stabilization measures are setback from the OHWM more than five (5) feet and/are sloped at a maximum 3 vertical (v): 1 horizontal (h) angle to provide dissipation of wave energy and increase the quality or quantity of nearshore habitat.	20 percent

Shoreline Setback Reduction Options		Reduction Allowance
5	Install large woody debris (minimum three pieces), plant and maintain aquatic emergent vegetation (minimum 25 ft^2), or restore aquatic substrate (minimum 250 ft^2) depending on the site's particular ecological condition and needs.	10 percent
6	Implement any other enhancement measure indicated by the Shoreline Restoration Plan, to an extent proportional to the proposed project's impacts.	10 percent
Upland Related Conditions or Actions		
7	Installation of biofiltration/infiltration mechanisms in lieu of piped discharge to the shoreline waterbody, such as mechanisms that infiltrate or disperse surface water on the surface of the subject property. These mechanisms shall be sized to store a minimum of 70% of the annual volume of runoff water from the subject property, for sites with poor soils, or 99% of the annual volume of runoff water from the subject property, for sites with well-draining soils. This mechanism shall apply to sites where the total new or replaced impervious surface is less than or equal to 5,000 square feet. The mechanisms shall be designed to meet the requirements of Ecology's *Stormwater Management Manual for Eastern Washington.*	20 percent
8	Installation of pervious material for 50 percent of all new pollution generating surfaces such as driveways, parking or private roads that allows water to pass through at rates similar to pre-developed conditions.	15 percent
9	Restoring at least 20 percent of the total lot area outside of the reduced setback and any critical areas and their associated buffers as native vegetation.	10 percent
10	Implement any other enhancement measure indicated by the Shoreline Restoration Plan, to an extent proportional to the proposed project's impacts.	10 percent

a. The City shall accept previous documented restoration actions that meet the provisions established in the setback reduction option chart as satisfying the requirements of this section, provided the previous action was: voluntary; not otherwise a requirement of the City either through specific regulation or as mitigation for prior development impacts; occurred on the site within the previous five years and after the effective date of this program; and that all other provisions are completed, including, but not limited to, the agreement noted in c. below. The reduction allowance for previously completed reduction actions may only be applied once on the subject property. Mitigation credit for prior restoration activities shall be determined upon application for the impacting project, and shall at a minimum, be commensurate with the proposed level of impact unless additional compensatory mitigation is provided.

b. Prior to issuance of a certificate of occupancy or final inspection, the applicant shall provide a final as-built plan of any completed improvements authorized or required under this subsection.

c. Applicants who obtain approval for a reduction in the setback must record the final approved setback and corresponding conditions, including maintenance of the conditions throughout the life of the development, unless otherwise approved by the City, in a form acceptable to the City and recorded with the County Auditor.

d. Where opportunities to mitigate in kind and on site are not available or adequate, the mitigation plan may include off-site or out-of-kind mitigation, or contributions to a fee in lieu restoration program when established. When off-site mitigation is proposed, projects included in the Restoration Plan found in Appendix C of this SMP shall be considered first.

5. The design of uses or activities under Subsection 4.5.A. shall avoid existing vegetation to the maximum extent practicable, and any impacts to existing vegetation or ecological functions must be mitigated as outlined in Section 4.2 and Appendix B.

6. These provisions do not apply to those portions of water-dependent or direct shoreline public access development that require improvements or uses adjacent to the water's edge, such as, haul-out areas for retail establishments providing boat and motor repair and service, boat launch ramps for boat launches, swimming beaches or other similar activities. Where space is available, the required native vegetation shall be planted in the shoreline setback area that is not being used for water-dependent or public access uses.

T. Additional Standards.

A. Landscape Standard for New Development, or Expansion. Sites that are currently undeveloped, or expanding existing impervious footprints by more than 10 percent of the existing site's impervious footprint, the development must provide a native landscape plan that meets the following criteria:

1. The applicant shall plant native vegetation, as necessary, along at least 75 percent of the shoreline frontage located along the water's edge. The nearshore riparian area shall be planted with an average fifty (50) percent of the width of the standard buffer or the same area required under the standard buffer in the approved reduced buffer, as measured from the OHWM. When the expansion footprint totals less than 500 square feet, the maximum linear feet of shoreline frontage required to be planted is 125 feet.

2. Restoration of native vegetation shall consist of a mixture of trees and shrubs typical of a native undisturbed riparian community in composition and structure, and be designed to improve habitat functions. At least eight (8) trees per 100 linear feet of shoreline must be included in the plan, and at least 80 percent of the restoration plan area shall be vegetated with trees or shrubs. The remaining 20 percent of the restoration plan area may be vegetated with groundcover. Plant materials must be native to Chelan County and the local watershed, and appropriate for the site's particular soil, exposure, and hydrologic conditions.

3. Restoration plan elements, including monitoring and maintenance, shall also be included in the plan consistent with mitigation plan requirements outlined in the City of Leavenworth critical areas regulations (see Appendix B).

4. Alternative Compliance with Landscape Standard. Vegetation required by this subsection shall be installed unless the applicant demonstrates one of the following and provides an alternative vegetation plan:

a. The vegetation will not provide shoreline ecological function due to existing levees, dikes or dams extend landward of the required shoreline buffer from the OHWM; or

b. It is not feasible to plant all of the required vegetation on the subject property, given the existing tree canopy coverage and location of trees on the property, the location of structures on the property, or minimum spacing requirements for the vegetation to be planted; or

c. The required vegetation placement will obstruct existing views to the river, at the time of planting or upon future growth, which cannot otherwise be mitigated through selection placement or maintenance activities. The applicant shall be responsible for providing sufficient information to the City to determine whether the vegetation placement will obstruct existing views to the river.

d. The alternate measures must be equal or superior to the provisions of this subsection in accomplishing the purpose and intent of maintaining and improving shoreline ecological functions and processes.

e. Requests to use alternative measures shall be reviewed by the Shoreline Administrator who may approve, approve with conditions, or deny the request.

f. If the alternative plan is consistent with the standards provided in this subsection, the Shoreline Administrator shall approve the plan or may impose conditions to the extent necessary to make the plan consistent with the provisions. If the alternative mitigation is denied, the applicant shall be informed of the deficiencies that caused its disapproval so as to provide guidance for its revision and re-submittal

B. These provisions do not apply to those portions of public recreational water-oriented uses and water-dependent uses that require improvements adjacent to the water's edge, including, but not limited to, haul-out areas for retail establishments providing boat and motor repair and service, boat launch ramps for boat launching, swimming beaches or other similar activities. Where space is available, the required native vegetation shall be planted in the shoreline setback area that is not being used for public recreational water-oriented uses and water-dependent uses. Any impacts to ecological functions must be mitigated.

C. Private physical shoreline access. A private access pathway constructed of pervious materials may be installed, a maximum of four (4) feet wide. Trails serving as community shoreline access paths may be no greater than six (6) feet in width. Community access trails shall placed in the outer (landward side) 25% of the required buffer, to the greatest extent feasible. Access paths down to the shoreline are limited to the areas identified in the site drawing as shoreline access paths/trails and may pass, through the shoreline buffer. Impervious materials may be used only as needed to construct a safe, tiered pathway down a slope. A railing may be installed on one edge of the pathway, a maximum of 36 inches tall and of open construction. Pathways to the shoreline should take the most direct route feasible.

D. Mitigation. All mitigation areas shall be permanently identified and protected by means of a conservation easement or similar legal instrument recorded with the County Auditor.

E. Tree Retention. To maintain the ecological functions that trees provide to the shoreline environment, significant trees shall be retained as follows:

1. Within shoreline jurisdiction, significant trees shall not be removed or topped for the purpose of creating views. Tree removal activities would include direct or indirect actions, including, but not limited to: (1) clearing, damaging or poisoning resulting in an unhealthy or dead tree; (2) removal of at least half of the live crown; or (3) damage to roots or trunk that is likely to destroy the tree's structural integrity.

2. Within any shoreline buffer, significant trees shall be retained to the maximum extent possible, except where the tree is dead, diseased, dying or hazardous as determined by a qualified professional. The applicant shall be encouraged to retain viable trees in other areas on-site.

3. If removal of a non-hazard significant tree in the shoreline buffer area is approved, a two-for-one replacement is required. For hazard trees, a one-for-one replacement is required. The required minimum size of the replacement tree(s) shall be five (5) feet tall for a conifer and one and three-quarters inches (1 ¾) caliper for deciduous or broad-leaf evergreen tree.

4. For required replacement trees, a planting plan showing location, size and species of the new trees is required. All replacement trees in the shoreline buffer must be native species.

U. In addition to City of Leavenworth-specific buffer reduction and/or averaging provisions above, buffers may be administratively modified as outlined below:

A. Roads and Railways. Where a legally established road or railway crosses a shoreline or critical area buffer, the Shoreline Administrator may approve a modification of the minimum required buffer width to the waterward edge of the legally established improved road or railway as of the effective date of this SMP.

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B. New Development.

1. New development in shoreline jurisdiction on undeveloped or redevelopment of sites shall be sited to minimize removal of existing significant trees and native vegetation. Removal of significant trees shall be compensated as outlined in Subsection E below and removal of other native vegetation must be compensated minimally at a 1:1 ratio with supplemental native shrub and groundcover plantings in the buffer, mature tree and shrub removal shall be addressed in the mitigation plan and may require a greater replacement ratio to account for temporal loss. When the buffer would not benefit from enhancement (when the buffer has a fully functioning vegetated riparian area), compensatory plantings may be installed in a corridor perpendicular to the OHWM and extending upland of the buffer outside of the development footprint. There should be an emphasis on connectivity of vegetative corridors when this option is chosen.

2. In the Shoreline Park/Public environment (this allowance is not applicable to Blackbird Island), new or expanded nonwater-oriented development must comply with the shoreline buffer identified in Table 4.5-1. In recognition of the existing condition of current and planned City shoreline parks and recreation facilities located in the Shoreline Park/Public environment designation, the following standards shall guide new development and redevelopment of water-oriented public access and recreation facilities. Applicants shall submit a management plan that addresses compliance with each of the following applicable standards and principles. The City may review and condition the project to more fully implement the principles below.

3. Table 5. Design and Management Standards

Design Element	Design and Management Standards
1. Category of Use	• Only water-dependent uses may be located immediately upland of the OHWM. • Accessory and primary water-oriented uses shall be located upland of a water-dependent use except that parking for those with disabilities when no other location is feasible may be located per “3” below. • New or expanded public water-oriented recreational development shall avoid existing riparian areas and comply with vegetation management requirements below.

Design Element	Design and Management Standards
	• Existing primary nonwater-oriented uses may only expand if they are located upland of water-oriented uses and if the expansion does not displace water-oriented uses. • Water-enjoyment recreational uses may be expanded. • Existing water-oriented uses may not be converted to a nonwater-oriented use except when the existing water-oriented use is separated from the OHWM by a levee or another property.
i. Impervious Surface and Stormwater Management	• New and expanded pollution-generating impervious surfaces (e.g., surfaces used predominantly by vehicles, such as parking areas, roads, or boat launches) must provide water quality treatment before discharging stormwater, through use of oil-water separators, bioswales, or other approved technique. • Treated runoff from pollution-generating impervious surfaces and runoff from non-pollution-generating impervious surfaces shall be infiltrated if feasible. • New or expanded pollution-generating impervious surfaces within 50 feet of the OHWM or within already disturbed areas shall be limited to those necessary to provide vehicle access to boat launches, to improve existing informal parking areas, to expand existing parking, or to provide ADA parking as outlined below under ii. Parking. • New or expanded trail systems shall avoid existing riparian areas and comply with vegetation management requirements below. Existing trail systems may only be expanded in response to increased demand, and shall be expanded in the following order of preference, with number 1 being the most preferred: 1) upland outside buffers found in Table 4.5.2, 2) landward of existing trail and 3) laterally.
ii. Parking	• New parking accessory to shoreline parks shall be at least 70 feet upland of the OHWM, except where a minimum number of parking spaces are provided closer than 70 feet to accommodate those with disabilities or where parking is provided in existing impervious surfaces. • Existing parking closer than 70 feet upland of the OHWM may only be expanded in response to increased demand. Expanded parking shall be expanded in the following order of preference, with 1) being the most preferred: 1) upland, 2) landward of existing parking and 3) laterally of the existing parking, if it is serving a previously existing authorized use and is located on existing impervious surface. Parking shall not be located closer than 50 feet upland of the OHWM unless the proposed expansion area is already an impervious surface or is necessary to accommodate those with disabilities.
iii. Vegetation Management	• New and expanded uses in shoreline jurisdiction shall be located to avoid and minimize intrusion into riparian areas, as well as avoid tree and shrub removal. • Significant tree removal in the shoreline buffer shall be mitigated at a 2:1 ratio and as otherwise consistent with SMP Section 4.4.5.E. • Other trees and shrubs in the shoreline buffer shall also be replaced at a 2:1 ratio using the same preference for location established for significant trees. • Landscape designs for new and modified recreation facilities in the shoreline jurisdiction shall incorporate the following. 1. Select species that are suitable to the local climate, having minimal demands for

Design Element	Design and Management Standards
	water, minimal vulnerability to pests, and minimal demands for fertilizers. Native species shall comprise 50 percent of the landscaped area, not counting lawn area. Redevelopment of lawn areas shall be no closer than 20 from the OHWM. Native grasses may be used within the first 20 feet landward of the OHWM. If lawn areas are not currently established within buffers required in Table 4.5-1, the existing riparian vegetation within the buffer shall be maintained, unless a mitigation management plan demonstrates ecological lift. 2. Preserve existing soil and vegetation (especially trees) where possible. Amend disturbed soils with compost. Mulch existing and proposed landscapes regularly with wood chips, coarse bark, leaves or compost. 3. Group plants by water need, use more efficient irrigation methods like drip and soakers under mulch, and design and maintain irrigation systems to reduce waste. 4. Place vegetation to maximize the following benefits: – development or supplementation of a native vegetated wildlife corridor, – development or supplementation of riparian vegetation adjacent to the water's edge, – screening parking areas from views from the water or the park, and/or – discouragement of wildlife that may directly or indirectly interfere with park use or human health (e.g., geese), 5. While a specified buffer is not required for public park areas, recreational improvement projects shall place an emphasis on shoreline restoration/enhancement inside of those buffers found in Table 4.5.-1. This emphasis shall not require the removal of existing lawn areas, but should place an emphasis on incorporation of riparian plantings if the public access area is underutilized or public access would not be impaired by the plantings.
iv. Chemical Applications	• A lawn and landscape management strategy for any allowed uses in the shoreline buffer shall be developed that incorporates the following: 1. A site-specific plan for use of integrated pest management technique, if applicable. 2. A detailed plan identifying anticipated use of fertilizers, herbicides and pesticides, to include method of application that ensures these materials will not enter the water. Phosphorus-containing fertilizer treatments shall not be applied to turf or landscaping within 50 feet of the OHWM. Natural applications and hand removal are preferred over synthetic applications.
6. Pools	• Pools and other upland recreational uses that utilize chemically treated water must either be connected to a sewer system or must collect the water for later discharge into a sewer system. • Pools and other upland recreational uses that utilize chemically treated water shall be located 75 feet upland of the OHWM.
7. Lighting	• Outdoor lighting fixtures and accent lighting must be shielded and aimed downward, and shall be installed at the minimum height necessary. The shield must mask the

Design Element	Design and Management Standards
	direct horizontal surface of the light source. The light must be aimed to ensure that the illumination is only pointing downward onto the ground surface, with no escaping direct light permitted to contribute to light pollution by shining upward into the sky. • Outdoor lighting fixtures and accent lighting shall not directly illuminate the stream or river, unless it is a navigational light subject to state or federal regulations.

C. Public/Park development or redevelopment application requirements:

1. Existing drawings of park facilities which provides a narrative to include area (sq. feet or sq. meters) description of trails, parking, riparian vegetation, campsites, recreational facilities (ball parks, picnic table, grilling areas) upland vegetation and lawn areas.

2. Proposed Drawings of park facilities which provides a narrative to include area (sq. feet or sq. meters) description of trails, parking, riparian vegetation, campsites, recreational facilities (ball parks, picnic table, grilling areas) upland vegetation and lawn areas.

3. Any increases in impervious surfaces (trail size, parking facilities, recreational facilities, etc.) shall be accompanied by a needs analysis that addressed the requirement for increased public facilities, what size facilities are needed citizens and where these facilities are or are not provided nearby.

4. Expansion of public/park facilities shall be accompanied by a mitigation management plan that addresses the design elements and the design and management standards above, address critical area impacts, and addresses the incorporation of applicable SMP restoration goals that have been accomplished by the development and demonstrates an ecological lift to shoreline functions.

D. Existing Development.

1. Landward of Standard Buffer. Existing development located landward of the standard buffer may redevelop or expand to the edge of the standard buffer consistent with the following:

   i. Where such redevelopment results in removal of native vegetation, minimally an equivalent area of native vegetation shall be planted in the buffer, mature tree and shrub removal shall be addressed in the mitigation plan and may require a greater replacement ratio to account for temporal loss. .

   ii. Where such redevelopment results in removal of significant trees, compensation shall be provided as outlined in Subsection E below.

2. Inside the Standard Buffer. Existing development located inside the standard buffer may expand vertically or landward of the development. Expansions waterward are prohibited except when the reduced buffer is consistent Section 4.5. All other expansions within the buffer must obtain a Shoreline Variance. Expansions within the standard buffer laterally toward the side lot lines may be allowed provided any impacts to vegetation are mitigated consistent with this Section, and any new impervious surfaces are infiltrated or treated prior to discharge into a waterbody.

F. Conflicts with flood hazard reduction measures. In those instances where management of vegetation as required by this SMP conflicts with vegetation provisions included in state, federal or other flood hazard agency documents governing licensed or certified flood hazard reduction measures, the requirements of this SMP will not apply. However, the applicant shall submit

documentation of these conflicting provisions with any shoreline permit applications, and shall comply with all other provisions of this section and this SMP that are not strictly prohibited by certifying or licensing agencies.

4.6 Water Quality, Stormwater and Nonpoint Pollution

4.6.1 Policies

A. Do not degrade waters. The location, construction, operation, and maintenance of all shoreline uses and developments should maintain or enhance the quantity and quality of surface and groundwater over the long term.

B. Assess and mitigate stormwater impacts. New developments or expansions or retrofits of existing developments should assess the effects of additional stormwater runoff volumes and velocities, and mitigate potential adverse affects on shorelines through design and implementation of appropriate stormwater management measures.

C. Low impact development. Use of low impact development (LID) techniques for minimization of impervious surfaces and management of stormwater runoff is encouraged.

D. Minimize need for synthetic chemical applications. Shoreline use and development, including invasive or noxious weed control, should minimize the need for synthetic chemical fertilizers, pesticides or other similar synthetic chemical treatments to prevent contamination of surface and ground water and/or soils and adverse effects on shoreline ecological functions and values. Use of natural and non-synthetic applications are encouraged when treatment is necessary.

E. Provide and maintain buffers**.** Appropriate buffers along all wetlands, streams, and lakes should be provided and maintained for new development in a manner that avoids the need for chemical treatment for vegetation management and be consistent with critical areas ordinances and best management practices.

F. Existing development. For existing development, implementation of management plans that minimize or avoid the need for chemical treatments of vegetation in shoreline buffers is encouraged. When lands owned by the City of Leavenworth are leased to private parties, a vegetation management plan should be negotiated during lease renewal.

G. Low Impact Development (LID) techniques should be considered and implemented to the greatest extent practicable throughout the various stages of development including site assessment, planning and design, vegetation conservation, site preparation, retrofitting and built-out management techniques.

4.6.2 Regulations

A. Do not degrade waters. Shoreline use and development shall incorporate measures to protect and maintain surface and groundwater quantity and quality in accordance with all applicable laws. (WAC 173-26-221(6)(b)(i))

B. Requirements for new development. New development shall manage stormwater to avoid and minimize potential adverse affects on shoreline ecological functions through the use of best management practices and/or through compliance with the current Stormwater Management Manual for Eastern Washington in effect at the time if applicable to the project. When the Stormwater Management Manual applies, deviations from the standards may be approved where it can be demonstrated that off-site facilities would provide better treatment, or where common retention, detention and/or water quality facilities meeting such standards have been approved as part of a comprehensive stormwater management plan. Additionally, new development is encouraged to implement low impact development techniques (WAC 173-26-221(6)(b)(ii))

C. Maintain storm drainage facilities. Maintenance of storm drainage facilities on private property shall be the responsibility of the property owner(s). This responsibility and the provision for maintenance shall be clearly stated on any recorded subdivision, short plat, or binding site plan map, building permit, property conveyance documents, maintenance agreements and/or improvement plans.

D. Use BMPs. Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all development in shoreline jurisdiction through an approved temporary erosion and sediment control (TESC) plan, identified in the Stormwater Management Manual for Eastern Washington, as amended or the most recent adopted stormwater manual, or administrative conditions, in accordance with the current federal, state, and/or local stormwater management standards in effect at the time.

E. Sewage management. To avoid water quality degradation by malfunctioning or failing septic systems located within shoreline jurisdiction, on-site sewage systems shall be located and designed to meet all applicable water quality, utility, and health standards, in addition to requirements outlined below. (WAC 173-26-221(6)(b)(ii))

1. Development within city limits that are within 200 feet of the City sewer system shall connect to city wastewater system.

2. For those developments proposed in County Jurisdiction, Urban Growth Areas (UGAs) or in areas where city sewer connection is not within 200 feet, proposals shall be subject to one of the following:

a. On-site wastewater treatment systems serving allowed uses in conformance with this Master Program shall be subject to regulations administered by the Chelan-Douglas Health District.

b. Large On-site Sewage Systems (LOSS) shall be subject to regulations administered by the Washington State Department of Ecology or Department of Health as required by rule adopted under RCW 70.118B.020. Such sewage treatment systems shall be located to prevent or minimize entry of nutrients, including phosphorus and nitrogen, or other pollutants, into ground and surface water within shoreline jurisdiction.

c. All individual and community on-site wastewater treatment systems, also called sewage treatment systems, including septic tanks and drainfields or alternative systems approved and inspected by the Chelan-Douglas Health District, the Washington Department of Ecology, or Washington Department of Health, shall be located landward of designated shoreline buffers.

d. The Chelan-Douglas Health District requires a standard horizontal separation of on-site sewage treatment systems from surface waters of 100 feet from the OHWM. In instances where shoreline buffers are less than 100 feet in width, an approval from the Chelan-Douglas Health District is required to locate sewage system components closer than 100 feet to the OHWM. Buffer reductions shall be the minimum necessary and shall be based on feasibility, lot size, or lot configuration. Where residential structures are permitted within 100 feet of the OHWM, tightlines from structures or septic tanks may be located within 100 feet from the OHWM.

e. Whenever feasible while meeting Chelan-Douglas Health District or Washington Department of Health standards, all components of on-site sewage treatment

systems, including subsurface soil absorption systems, shall be located landward of the residential structures they serve.

F. Materials requirements. All materials that may come in contact with water shall be constructed of materials, such as untreated or approved treated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state or federal agencies for contact with water to avoid discharge of pollutants from wave splash, rain, or runoff. Wood treated with creosote or pentachlorophenol is prohibited in shoreline waterbodies and other waters. (WAC 173-26-221(6)(b)(i-ii))

G. Low Impact Development (LID) techniques shall be considered and implemented to the greatest extent practicable throughout the various stages of development including site assessment, planning and design, vegetation conservation, site preparation, retrofitting and built-out management techniques.

H. Existing public stormwater management systems and facilities shall be retrofitted and improved to incorporate LID techniques whenever feasible

5 SHORELINE MODIFICATIONS AND USES

Chapter 5 presents specific policies and regulations that apply to particular developments, uses, or activities in any environment designation.

Each section includes policies and regulations. Policies are statements of principles that guide and determine present and future decisions. Regulations are rules that govern developments, uses, or activities.

The Use Matrix and Development Standards sections found in Chapters 3 and 4 as well as Appendices A, B, F and H are considered part of the regulations.

Shoreline application requirements are found in Section 7.4 of this SMP. Chapters 4 & 5 may contain specific submittal requirements for a particular use or modification beyond those stated in Section 7.4. Chapter 5 also contains performance standards for shoreline modifications and uses. Further, the Shoreline Administrator may condition a proposal in order to comply with the Act or this SMP consistent with the provisions in Section 7.5.3, 7.7.3, 7.8.3, and 7.9.

5.1 General Upland Shoreline Modification and Use Regulations

This section provides policies and standards addressing preferred layouts of shoreline development and appropriate signage serving the intended use and recognizing shoreline locations.

5.1.1 Policies

A. Designs Avoid Sensitive Areas. Development and uses should be designed in a manner that directs land alteration to the least sensitive portions of the site to maximize vegetation conservation, both upland and aquatic; minimize impervious surfaces and runoff; protect riparian, nearshore, aquatic and wetland habitats; protect wildlife and habitats; protect archaeological, historic and cultural resources; and preserve aesthetic values. (Proposed based on principles described in Chapter 4)

B. Location of Nonwater-Oriented Accessory Uses. Nonwater-oriented accessory development or use that does not require a shoreline location should be located landward of shoreline jurisdiction unless such development is required to serve approved water-oriented uses and/or developments. When sited within shoreline jurisdiction, uses and/or developments such as parking, service buildings or areas, access roads, utilities, signs, and materials storage should be located landward of shoreline, riparian and/or wetland buffers and landward of water-oriented developments and/or other approved uses. (based on use preferences in RCW 90.58.020, WAC 173-26-201(2)(d), WAC 173-26-241 (2)(a)(iii) and 173-26-211(3)(b))

C. Minimize Impacts on Shoreline and Upland Uses. Development should be located, designed, and managed to minimize impacts on shoreline or upland uses through bulk and scale restrictions, setbacks, buffers, light shielding, noise attenuation, and other measures. (WAC 173-26-211(4)(a)(iv))

D. Vistas and Viewpoints. Vistas and viewpoints from public properties and rights of way should not be degraded and visual access to the water from such vistas should not be impaired by the placement of signs. (1975 SMP Policy 7c)

5.1.2 Regulations

A. Design features for compatibility**.** Shoreline use and development activities shall be designed to complement the character and setting of the property, minimize noise and glare, and avoid impacts to view corridors. Shoreline applicants shall demonstrate efforts to minimize potential impacts to the extent feasible, including: (WAC 173-26-211(4)(a)(iv) and 221(4)(d)(iv))

1. Building mechanical equipment shall be incorporated into building architectural features, such as pitched roofs, to the maximum extent possible. Where mechanical equipment cannot be incorporated into architectural features, a visual screen shall be provided consistent with building exterior materials that obstructs views of such equipment.

2. Outdoor storage shall be screened from public view through techniques such as landscaping, berming, fencing and/or other equivalent measures.

3. Property screening in the form of fences or berms shall be subject to Section 5.1.2.E below.

B. Preference for water-oriented facility location. Shoreline developments shall locate the water-oriented portions of their developments along the shoreline and place all other facilities landward or outside shoreline jurisdiction. (Based on use preferences in RCW 90.58.020, WAC 173-26-241 (2)(a)(iii) and 173-26-211(3)(b))

C. Minimize changes to topography. To the extent feasible, design of structures, and motorized and nonmotorized vehicular improvements, shall conform to natural contours and minimize disturbance to soils and native vegetation and natural features while meeting applicable government standards. (Based on 1975 SMP Policy 15d as well as principles of environmental impact mitigation in WAC 173-26-201(2)(e), vegetation conservation in WAC 173-26-221(5), low impact development principles, and example SMPs)

D. Soil disturbance. All disturbed areas shall be restored and protected from erosion using vegetation and other means.

E. View corridors.

1. Heights Greater than 35 Feet: Per WAC 173-27-180, applicants for structures exceeding 35 feet in height shall provide a depiction of the impacts to views from substantial numbers of residences and public areas. To mitigate impacts, site design shall provide for view corridors between buildings through the use of building separation, setbacks, upper story setbacks, pitched roofs, and other mitigation. In order to determine appropriate view corridor location, applicants and the City of Leavenworth shall review shoreline public access plans (Appendix G), location of Federal- or State-designated scenic highways, government-prepared view studies, SEPA documents, or applicant-prepared studies. The maximum width of a view corridor shall be 25% of the lot width of the lot frontage; where the view corridor requires vegetation removal, the view corridor may be limited to 25% or 25 feet, whichever is less. (WAC 173-26- 221(4)(d)(iv))

2. Height Adjustments: In order to allow for public access pursuant to Sections 4.4, and/or to allow for buffer accommodations pursuant to

Sections 4.5, building height may be increased when consistent with the criteria in 3a to 3b below.

3. View Analysis Standards: In the case of heights proposed above 35 feet (limited to 50 feet) in Subsection E.1or when adjusted per E.2, the following view analysis standards and procedures apply:

   a. The applicant shall prepare a view analysis conducted consistent with Section 7.4. The analysis shall address such considerations as cumulative view obstruction within a1,000-foot radius with implementation of the proposed development combined with those of other developments that exceed 35-feet in height. The cumulative impact analysis shall address overall views that are lost, compromised, and/or retained; available view corridors; and surface water views lost, compromised, and/or retained. For phased developments, the view analysis shall be prepared in the first phase and include all proposed buildings.

   b. Applicants proposing building or structure heights above 35 feet, but consistent with this SMP and underlying zoning allowances, may be approved as part of a Substantial Development Permit if the following criteria are affirmatively met:

      (1) The building or structure will not impact a substantial number of residences. The applicant shall review residences involved on or in an area adjoining the project area.

      (2) The development will not cause an obstruction of view from public properties or substantial number of residences. The applicant shall demonstrate through photographs, videos, photo-based simulations, and/or computer-generated simulations that the proposed development will obstruct less than 30% of the view of the shoreline enjoyed by a substantial number of residences on areas adjoining such shorelines.

   c. Proposals for building heights above 35 or 50 feet (as applicable), but inconsistent with this SMP and underlying zoning allowances, require authorization via a Shoreline Variance Permit pursuant to Section 7.8 of this Shoreline Master Program.

F. Lighting. Interior and exterior lighting shall be designed and operated to avoid illuminating nearby properties or public areas; prevent glare on adjacent properties, public areas or roadways to avoid infringing on the use and enjoyment of such areas; and to prevent hazards. Methods of controlling spillover light include, but are not limited to, limits on height of structure, limits on light levels of fixtures, light shields, setbacks, buffer areas and screening. Lighting shall be directed away from critical areas, unless necessary for public health and safety. (WAC 173-26-211(4)(a)(iv)

G. Sign regulations.

1. Sign Size, Location, and Lighting Standards: Signs are allowed subject to the standards of the LMC and the following:

   a. The maximum area of individual sign faces shall be consistent with standards in LMC.

   b. Signs required by law shall not be subject to limitations with respect to the number, location, and/or size, provided that they are the minimum necessary to achieve the intended purpose. Signs required by law include, but are not limited to, official or legal notices issued and posted by any public agency or court, or traffic directional or warning signs.

   c. Any signs or other devices which flash, blink, flutter, rotate, oscillate, or otherwise purposely fluctuate in lighting or position, in order to attract attention through their distractive character are prohibited in shoreline jurisdiction.

   d. Freestanding signs authorized by this SMP are subject to the shoreline and critical area buffers and vegetation conservation standards in Section 4.5 and Appendix B. Building mounted signs are subject to shoreline buffers and other setbacks applicable to buildings. Height of wall signs shall be measured in accordance with LMC standards.

2. Views: Signs shall not significantly obstruct visual access to the water or scenic vistas nor impair driver vision. Signs shall be subject to the review of Section 5.1.2.E.

3. Natural Features: Signs shall not be posted or painted on natural features such as trees, rocks, and hillsides, etc., not including Numeral Mountain which has traditionally been painted by graduating seniors at a local high school, within shoreline jurisdiction. (based on 1975 SMP Sections 18.1 and 18.2)

4. Moved Signs: Signs that are moved, replaced, or substantially altered shall conform with SMP requirements and the City of Leavenworth regulations. (based on 1975 SMP Sections 18.1 and 18.2) For the purposes of this section, “substantial alterations” includes modifying structural elements of the sign.

5.2 General Aquatic Shoreline Modification and Use Regulations

These policies and regulations apply to all modifications and uses taking place waterward of the OHWM, whether or not a shoreline permit or written statement of exemption is required.

5.2.1 Policies

A. Protect beneficial uses, including ecological functions and water-dependent uses. Shoreline modifications and uses should be designed, located and operated in a manner that supports long-term beneficial use of the shoreline and protects and maintains shoreline ecological functions and processes. Modifications should not be permitted where they would result in a net loss of shoreline ecological functions, adversely affect the quality or extent of habitat for native species, adversely impact other habitat conservation areas, or interfere with navigation or other water-dependent uses.

B. Minimize and mitigate unavoidable impacts. All significant adverse impacts to the shoreline should be avoided or, if that is not possible, minimized to the extent feasible and then mitigated.

C. Protect water quality and hydrograph. Shoreline modifications and uses should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

5.2.2 Regulations

The following regulations shall apply to in-water work, including, but not limited to, installation of new structures, repair or maintenance of existing structures, replacement projects, restoration projects, and aquatic vegetation removal:

A. Siting and design requirements. In-water structures and activities shall be sited and designed to avoid the need for future shoreline stabilization activities and dredging, giving due consideration to watershed functions and processes, with special emphasis on protecting and restoring priority habitat and species. Modifications and uses located in the Aquatic environment shall be the minimum size necessary.

B. Buffers. Water-dependent in-water structures, activities and uses are not subject to the shoreline buffers established in this SMP.

C. Required permits. Projects involving in-water work must obtain all applicable state and federal permits or approvals, including, but not limited to, those from the U.S. Army Corps of Engineers, Ecology, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, and possibly Chelan County Public Utility District.

D. Timing restrictions. Projects involving in-water work shall comply with timing restrictions as set forth by state and federal project approvals.

E. Structure removal. Removal of existing structures shall be accomplished so the structure and associated material does not re-enter the waterbody.

F. Disposal of waste material. Waste material, such as construction debris, silt, excess dirt or overburden resulting from in-water structure installation, shall be deposited outside of shoreline jurisdiction in an approved upland disposal site. Proposals to temporarily store waste material or re-use waste materials within shoreline jurisdiction may be approved provided that use of best management practices is adequate to prevent erosion or water quality degradation and that an on-site location outside of shoreline jurisdiction is not available.

G. Hazardous materials. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the waterbody during in-water activities. Necessary refueling of motorized equipment, other than watercraft, shall be conducted outside of shoreline buffers and a minimum of 50 feet from the OHWM if feasible. Appropriate spill clean-up materials must be on-site at all times, and any spills must be contained and cleaned immediately after discovery.

H. Over- and In-water Materials. See SMP Section 4.6.2.F.

I. Prevent siltation of adjacent areas. In-water work shall be conducted in a manner that causes little or no siltation to adjacent areas. A sediment control curtain

shall be deployed in those instances where siltation is expected. The curtain shall be maintained in a functional manner that contains suspended sediments during project installation.

J. Below-OHWM excavations. Any trenches, depressions, or holes created below the OHWM shall be backfilled prior to inundation by high water or wave action.

K. Concrete management. Fresh concrete or concrete by-products shall not be allowed to enter the waterbody at any time during in-water installation. All forms used for concrete shall be completely sealed to prevent the possibility of fresh concrete from entering the waterbody.

L. Protection of bank and vegetation. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to perform the in-water work. All disturbed areas shall be restored and protected from erosion using vegetation or other means.

M. Trash and unauthorized fill removal required. All trash and unauthorized fill, including concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, and paper, found below the OHWM at the time of project implementation shall be removed if the project includes use of equipment suited for that purpose. Where the trash or fill is visibly providing some habitat function, consultation with Washington Department of Fish and Wildlife and/or the U.S. Army Corps of Engineers should occur before removal. Disposal should occur in an approved upland disposal location, outside of shoreline jurisdiction if feasible, but at a minimum landward of the OHWM and the channel migration zone. See Sections 5.8, Dredging and Dredge Material Disposal and 5.9, Fill for potentially applicable policies and regulations regarding dredging, fill and disposal.

N. Notification when fish harmed. If at any time, as a result of in-water work, fish are observed to be in distress or killed, immediate notification shall be made to appropriate state or federal agency(ies), including the Washington Department of Fish and Wildlife, National Marine Fisheries Service and/or U.S. Fish and Wildlife Service.

O. Notification of water quality problems. If at any time, as a result of in-water work, water quality problems develop, immediate notification shall be made to the appropriate state or federal agency(ies), including Ecology, National Marine Fisheries Service and/or U.S. Fish and Wildlife Service.

P. Retain natural features. Natural in-water features such as snags, uprooted trees, or stumps should be left in place unless it can be demonstrated that they are actually causing bank erosion, higher flood stages, or a hazard to navigation or human safety.

Q. Floatation materials. Floatation material (floats, buoys) must be encapsulated within a commercially manufactured shell, typically polyethylene or another material specifically approved for use in aquatic environments that prevents breakup or loss of the floatation material into the water, and is not readily subject to damage by ultraviolet radiation or abrasion. During maintenance, existing un-encapsulated floatation material must be replaced. Tires may not be modified for use as floatation devices.

R. Tire use. Tires shall not be allowed as part of above- or below-water structures or where tires could potentially come in contact with the water (e.g., floatation,

fenders). Existing tires used for floatation should be replaced with inert or encapsulated materials such as plastic or encased foam during maintenance or repair of the structure.

S. Anchors. Floats, rafts, mooring buoys, and navigational aids, such as channel markers or buoys, must use helical screw anchors or other embedded anchors and midline floats or other technologies to prevent anchors or lines from dragging or scouring. Floats and rafts may also be anchored with piles as provided in SMP Sections 5.5 and 5.14.

T. Mitigation. All aquatic shoreline modifications and uses are subject to the mitigation sequencing requirements in Section 4.2, Ecological Protection and Critical Areas, with appropriate mitigation required for any unavoidable impacts to ecological functions. If critical areas in shoreline jurisdiction are impacted, the project is also subject to relevant requirements of Appendix B, Critical Areas Regulations.

5.3 Agriculture

5.3.1 Policies

A. Maintain Agriculturally Productive Lands. Lands well suited for agriculture may be maintained in agricultural production. (1975 SMP Policy 1a)

B. Encourage Vegetative Buffer. The maintenance of a buffer of permanent vegetation along the shoreline in agricultural areas should be encouraged in order to retard surface runoff, reduce siltation, and provide sanctuary for fish and other wildlife. (1975 SMP Policy 1b)

C. Protect Airsheds. Natural airsheds, made up of ravines, swales, tributaries, and other topographic features which direct the flow of cold air down to major streams, should be protected. Obstructions which would create frost pockets should be avoided. Adverse effects of highways, buildings, dikes, landfills, and dense plantings which may obstruct airflow and threaten existing orchards should be minimized. (1975 SMP Policy 1f)

D. Avoid Water Pollution. Agricultural activities should be conducted and buildings designed to avoid surface or groundwater pollution. (1975 SMP Policy 1c)

E. Avoid Structures in Floodplains. Agricultural structures should be located outside of the floodway. Agricultural structures should be discouraged in the 100-year floodplain unless no other suitable location is available and adequate protective measures are implemented. (1975 SMP Policy 1d)

F. Manage Water Resources. Water resources should be managed in accordance with federal and state laws and adopted County watershed plans. (1975 SMP Policies 1g to 1j.)

5.3.2 Regulations

A. Existing Agriculture. The provisions of this SMP do not limit or require modification of agricultural activities on agricultural lands as of the date of adoption of the SMP. Agricultural uses shall be allowed in conformance with City zoning requirements, and the provisions of this SMP, including but not limited to SMP Sections 5.3.2

B. Applicability. SMP provisions shall apply in the following cases:

1. New agricultural activities on land not meeting the definition of agricultural land;
2. Expansion of agricultural activities on non-agricultural lands or conversion of non-agricultural lands to agricultural activities;
3. Conversion of agricultural lands to other uses;
4. Other development on agricultural land that does not meet the definition of agricultural activities; and
5. Agricultural development and uses not specifically exempted by the Act.

C. No Net Loss of Ecological Function. Agricultural uses and development in support of agricultural uses shall be located and designed to assure no net loss of ecological functions and no significant adverse impact on other shoreline resources and values.

D. Development Standards.

1. A Substantial Development Permit shall be required for all agricultural development not specifically exempt by the provisions of RCW 90.58.030(3)(a)(vi) and for activities listed in Section B.
2. Feedlots shall comply with the following standards.
   a. Shall be located outside of shoreline buffers, vegetation conservation areas, and 100-year floodplains.
   b. Shall have a minimum of four feet between the ground surface and the upper surface of the water table.
   c. Shall be conditioned to meet best management practices promulgated by federal or state agencies. (Similar to 1975 SMP Section 12.1.3)
3. Agricultural-Commercial Uses. Agricultural-commercial uses are allowed where specified in environment designations when consistent with Commercial use standards in Section 5.7.
4. Non-agricultural activities on agricultural lands. New non-agricultural activities proposed on agricultural lands shall be consistent with other applicable shoreline use standards in Chapters 4 and 5, for example Commercial or Industrial, and with other General Policies and Regulations.
5. New agricultural uses such feedlots of any size, all processing plants, other activities of a commercial nature, upland finfish facilities and other activities which require alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities and shall comply with the applicable development standards found in regulations in Chapter 4 & 5.
6. New Agricultural uses on non-agricultural lands are allowed where specified in the Use Table and when consistent other applicable standards in Chapter 4 and 5.

7. Upland finfish facilities requiring alteration of the contour of the shorelands by leveling or filling shall comply with Aquaculture policies and development standards.

5.4 Aquaculture

5.4.1 Policies

A. Water-dependent and preferred use. Aquaculture is a water-dependent use and, when consistent with control of pollution and avoidance of adverse impacts to the environment and preservation of habitat for resident or anadromous native species, is a preferred use of the shoreline (WAC 173-26-241(3)(b)).

B. Recognize limited availability of suitable locations. Potential locations for aquaculture activities are relatively restricted because of specific requirements related to water quality, temperature, oxygen content, currents, adjacent land use, wind protection and navigation.

C. Recognize and facilitate non-commercial aquaculture. Aquaculture can be commercial or non-commercial. Non-commercial aquaculture is used for the purpose of enhancement and restoration of fish and wildlife resources. The goals and objectives of non-commercial aquaculture include, but are not limited to, supplementation, conservation, restoration, supplementation, mitigation, recreation, education, reintroduction, research, and harvest. Non-commercial aquaculture is location dependent because of the requirement for natal waters. Permitting should be streamlined for facilities that support propagation and acclimation of desirable salmonid species, particularly those covered by the Upper Columbia Salmon Recovery Plan.

D. Preference for lower-impact methods. Preference should be given to those forms of aquaculture that involve lesser environmental and visual impacts, and lesser impacts to native plant and animal species. In general, projects that require either no structures or submerged structures are preferred over those that involve substantial floating structures. Projects that involve little or no substrate modification are preferred over those that involve substantial modification. Projects that involve little or no supplemental food sources, pesticides, herbicides or antibiotic application are preferred over those that involve such practices.

E. Protect ecological functions. Aquaculture activities should be designed, located and operated in a manner that supports long-term beneficial use of the shoreline and protects and maintains shoreline ecological functions and processes. Aquaculture should not be permitted where it would result in a net loss of shoreline ecological functions, adversely affect the quality or extent of habitat for native species, adversely impact other habitat conservation areas, or interfere with navigation or other water-dependent uses.

F. Prevent cumulative adverse effects. Aquaculture that involves risk of cumulative adverse effects on water quality, sediment quality, benthic and other aquatic organisms, and/or wild fish populations through potential contribution of antibiotic resistant bacteria, escapement of non-native species, or other adverse effects on ESA-listed species should not be permitted unless the potential benefits outweigh the potential risks as determined by the appropriate state or federal agencies..

G. Consult with stakeholders. The local government should actively seek substantive comment on any shoreline permit application for aquaculture from all appropriate Federal, State, Tribal and local agencies and the general public regarding potential adverse impacts. Comments of nearby residents or property owners directly affected by a proposal should be considered and evaluated, especially in regard to use compatibility and aesthetics.

H. Coordinate with Tribes. The rights of treaty tribes to aquatic resources within their usual and accustomed areas should be addressed through the permit review process. Direct coordination between the applicant and the tribe should be encouraged.

I. Consider beneficial and adverse impacts. Consideration should be given to both the potential beneficial impacts and potential adverse impacts that aquaculture development might have on the physical environment; on other existing and approved land and water uses, including navigation; and on the aesthetic qualities of a project area.

J. Restrictions on experimental aquaculture. Experimental aquaculture means an aquaculture activity that uses methods or technologies that are unprecedented or unproven in the State of Washington. The technology associated with some forms of aquaculture is still experimental and in formative stages. Therefore, some latitude should be given when implementing the regulations of this section in the development of this use. However, experimental aquaculture projects in waterbodies should be limited in scale and should be approved for a limited period of time, as specified by the regulatory agency.

K. Protect existing aquaculture. Legally established aquaculture enterprises, including authorized experimental projects, should be protected from incompatible uses that may seek to locate nearby. Uses or developments that have a high probability of damaging or destroying an existing aquaculture operation are not consistent with these policies.

5.4.2 Regulations

A. Location.

1. Water-dependent portions of aquaculture facilities and their necessary accessories may be located waterward of the OHWM or in the shoreline buffer. Water intakes and discharge structures, water and power conveyances, and fish collection and discharge structures are all considered water-dependent or accessory to water-dependent.

2. All other elements of facilities shall be located outside the shoreline buffer, unless those facilities are deemed to be water-related and proximity to the water-dependent project elements is critical to the successful implementation of the facility's purpose.

3. Sites shall be selected to avoid and minimize the need for and degree of floodplain or floodway alteration, channel migration zone alteration, shoreline stabilization, native vegetation removal, and/or wetland alteration. - Aquaculture operations may be required to submit a site alternatives analysis. Recognizing the limited number of sites that are suitable for -aquaculture, applicants for - aquaculture operations shall - be required to demonstrate that the location of the proposed facilities on the

available site avoids and minimizes impacts to any on-site critical areas and habitats to the maximum extent feasible. Aquaculture facilities shall be designed and located so as not to spread disease to native aquatic life, establish new nonnative species which cause significant ecological impacts, or significantly impact the aesthetic qualities of the shoreline.

4. To the extent that a location in channel migration zones, floodplains or floodways, or wetlands is necessary for aquaculture facilities, low-intensity, moderate-intensity and high-intensity aquaculture is preferred in that order as defined in Chapter 8.

B. Substrate modification. Aquaculture that involves substantial aquatic substrate modification or sedimentation through dredging, trenching, digging, or other similar mechanisms, shall not be permitted in areas where the proposal would have long-term adverse impacts on important fish or wildlife habitats. If substrate modification will not have long-term adverse impacts or the adverse impacts will be short-term, the applicant shall further demonstrate that the degree of proposed substrate modification is the minimum necessary for feasible aquaculture operations at the site.

C. Mitigation sequencing. New aquaculture proposals shall comply with mitigation sequencing requirements as outlined in Section 4.2.2(A). New aquaculture facilities shall comply with general standards in Chapter 4 and applicable standards in Appendix B. Aquaculture activities that would have a significant adverse impact on natural, dynamic shoreline processes, or that would result in a net loss of shoreline ecological functions, shall be prohibited. Aquaculture practices shall be designed to minimize use of artificial substances and shall use chemical compounds that are least persistent and have the least impact on plants, animals and water quality.

D. Agency review. All aquaculture projects shall be reviewed by local, State and Federal agencies, and as applicable by FERC-licensed hydro-projects review authorities.

E. New aquatic species. New aquatic species that were not previously found or cultivated in Chelan County shall not be introduced into fresh waters without prior written approval of the Director of the Washington Department of Fish and Wildlife and the Director of the Washington Department of Health.

F. Fish kill. In the event of a fish kill at the site of a net pen facility, the aquaculture operator shall immediately report to the Chelan-Douglas Health District and Washington Department of Fish and Wildlife stating the cause of death and shall detail remedial action(s) to be implemented to prevent reoccurrence.

G. U.S. Coast Guard requirements. All floating and submerged aquaculture structures and facilities in navigable waters shall be marked in accordance with U.S. Coast Guard requirements.

H. Coordination with Tribes. The rights of treaty tribes to aquatic resources within their usual and accustomed areas shall be addressed through direct coordination between the applicant and the affected tribe(s) during the permit review process.

I. Submerged and floating structures. The installation of submerged structures and floating structures shall be allowed only when the applicant demonstrates that no alternative method of operation is feasible.

J. Potential impacts. If uncertainty exists regarding potential impacts of a proposed aquaculture activity, and for all experimental aquaculture activities, baseline and periodic operational monitoring by a qualified professional may be required, at the applicant's expense, and shall continue until adequate information is available to determine the success of the project and/or the magnitude of any probable significant adverse environmental impacts. Aquaculture operators may submit monitoring reports prepared by qualified professional as part of monitoring required by other state or federal agencies. Permits for such activities shall include specific performance measures and provisions for adjustment or termination of the project at any time if monitoring indicates significant, adverse environmental impacts that cannot be adequately mitigated.

K. Over-water structures. For water-dependent portions of aquaculture projects - which may require over-water structures, storage of necessary tools and apparatus waterward of the OHWM shall be limited to containers of not more than 3 feet in height, as measured from the surface of the raft or dock; provided that, in locations where the visual impact of the proposed aquaculture structures will be minimal, City of Leavenworth may authorize storage containers of greater height. In such cases, the burden of proof that the container is the minimum size necessary and the visual impact is minimal shall be on the applicant. Materials that are not necessary for the immediate and regular operation of the facility shall be stored outside of the shoreline buffer.

L. Permanent instream facilities. Permanent water-dependent instream facilities must be properly anchored or keyed to prevent the channel from migrating around it and causing erosion or creating a safety hazard, and must evaluate and mitigate any potential adverse effects on adjacent properties upstream and downstream.

M. Product processing. No processing of any aquaculture product, except for the sorting or culling of the cultured organism and the washing or removal of surface materials or organisms after harvest, shall occur in or over the water unless specifically approved by permit. All other processing and processing facilities shall be located on land and shall be subject to the policies and regulations of Section 5.7, Commercial Development and/or Section 5.11, Industry, when located within shoreline jurisdiction, in addition to the policies and regulations in this section.

N. Waste disposal. Aquaculture wastes shall be disposed of in a manner that will ensure strict compliance with all applicable governmental waste disposal standards, including, but not limited to, the Federal Clean Water Act, Section 401, and the Washington State Water Pollution Control Act (RCW 90.48).

O. Construction, maintenance and bonding. Aquaculture structures and equipment shall be of sound construction and shall be so maintained. Abandoned or unsafe structures and/or equipment shall be removed or repaired promptly by the owner. Where any structure might constitute a potential hazard to the public in the future, City of Leavenworth may require the posting of a bond commensurate with the cost of removal or repair. The local government may abate an abandoned or unsafe structure, following notice to the owner, if the owner fails to respond in thirty (30) days and may impose a lien on the related shoreline property or other assets in an amount equal to the cost of the abatement. Bonding requirements shall not duplicate requirements of other agencies.

P. Application Requirements for Aquaculture projects shall include all information necessary to conduct a thorough evaluation of the proposed aquaculture activity, including but not limited to the following:

1. A site plan map including:
   - a. The perimeter of the proposed aquaculture operations area.
   - b. Existing bathymetry depths based on the Ordinary High Water Mark (OHWM).
   - c. Adjacent upland use, vegetation, presence of structures, docks, bulkheads and other modifications. If there are shore stabilization structures, provide the beach elevation at the toe of the structure and the top of the structure (OHWM datum).
   - d. Areas where specific substrate modification will take place or structures will be constructed or installed.
   - e. Access provisions.
   - f. Location of storage or processing structures or facilities.
2. A baseline description of existing conditions, including best available information on:
   - a. Water quality
   - b. Prevailing storm wind conditions
   - c. Current flows
   - d. Flushing rates
   - e. Areas of differing substrate composition.
   - f. Areas of aquatic and upland vegetation complexes.
   - g. Existing shoreline or water uses and structures.
   - h. Aquatic and benthic organisms.
   - i. Assessment of aquatic species, and spawning and other lifecycle use of, or adjacent to, the site. Further baseline studies including surveys and sampling may be required depending upon the adequacy of available information, existing conditions, and the nature of the proposal.
3. A detailed description of the project proposal including:
   - a. Species to be reared.
   - b. Substrate modification or vegetation removal.
   - c. Planting, harvest and processing location, method and timing, including work proposal and construction techniques proposed (list all hand tools, machinery used (such as track hoes, trucks or barges), type of work, frequency, and duration.
4. Anticipated use of any feed, pesticides, herbicides, antibiotics, vaccines, growth stimulants, antifouling agents, or other chemicals, and an assessment of predicted impacts. No such materials shall be used until

approval is obtained from all appropriate State and Federal agencies, including but not limited to the U.S. Food and Drug Administration, and the Washington State departments of Ecology, Fish and Wildlife, and Agriculture, as required, and proof thereof is submitted to the local government with jurisdiction. Compounds with the least persistence shall be used. An annual report of antibiotic use shall be submitted to the Chelan County Health District. The report shall indicate the type and amount of antibiotics used during the previous calendar year. Actual usage data for all chemicals and antibiotics shall be maintained for review by Health District staff at all times.

5. Number of employees/workers necessary for the project, including average and peak employment.

6. Methods of waste disposal and predator control.

7. Methods to address pollutant loading, including biological oxygen demand (BOD), suspended solids and fecal coliform.

8. Assessment of potential impacts on shoreline ecological functions and processes addressing the baseline conditions identified in the Shoreline Characterization, including but not limited to watershed-level, indirect and cumulative effects.

9. For floating culture facilities or other structures, the local government with jurisdiction may require a visual impact analysis. (See the Department of Ecology's "Aquaculture Siting Study" 1986 for general approach.) Depending on the size and complexity of the proposal, such analysis may be prepared by the applicant without professional assistance, provided that it includes an adequate assessment of impacts.

10. Information demonstrating that the site has natural potential for the type(s) of aquaculture proposed, due to necessary substrate or other conditions, as well as water quality suitable for the type(s) of aquaculture proposed.

11. Information demonstrating that the proposed aquaculture activities will not result in a net loss of shoreline ecological functions or processes or adversely affect Critical Areas.

12. Information demonstrating that the proposed aquaculture activities will not substantially and materially conflict with areas devoted to established uses of the aquatic environment. Such uses include but are not limited to navigation, moorage, sport or commercial fishing, underwater utilities, and scientific research. Existing public opportunities for gathering wild stock aquatic resources on public lands shall be addressed in any application for aquaculture on public bedlands. Compensation for loss of public access to public aquatic resources may be required.

13. Other pertinent information deemed necessary by the Administrator. Applications for aquaculture activities must demonstrate that the proposed activity will be compatible with surrounding existing and planned uses.

14. Aquaculture activities shall comply with all applicable noise, air, and water quality standards. All projects shall be designed, operated and

maintained to minimize odor and noise.

15. Aquaculture activities shall be restricted to reasonable hours and/or days of operation when necessary to minimize substantial, adverse impacts from noise, light, and/or glare on nearby residents, other sensitive uses or critical habitat.

16. Aquaculture facilities shall not introduce incompatible visual elements or substantially degrade the aesthetic qualities of the shoreline. Aquaculture structures and equipment, except navigation aids, shall be designed, operated and maintained to blend into their surroundings through the use of appropriate colors and materials.

5.5 Boating Facilities

Public, including public docks, fishing docks, and boat launch facilities, shall be subject to the policies and regulations of this Section. Buoys associated with these facilities are also subject to these policies and regulations, as well as the general location and design standards found in Section 5.14.2.E. See the Shoreline Use and Modification Chart Section 3.

All boating facilities that extend onto State-owned aquatic lands must also comply with Washington Department of Natural Resources standards and regulations.

5.5.1 Policies

A. Boating facilities are water-dependent uses. When facilitating public access or providing an opportunity for substantial numbers of people to enjoy the shoreline, these uses should be given priority for shoreline location. Shorelines particularly suitable for public boat launch facilities are limited and should be identified and reserved to prevent irreversible commitment for other uses having less stringent site requirements.

B. Plan and coordinate boat launch regionally. Regional needs for boat launch facilities should be carefully considered in reviewing new proposals as well as in allocating shorelines for such development. Such facilities should be coordinated with park and recreation plans and, where feasible, collocated with other compatible water-dependent uses. Review of such facilities should be coordinated with recreation providers, including other local governments, adjacent counties, the Washington State Parks and Recreation Commission, and the Washington State Department of Natural Resources, to efficiently provide recreational resources, avoid unnecessary duplication, and minimize adverse impacts to shoreline ecological functions and processes. (consistent with principles in WAC 173-26-231(2)(b, d))

C. Minimize modifications. Boating facilities that minimize the amount of shoreline modification, in-water structure, and overwater cover are preferred. (consistent with principles in WAC 173-26-231(2)(b, d))

D. Balance public access and ecological functions. New marinas should provide public shoreline access, particularly where water-enjoyment uses are associated with the marina, to the extent compatible with shoreline ecological functions and processes and adjacent shoreline use. (WAC 173-26-241(3)(c)(iv))

E. Limitations on accessory uses. Accessory uses at boating facilities should be limited to water-oriented uses, or uses that provide physical and/or visual shoreline access for substantial numbers of the general public. Nonwater-

dependent accessory uses should be located outside of shoreline jurisdiction or outside of the shoreline buffer whenever possible.

F. Protect other water-dependent uses. Boating facilities should be located, designed and operated so that other appropriate water-dependent uses are not adversely affected.

G. Minimize impacts to adjacent uses and users. Boating facilities should be located, designed, constructed and maintained to avoid adverse impacts such as noise, light and glare; aesthetic impacts to adjacent land uses; and impacts to public visual access to the shoreline.

H. Site facilities appropriately. New boating facilities should be located only at sites where suitable environmental conditions, shoreline configuration, access, and compatible or similar uses are present. (WAC 173-26-241(3)(c)(i))

I. No net loss of ecological functions. Boating facilities should be located and designed to ensure no net loss of ecological functions or other significant adverse impacts, and should, where feasible, enhance degraded and/or scarce shoreline features. (WAC 173-26-241(3)(c)(vi))

J. Consider navigation and other recreation opportunities. Boating facilities should not unduly obstruct navigable waters and should consider adverse effects to recreational opportunities such as fishing, pleasure boating, swimming, beach walking, picnicking and shoreline viewing.

5.5.2 Regulations

A. Location Standards. (based on WAC 173-26-241(3)(c)(i, ii, iv))

1. Boating facilities shall not be permitted within the following shoreline habitats because of their scarcity, biological productivity and sensitivity unless no alternative location is feasible, the project results in a net enhancement of shoreline ecological functions, and the proposal is otherwise consistent with this SMP:

   a. Native aquatic vegetation or wetlands with emergent vegetation (marsh type areas), or

   b. Spawning and holding areas for priority anadromous or priority resident fish.

   Projects located in these habitats must obtain a Shoreline Conditional Use Permit.

2. New boating facilities shall not be permitted in channel migration zones, or areas where dredging will be required to create or maintain the new facility, where a flood hazard will be created, or where impacts to shoreline ecological functions and processes cannot be mitigated. To the extent feasible, expansions of existing boating facilities should be designed to minimize the need for new or maintenance dredging.

3. New or expanded boating facilities shall be designed such that any moored boats will be located in water depths which prevent prop scour, unless the applicant can demonstrate that prop scour will not adversely impact aquatic vegetation or increase suspended sediment loads.

4. Boating facilities shall be located and designed in a manner that eliminates the need for shoreline stabilization. When the need for stabilization is unavoidable, as indicated by a study prepared consistent with SMP Section 5.18, only the minimum necessary shoreline stabilization to adequately protect facilities, users, and watercraft from floods or destructive storms shall be permitted.

5. Boating facilities shall not be located within 200 feet of beaches commonly used for public swimming, valuable public fishing areas, aquaculture facilities, or commercial navigation areas unless no alternative location exists and appropriate measures are installed or best management practices are implemented to minimize impacts to such areas and protect the public health, safety and welfare. For example, clearly delineating swimming, fishing or boating areas through upland signage, wake limit buoys, and/or floating swim area marker ropes.

6. Launch ramps shall be located where 1) there is adequate water mixing and flushing; 2) they will not adversely affect flood channel capacity or otherwise create a flood hazard; 3) water depths are adequate to eliminate or minimize the need for dredging or filling; 4) critical areas, active channel migration areas, and salmonid spawning habitat is not present.

7. Boating facilities shall be located only where adequate utility services that are necessary to meet applicable health, safety and welfare requirements, such as water, power and/or wastewater collection and treatment, are available or where they can be provided concurrent with the development.

8. Long-term boat storage located landward of the OHWM is regulated as a nonwater-oriented commercial use under Section 5.7, Commercial Development of this SMP, unless it is equipped with a boat launch facility (either launch ramp, crane, hoist or similar device). If the storage use is equipped with a boat launch facility, it is regulated as a water-related commercial use. The dry boat storage portion shall be located landward of the shoreline buffers, unless there are site constraints that prevent the boats from being moved inland. In all cases, boat storage shall comply with applicable height restrictions.

B. Facility Design.

1. Consistent with requirements for mitigation sequencing in Section 4.2, Ecological Protection and Critical Areas and provisions in Section 5.2, General Aquatic Shoreline Modification and Use Regulations of this SMP, all boating facilities shall be designed and located to avoid and then minimize potential adverse impacts to critical areas. All unavoidable adverse impacts to critical areas must be mitigated, and a mitigation plan submitted consistent with Subsection F, Submittal Requirements, below.

2. All boating facilities shall be no larger than the minimum size necessary to accommodate the anticipated demand. Specifically, the amount of overwater coverage, the size and number of in-water structures, the waterward length of the facility, and the extent of any necessary

associated shoreline stabilization or modification shall be minimized. Specific sizing of all boating facility components shall be based on the results of the analyses conducted under Subsection F, Submittal Requirements, below, with the following limitations for specific boating facilities:

a. New boating facilities with overwater structures shall be located in water sufficiently deep to prevent the structure from grounding at the lowest low water, or stoppers must be installed to prevent grounding.

3. Launch ramps shall be designed and constructed using methods / technology that have been recognized and approved by state and federal resource agencies as the best currently available, with consideration for site-specific conditions and the particular needs of that use outlined in the submittal requirements in F below. At a minimum, they shall minimize the obstruction of currents, alteration of sediment transport, and the accumulation of drift logs and debris.

4. New over-water residences, including floating homes, are not a preferred use and shall be prohibited.

5. Replacement of Existing Boating Facilities. Proposals involving replacement of the entire existing over-water facility or 75 percent or more of dock support piles, when applicable, or 75 percent or more of an existing boat launch are considered a new boating facility and must be designed consistent with any dimensional, materials and mitigation standards for new boating facilities as outlined above in Sections 5.5.2.A and B.1-4, except the Shoreline Administrator may approve an alternative design without a Shoreline Variance if it meets all of the following criteria:

   a. All appropriate Federal agencies have already approved the proposal; and

   b. The total square footage of the replacement facility is no larger than the existing facility.

6. Additions to Boating Facilities. Proposals involving the modification and/or enlargement of existing boating facilities must comply with the following measures:

   a. The applicant must demonstrate to the satisfaction of City of Leavenworth that there is a need for the enlargement of an existing boating facility. Proposals that demonstrate an enlargement is necessary due to increased or changed use or demand, safety concerns, or inadequate depth of water will be considered.

   b. Enlarged portions of boating facilities must comply with applicable dimensional, design, materials and mitigation standards for new boating facilities as described in Sections 5.5.2.A and B.1-4.

7. Repair of Existing Boating Facility.

    1. Repair proposals which replace 75 percent or greater of the existing dock-support piles or boat launch area within 5-years are considered replacements and must comply with requirements for replacement facilities.

    2. Other repairs to existing legally established boating facilities are permitted consistent with all other applicable codes and regulations and provided that materials standards for new facilities are followed.

C. Site Design and Operation.

1. Boating facilities shall be designed so that lawfully existing or planned public shoreline access is not blocked, obstructed nor made dangerous. (WAC 173-26-241(3)(c)(i, iv)

2. Covered moorage, including watercraft lift canopies, is prohibited. (consistent with WAC 173-26-231(2)(b) and WAC 173-26-241(3)(c)(vi))

3. Accessory uses at boating facilities shall be limited to water-oriented uses or uses that support physical or visual shoreline access the public. Accessory development may include, but is not limited to, parking, non-hazardous waste storage and treatment, stormwater management facilities, and utilities where these are necessary to support the water-oriented use.

D. Parking and Vehicle Access. (WAC 173-26-241(3)(c)(i)) Public boat launch facilities shall include parking spaces for boat trailers commensurate with projected demand. All boating facilities shall provide parking facilities commensurate with projected demand and consistent with Section 5.19 of this SMP and local zoning standards.

E. Waste Disposal. (WAC 173-26-241(3)(c)(ii, vi))

1. Discharge of solid waste or sewage into a waterbody is prohibited. Garbage or litter receptacles shall be provided and maintained by the operator at several locations convenient to users.

2. Commercial disposal or discarding of fish-cleaning wastes, scrap fish, viscera, or unused bait into water or in other than designated garbage receptacles is prohibited. Private recreational fish waste disposal is allowed.

3. Compliance with Federal or State law may fulfill this requirement. Handling of fuels, chemicals or other toxic materials must be in compliance with all applicable Federal and State water quality laws as well as health, safety and engineering requirements. Rules for spill prevention and response, including reporting requirements, shall be posted on site.

F. Submittal Requirements.

1. Applicants shall provide an assessment of demand for new or expanded boating facilities, including, but not limited to, the following: (consistent with WAC 173-26-231(2)(b) and (3)(b))

a. The total amount of moorage proposed (except for boat launch facility proposals);

b. For new or expanded facilities proposing permanent or temporary moorage, the existing supply of temporary or permanent moorage spaces within the service range of the proposed facility, including vacancies or waiting lists at existing facilities. The service range is a site-specific determination made by the applicant considering the proposed facility location and proximity to other locations within either boating or driving distance;

c. For new or expanded boat launch ramps, identification of the nearest existing boat launch facility, the expected or current level of use of the new or expanded boat launch ramp, and any other relevant factors related to the need for safe or efficient access to public waters, if that information supports justification for specific design elements;

d. The expected service population and boat ownership characteristics of the population, if that information supports justification for specific design elements related to facility length or necessary water depth; and/or

e. Existing approved facilities, or pending applications, within the service range of the proposed new facility.

4. Applicants for new or expanded boating facilities shall provide habitat surveys and critical area studies consistent with Section 4.2, Ecological Protection and Critical Areas and Appendix B, Critical Areas Regulations. If the project results in unavoidable adverse impacts to ecological functions or processes, a mitigation plan must be prepared using the process and standards outlined in Section 5.14.2.G, Mitigation. In addition, the mitigation plan shall discuss how the proposed project avoids and minimizes impacts consistent with the facility's sizing needs, which are to be based on the results of any habitat survey/critical area study and the demand analysis prepared under F.1 above. A slope bathymetry map may be required when deemed beneficial by the Shoreline Administrator for the review of the project proposal.

5. Applicants for new or expanded boating facilities shall provide an assessment of existing water-dependent uses in the vicinity, including, but not limited to, navigation, fishing, hunting, pleasure boating, swimming, beach walking, picnicking and shoreline viewing, and document potential impacts and mitigating measures. City of Leavenworth will assist the applicant in identification of area water-dependent uses. Potential impacts on these resources shall be considered in review of proposals and specific conditions to avoid or minimize impacts shall be imposed.

6. New boat launch facilities shall be approved only if they provide public access to public waters that are not adequately served by existing access facilities, or if use of existing facilities is documented to exceed the designed capacity. Prior to providing boat launch facilities at a new

location, documentation shall be provided demonstrating that expansion of existing launch facilities would not be adequate to meet demand. (consistent with WAC 173-26-231(2)(b))

7. Applicants for new or expanded boating facilities shall also comply with and submit any additional materials and/or studies required by the City of Leavenworth.

G. Aquatic lands and other agency requirements:

1. All boating facilities that extend onto State-owned aquatic lands must also comply with Washington Department of Natural Resources standards and regulations.

2. All boating facilities that extend in the aquatic environment shall also comply with permit(s) issued and land use regulations controlled by state, federal and/or permit issuing authorities. (US Army Corps permit, HPAs, PUD)

5.6 Breakwaters, Jetties, Groins, Weirs and Barbs

Breakwaters, jetties, groins , weirs and barbs are generally intended to protect harbors, moorages, navigation activity, or stream banks or bed from wave and wind action or stream flow by creating slow- or stillwater areas along shore. A secondary purpose is to protect shorelines from wave- or flow-caused erosion. In addition to this section, development of breakwaters, jetties, groins, weirs, and barbs is also subject to provisions in Section 5.12 (In-water structures).

5.6.1 Policies

A. Allowed circumstances. Breakwaters, jetties, groins, weirs and barbs located waterward of the OHWM should be allowed only where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose. (WAC 173-26-231(3)(d))

B. Regional benefit and no net loss of ecological functions. Breakwaters, jetties, groins weirs and barbs should be permitted only for water-dependent uses when the benefits to the region outweigh short-term resource losses from such works, and only where mitigated to provide no net loss of shoreline ecological functions and processes. (WAC 173-26-231(2)(b, d))

C. Use less-impacting alternatives. Alternative structures, including floating, portable or submerged breakwater structures, or several smaller discontinuous structures, should be considered where physical conditions make such alternatives with less impact feasible. (Consistent with WAC 173-26-231(2)(b, d))

D. Shoreline Conditional Use Permit required. Breakwaters, jetties, groins, weirs, barbs and similar structures should require a Shoreline Conditional Use Permit, except for those structures installed to protect or restore ecological functions, such as woody debris, engineered log jams, or habitat-forming rock weirs installed in streams. (WAC 173-26-231(3)(d))

E. Protect critical areas. Breakwaters, jetties, groins, weirs and barbs should be designed to protect critical areas and should provide for mitigation according to the sequence defined in Section 4.2.2(A). (WAC 173-26-231(3)(d))

5.6.2 Regulations

A. No net loss of ecological functions. New, expanded or replacement structures shall only be permitted if it can be demonstrated that the proposed development will not result in a net loss of shoreline ecological functions and that it supports water-dependent uses, public access, shoreline stabilization, or other specific public purpose. (WAC 173-26-231(2)(b, d))

B. Conditional Use Permit required. Breakwaters, jetties, groins, weirs, barbs and similar structures shall require a Conditional Use Permit, except for those structures installed to protect or restore ecological functions, such as woody debris installed in streams. (WAC 173-26-231(3)(d))

C. Limitations on groins. Groins are prohibited except as a component of a professionally designed community or public beach management program that encompasses an entire reach for which alternatives are infeasible, or where installed to protect or restore shoreline ecological functions or processes. (consistent with WAC 173-26-231(2)(b, d, e))

D. Limit size of structures. The size of breakwaters, jetties, groins weirs and barbs shall be limited to the minimum necessary as determined by a qualified professional (see 5.6.2.F) to provide protection for the structure or use it is intended to protect. (WAC 173-26-231(2)(b))

E. Use less-impacting alternatives. Jetties and breakwaters are prohibited.

F. Professional design. Proposed designs for new or expanded structures shall be designed and certified by a qualified professional, including an engineer, hydrologist, or geomorphologist.

G. State-owned aquatic lands. Proposals for breakwaters shall be consistent with the Washington Department of Natural Resources Aquatic Land Management standards (WAC 332-30, RCW 79.105).

5.7 Commercial Development

5.7.1 Policies

A. Encourage water-oriented uses. Water-oriented commercial developments which provide an opportunity for substantial numbers of people to enjoy the amenities of the shorelines should be encouraged to locate near the water. Nonwater-oriented commercial development should be encouraged to locate landward or outside shoreline jurisdiction. (1975 SMP policy 6a)

B. Commercial use preferences. Preference should be given for water-dependent commercial uses above water-related uses. Water-related uses should have priority above water-enjoyment uses. All water-oriented commercial uses have preference over nonwater-oriented commercial uses. (WAC 173-26-241(3)(d))

C. Location in existing commercial areas. New commercial development should be encouraged to locate in those areas where current commercial uses exist. (1975 SMP policy 6b)

D. Design. New commercial development should be designed to provide economic activity meeting the needs of residents, businesses, and tourists, protect the public's health, safety, and welfare, protect shoreline ecological functions, and provide public access where feasible and consistent with constitutional limits.

E. Encourage the expansion of general retail goods, services, recreational opportunities, and entertainment facilities for area residents (Comprehensive Plan Commercial Goal 1)

F. Commercial developments should be clustered to provide safe and convenient access for automobiles, pedestrians, and suppliers, and to maintain and enhance the aesthetic quality of the area. (Comprehensive Plan Commercial Goal 1, Policy 2)

G. Encourage landscaping which provides unity to commercial development and which screens or softens parking lots and unsightly areas, particularly in the transition areas between commercial and residential and recreational land uses. (Comprehensive Plan Commercial Goal 1, Policy 4)

H. Provide landscaped buffers, walls, open spaces, etc. as needed to minimize noise, screen parking and service areas, rooftop equipment, solid waste receptacles, outdoor storage areas, and other potential impacts and nuisances. (Comprehensive Plan Commercial Goal 1, Policy 6)

I. Encourage the development of commercial land in a manner which is complementary and compatible with adjacent land uses and the surrounding environment by providing well designed transition or buffer areas. (Comprehensive Plan Commercial Goal 1, Policy 7)

J. Promote appropriately buffered multi-family residential and/or office development compatible with existing and potential commercial activities to provide a transition between high intensity and low intensity uses. (Comprehensive Plan Commercial Goal 1, Policy 8)

K. Encourage the development of additional tourist commercial facilities. (Comprehensive Plan Commercial Goal 2)

L. Encourage a pattern of mixed-use development in the commercial areas with residential uses as supportive, secondary development to the primary commercial areas. (Comprehensive Plan Goal 1, Policy 3)

M. Refine and enhance existing design criteria for buildings and signs, which will lessen the aesthetic impacts of businesses which utilize standard logos and/or building designs. Preserve the unique character and Bavarian design of Leavenworth. (Comprehensive Plan Goal 1, Policy 6)

5.7.2 Regulations

A. Commercial uses shall be allowed in conformance with City zoning requirements and the provisions of this SMP, including, but not limited to, SMP Sections 5.7.2

Water-oriented uses allowed. Water-dependent, water-related, and water-enjoyment uses are permitted where allowed by zoning and this SMP. Water-dependent commercial uses shall be given preference over water-related and water-enjoyment uses. The applicant shall demonstrate to the satisfaction of City of Leavenworth that proposed uses meet the definitions of water-dependent, water-related or water-enjoyment (water-oriented use). (WAC 173-26-241(3)(d))

B. Residential uses as part of mixed use development. Nonwater-oriented uses, including but not limited to residential uses, may be located with water-oriented commercial uses provided:

1. The mixed-use project includes one or more water-dependent uses.

2. Water-dependent commercial uses as well as other water-oriented commercial uses have preferential locations along the shoreline.

3. The underlying zoning district permits residential uses together with commercial uses.

4. Public access is provided for significant number of persons in accordance with Section 4.4, and/or ecological restoration is provided as a public benefit.

5. Residential uses meet requirements of Section 5.16 of this SMP.

C. Nonwater-oriented commercial uses limited. In areas designated for commercial use, nonwater-oriented commercial uses are allowed if the site is physically separated from the shoreline by another property or public right of way. On properties fronting the shoreline, new nonwater-oriented commercial development is prohibited in shoreline jurisdiction, except where such use provides a significant public benefit with respect to the Act's objectives, such as providing public access and ecological restoration and meets one of the following conditions: (WAC 173-26-241(3)(d))

1. The use is part of a mixed-use project that includes water-dependent uses; or

2. Navigability is severely limited at the proposed site,

D. Overwater uses. Nonwater-dependent commercial uses shall not be located over water except in existing structures or in the limited instances where they are auxiliary to and necessary in support of water-dependent uses. (WAC 173-26-241(3)(d))

E. Accessory uses to water-oriented commercial activities. Accessory commercial development that does not require a shoreline location shall be located landward of the water-oriented portions of the development and comply with shoreline buffers for nonwater-oriented uses. Accessory uses may be allowed in existing structures or where necessary in support of water-oriented uses. Accessory development includes, but is not limited to, parking, storage and service areas, and circulation. (WAC 173-26-201(2)(d), WAC 173-26-241 (2)(a)(iii), WAC 173-26-211(3)(b)), and WAC 173-26-241(3)(d))

F. Environmental protection. Commercial development shall be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions and without significant adverse impacts to other preferred land uses and public access features. (WAC 173-26-241(3)(d))

G. Public access. See Section 4.4 (WAC 173-26-241(3)(d))

5.8 Dredging and Dredge Material Disposal

As regulated in this SMP, dredging is the excavation or displacement of the bottom or shoreline of a waterbody (waterward of the OWHM) for purposes of flood control, navigation, utility installation (excluding on-site utility features serving a primary use, which are “accessory utilities” and shall be considered a part of the primary use), the construction or modification of essential public facilities and regional transportation facilities, and/or restoration (of which the primary restoration element is sediment/soil removal rather than being incidental to the primary restoration purpose). This section is not intended to cover other excavations waterward of the ordinary high water mark that

are incidental to construction of an otherwise authorized use or modification (e.g., bulkhead replacements, large woody debris installations, boat launch ramp installation, pile placement). These in-water substrate modifications should be conducted pursuant to regulations found in Section 5.2, General Aquatic Shoreline Modification and Use Regulations, Section 5.9, Fill and Excavation, and regulations found in sections of this Master Program governing the use or modification with which the excavation is associated, such as Section 5.5, Boating Facilities or Section 5.18, Shoreline Stabilization.

All dredging and dredge material disposal on state-owned aquatic lands must also comply with Washington Department of Natural Resources standards and regulations.

5.8.1 Policies (based on WAC 173-26-231(2) and (3)(f))

A. Permitted. Dredging should be permitted for water-dependent uses and/or essential public facilities only when necessary and when alternatives are infeasible or less consistent with this SMP. Dredging as part of flood hazard abatement, ecological restoration or enhancement, beach nourishment, public access or public recreation should be permitted if consistent with this SMP.

B. Prohibited. Dredging of bottom materials for the primary purpose of obtaining material for fill, construction, or beach nourishment should not be permitted.

C. Disposal. Spoil disposal on land outside of shoreline jurisdiction is generally preferred over open water disposal. Disposal of dredged material on shorelands or wetlands within a river's channel migration zone should be discouraged.

D. Cooperative management programs. Long-term cooperative management programs that rely primarily on natural processes, and involve land owners and applicable local, State and Federal agencies and tribes, should be pursued to prevent or minimize conditions which make dredging necessary.

E. Siting and design. New development should be sited and designed to avoid or, where avoidance is not possible, to minimize the need for new maintenance dredging.

F. Ecological impacts. Dredging and dredge material disposal shall be done in a manner that avoids or minimizes significant ecological impacts. Impacts that cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions.

G. Navigation channels and basins. Dredging for the purpose of establishing, expanding, relocating or reconfiguring navigation channels and basins should be allowed where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided. Maintenance dredging of established navigation channels and basins should be restricted to maintaining previously dredged and/or existing authorized locations, depths and widths.

5.8.2 Regulations (based on WAC 173-26-231(2) and (3)(f))

A. Siting and design. New development shall be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.

B. Allowed dredging activities. Dredging shall only be permitted for the following activities:

1. Development of new or expanded wet moorages, harbors, ports or water-dependent industrial uses only when there are no feasible alternatives or other alternatives may have a greater ecological impact and only where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided.
2. Development of essential public facilities when there are no feasible alternatives.
3. Maintenance of irrigation reservoirs, drains, canals, or ditches for agricultural purposes. City of Leavenworth may approve five-year management plans addressing maintenance dredging, use of best management practices, and other measures to assure no-net-loss of shoreline ecological functions.
4. Restoration or enhancement of shoreline ecological functions and processes benefiting water quality and/or fish and wildlife habitat.
5. Trenching to allow the installation of underground utilities (excluding "accessory utilities" associated with a primary use) if no practicable alternative exists, and:
    a. Impacts to fish and wildlife habitat are minimized to the maximum extent possible, which may require mitigation sequencing and implementation of a mitigation management plan.
    b. The utility installation shall not increase or decrease the natural rate, extent, or opportunity of channel migration.
    c. Appropriate best management practices are employed to prevent water quality impacts or other environmental degradation.
6. Establishing, expanding, relocating or reconfiguring navigation channels and basins where necessary to assure safe and efficient accommodation of existing navigational uses.
7. Maintenance dredging of established navigation channels and basins, which shall be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.
8. Flood hazard reduction, including dam maintenance.

C. Prohibited dredging activities. Dredging shall be prohibited for the primary purpose of obtaining fill material, except that permitted under Section 5.13, Mining and except when necessary for restoration of ecological functions. In the latter circumstance, the fill must be placed waterward of the OHWM. The project must be either associated with a MTCA (Model Toxics Control Act) or CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) habitat restoration project or, if approved through a Shoreline Conditional Use Permit, any other significant habitat enhancement project.

D. Maintain ecological functions and processes. The physical alignment and ecological functions and processes of shoreline waterbodies shall be maintained, except to improve hydraulic function, water quality, fish or wildlife habitat, or fish passage. Consistent with the mitigation sequencing steps outlined in Section

4.2.2, Ecological Protection and Critical Areas, dredging and dredge disposal proposals should be first designed to avoid and then minimize potential adverse impacts. Where adverse impacts are unavoidable, mitigation shall be required. When required, mitigation plans shall be prepared by a qualified professional and shall be consistent with the relevant plan requirements of the appropriate responsible government in Appendix B, Critical Areas Regulations.

E. Conditions may be applied. Limitations on dredge or disposal operation may be imposed to reduce proximity impacts, protect the public safety and assure compatibility with the interests of other shoreline users. Conditions may include limits on periods and hours of operation, type of machinery, and may require provision of landscaped buffer strips and/or fencing to address noise and visual impacts at land disposal or transfer sites.

F. Circumstances when disposal is allowed. Dredge material disposal within shoreline jurisdiction is permitted under the following conditions:

1. Shoreline ecological functions and processes will be preserved, restored or enhanced, including protection of surface and groundwater; and

2. Erosion, sedimentation, floodwaters or runoff will not increase adverse impacts to shoreline ecological functions and processes or property.

G. Disposal of dredge material within channel migration zone discouraged. Disposal of dredge material on shorelands or wetlands within a river's channel migration zone is discouraged. In the limited instances where it is allowed, such disposal requires a Shoreline Conditional Use Permit. This provision is not intended to address discharge of dredge material into the flowing current of the river or in deep water within the channel where it does not substantially affect the geohydrologic character of the channel migration zone.

H. Circumstances when open water dredge disposal is allowed. Dredge material disposal in open waters may be approved only when authorized by applicable agencies, which may include the U.S. Army Corps of Engineers pursuant to Section 10 (Rivers and Harbors Act) and Section 404 (Clean Water Act) permits, and Washington State Department of Fish and Wildlife Hydraulic Project Approval (HPA); and when one of the following conditions apply:

1. Land disposal is infeasible, less consistent with this SMP, or prohibited by law; or

2. Nearshore disposal as part of a program to restore or enhance shoreline ecological functions and processes is not feasible.

I. Open water dredge disposal conditions. Dredge materials approved for disposal in open waters shall comply with the following conditions:

1. Offshore habitat will be protected, restored, or enhanced;

2. Adverse effects on water quality or biologic resources from contaminated materials will be mitigated;

3. Shifting and dispersal of dredge material will be minimal; and

4. Water quality will not be adversely affected.

J. Submittal requirements. The following information shall be required for all dredging applications:

1. A description of the purpose of the proposed dredging and an analysis of compliance with the policies and regulations of this SMP.
2. An analysis of the existing shoreline and potential adverse impacts, including the following:
    a. A site plan map outlining the perimeter of the proposed dredge area. The map must also include the existing bathymetry and have data points at a minimum of 2-foot depth increments.
    b. A detailed description of the existing physical character, shoreline geomorphology, and biological resources provided by the area proposed to be dredged. This description should include information on the stability of bedlands adjacent to proposed dredging and spoils disposal areas.
    c. A detailed description of potential adverse impacts to ecological functions and processes.
    d. A mitigation plan to address any identified adverse impacts to ecological functions or processes.
3. A detailed description of the physical, chemical and biological characteristics of the dredge materials to be removed, including:
    a. Physical analysis of material to be dredged (material composition and amount, grain size, organic materials present, source of material, etc.).
    b. Chemical analysis of material to be dredged (volatile solids, chemical oxygen demand (COD), grease and oil content, mercury, lead and zinc content, etc.).
    c. Biological analysis of material to be dredged.
4. A description of the method of materials removal, including facilities for settlement and movement.
5. Dredging procedure, including the estimated length of time it will take to complete dredging, method of dredging, and amount of materials removed.
6. Frequency and quantity of project maintenance dredging.
7. Detailed plans for dredge spoil disposal, including specific land disposal sites and relevant information on the disposal site, including, but not limited to:
    a. Dredge material disposal area;
    b. Physical characteristics including location, topography, existing drainage patterns, surface and ground water;
    c. Size and capacity of disposal site;
    d. Means of transportation to the disposal site;
    e. Proposed dewatering and stabilization of dredged material;
    f. Methods of controlling erosion and sedimentation; and

g. Future use of the site and conformance with land use policies and regulations.

8. Plan for disposal of maintenance spoils for at least a 50-year period, if applicable.

9. Hydraulic modeling studies sufficient to identify existing geo-hydraulic patterns and probable effects of dredging.

5.9 Fill and Excavation

Fill regulations in this section apply to fills anywhere in shoreline jurisdiction, in both aquatic and upland environments. "Fill" is the addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land.

Excavation regulations in this section apply to excavation anywhere in shoreline jurisdiction. "Excavation" is the disturbance or displacement of unconsolidated earth material such as silt, sand, gravel, soil, rock or other material. In addition to upland excavation, this section is intended to cover excavations waterward of the ordinary high water mark that are incidental to construction of an otherwise authorized use or modification (e.g., bulkhead replacements, large woody debris installations, boat launch ramp installation, pile placement). See Section 5.8, Dredging and Dredge Material Disposal for dredging for purposes of flood control, navigation, primary utility installation, the construction of water-dependent portions of essential public facilities, and/or restoration whose primary project element is removal of material waterward of the OHWM.

All fill and excavation on state-owned aquatic lands must also comply with Washington Department of Natural Resources standards and regulations.

5.9.1 Policies (based on WAC 173-26-231(2) and (3)(c))

A. Minimize fill and excavation. Fill and excavation should only be permitted to the minimum extent necessary to accommodate an approved shoreline use or development and with assurance of no net loss of shoreline ecological functions and processes. Enhancement and voluntary restoration of landforms and habitat are encouraged.

B. Location. Fills and excavation should be located and developed so that water quality, hydrologic and runoff patterns are not altered.

C. Shoreline stabilization. Fill should not be allowed where shoreline stabilization would be required to maintain the materials placed.

D. Restoration. Excavation and grading may be permitted landward of the OHWM of a waterbody for projects with the primary purpose of restoring ecological functions and natural character.

E. Creation of uplands. Fill in waterbodies, floodways, channel migration zones, and/or wetlands should not be permitted for creation of new uplands, unless it is part of an approved ecological restoration activity or provides some other public benefit.

F. Permitted Fill. Fill should be permitted in limited instances to restore uplands where recent erosion has rapidly reduced upland area where the erosion has not been caused by the landowners own actions of vegetation removal or improper stormwater handling, to build protective berms outside required buffers and

nourish beaches for shore stabilization or recreation, to restore or enhance degraded shoreline ecological functions and processes, or to facilitate upland development outside required buffers otherwise allowed by and consistent with this SMP.

G. Benefits and impacts. The predicted economic benefits of fills and excavation should be weighed against long-term cumulative impacts on ecological processes and functions.

5.9.2 Regulations (based on WAC 173-26-231(2) and (3)(c))

A. Protect ecological function**.** All fills and excavations shall be located, designed and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration. Fill and excavation shall be minimized to the maximum extent practicable and necessary to accommodate approved shoreline uses and development activities that are consistent with this SMP. When fill or excavation causes adverse impacts to ecological functions, a mitigation plan must be prepared and implemented consistent with Section 4.2 of this SMP.

B. Permissible fill and excavation. Fill and excavation within wetlands, floodways, channel migration zones, or waterward of the OHWM shall only be permitted in limited instances for the following purposes and when other required state or federal permits have been obtained, with due consideration given to specific site conditions, and only along with approved shoreline use and development activities that are consistent with this SMP, such as:

1. Water-dependent uses, public access, and cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan;
2. Disposal of dredged material considered suitable under, and conducted in accordance with, the Dredged Material Management Program of the Department of Natural Resources and/or the Dredged Material Management Office of the U.S. Army Corps of Engineers (see also Section 5.8.2 of this SMP);
3. Expansion or alteration of transportation facilities of statewide significance currently located on the shoreline where alternatives to fill are infeasible;
4. Ecological restoration or enhancement, including, but not limited to, beach nourishment, habitat creation, culvert upgrades to improve fish and flow passage, or bank restoration when consistent with an approved restoration plan; or
5. Protection of cultural or historic resources when fill is the most feasible method to avoid continued degradation, disturbance or erosion of a site. Such fills must be coordinated with any affected Indian tribes and comply with applicable provisions of Section 4.1.2 of this SMP.

All fills and excavation waterward of the OHWM not associated with ecological restoration, flood control or approved shoreline stabilization shall require a Shoreline Conditional Use Permit.

All other upland fills are permitted provided they are conducted outside required

buffers and as part of an approved shoreline use or modification or are necessary to provide protection to cultural or historic resources, are the minimum necessary to implement the approved use or modification, do not significantly change the topography of the landscape in a manner that affects the hydrology or increases the risk of slope failure and are consistent with applicable provisions of Appendix B, particularly regulations governing floodways and 100-year floodplains.

C. Shoreline stabilization. Fills or excavation shall not be located where shoreline stabilization will be necessary to protect materials placed or removed, except when part of an approved plan for protection of cultural resources.

D. Physical and visual consistency. Fills, beach nourishment and excavation shall be designed to blend physically and visually with existing topography whenever possible, so as not to interfere with long term appropriate use including lawful access and enjoyment of scenery.

E. Maximum slopes. Cut and fill slopes shall generally be sloped no steeper than one foot vertical for every two feet horizontal (1:2) unless a specific engineering analysis has been provided.

F. Erosion control. A temporary erosion and sediment control (TESC) plan, including BMPs, consistent with the Stormwater Management Manual for Eastern Washington, or the most recent Ecology revised -stormwater manual, shall be provided for all proposed fill and excavation activities, and approved by the Shoreline Administrator prior to commencement of activity. Disturbed areas shall be immediately protected from erosion using weed-free straw, mulches, or similar methods and revegetated, as applicable.

5.10 Forest Practices

5.10.1 Policies

A. Avoid Steep Slopes. Forest practices should be avoided on shorelines with slopes of such grade that large sediment runoff will result unless adequate restoration and erosion control including seeding, mulching, matting and replanting can be expeditiously accomplished. (1975 SMP Policy 3a)

B. Protect Waterways and Floodplains. Special attention should be directed to forest practices activities including thinning, harvest and road construction to prevent the accumulation of slash and other debris in contiguous waterways and their floodplains. (1975 SMP Policy 3b)

C. Visual Impacts. The visual impact of forest practices should be considered in all shoreline areas. Timber harvesting practices, including road construction and debris removal, should proceed in accord with Washington State Department of Natural Resource forest resource plan policies so that the quality of the view and viewpoints along shorelines are not degraded; for example harvest size limitation, leave tree requirements, riparian and wetland protection, forest land planning and SEPA analysis on both project and nonproject proposals. (1975 SMP Policy 3c)

D. Buffer Zone. The use of buffer zones along forested shorelines is encouraged in order to retard surface runoff, reduce siltation, provide shade for fish, and be aesthetically pleasing. (1975 SMP Policy 3d)

E. Water Quality. Timber harvesting practices on shorelines should be conducted to maintain State and Federal water quality standards as appropriate. (1975 SMP Policy 3e)

5.10.2 Regulations

A. Conversion to other use. Preparatory work associated with the conversion of land to non-forestry uses and/or developments shall be consistent with the following performance standards:

1. Limit the conversion to the minimum necessary to accomplish the purpose and intent of the shoreline use environment, general policies and regulations, and specific shoreline modification and use policies on the subject property. (proposed based on principles of environmental impact mitigation in WAC 173-26-201(2)(e), vegetation conservation in WAC 173-26-221(5), and low impact development principles)

2. Ensure no net loss of shoreline ecological functions or significant adverse impacts to other shoreline uses, resources and values provided for in RCW 90.58.020 such as navigation, recreation and public access. (WAC 173-26-241(3)(e)).

Forest practices shoreline permit applications shall demonstrate compliance with performance standards in this subsection.

B. State and local forest practice regulations. All forest practices, including forest conversions, undertaken on shorelines shall comply with the applicable policies and provisions of the Forest Practices Act, RCW 76.09 as amended, and any regulations adopted pursuant thereto (WAC 222), as administered by City of Leavenworth. (WAC 173-26-241(3)(e))

C. General Tree Management. Forest management activities that minimize the potential for catastrophic wildfires and hazard tree removal are allowed consistent with any applicable state and local forest practice regulations and Section 4.5.2, Vegetation Conservation.

D. Selective cutting – shorelines of statewide significance. Within shoreline jurisdiction along shorelines of statewide significance, only selective commercial timber cutting may be permitted so that no more than thirty percent (30%) of the merchantable timber may be harvested in any 10-year period; provided that, other timber harvesting methods may be permitted with a Conditional Use Permit in those limited instances where topography, soil conditions or silviculture practices necessary for regeneration render selective logging ecologically detrimental. (RCW 90.58.150)

E. Natural environment – limited forest practices. Within the Natural environment, timber harvesting shall be permitted only where it is necessary to:

1. Preserve a desired pre-climatic state of a plant succession, such as a stand of Douglas-fir, which would be eventually superseded by other species if no cutting were done;

2. Prevent an epidemic of insects or disease infestations in the area or to adjoining areas when no other means of epidemic control will work; or

3. Clean up and restore an area devastated by disaster such as extensive windfall or fire. (1975 SMP Section 14.4.1)

5.11 Industry

5.11.1 Policies

A. Industrial use preference. Industries are an appropriate land use along shorelines where compatible with existing land use plans and zoning. However, first priority should be given to water-dependent industries over nonwater-dependent uses, and second priority to water-related industries over nonwater-oriented uses. (1975 SMP Policy 9d)

B. Industries requiring navigable water. Water-dependent industries which require frontage on navigable water should be given priority over other industrial uses. (1975 SMP Policy 9c)

C. Environmental limitations. Lands designated for industrial development should not include shoreline areas with severe environmental limitations, such as critical areas. (WAC 173-26-241(3)(f))

D. Water and wastewater facilities. Sewage treatment and potable water facilities should be located with consideration for economic operation and compatibility with surrounding uses, designed to assure no net loss of ecological functions, and designed not to have significant adverse impacts to other shoreline resources and values. (1975 SMP Policy 9b)

E. Cleanup and restoration. Industrial development and redevelopment should be encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated. (WAC 173-26-241(3)(f))

F. Encourage the development of water-oriented small light industrial sites with adequate infrastructure (Comprehensive Plan Land Use Element Industrial Goal 1)

G. New industrial developments should be reviewed as planned industrial developments. (Comprehensive Plan Land Use Element Industrial Goal 1, Policy 1)

5.11.2 Regulations

A. Industrial uses shall be allowed in conformance with City zoning requirements and the provisions of this SMP, including, but not limited to, SMP Sections 5.11.2

B. Water-dependent or water-related uses allowed. Industrial facilities and structures that are water-dependent or water-related are permitted where allowed by zoning and this SMP. The applicant shall demonstrate to the satisfaction of City of Leavenworth that proposed uses are water-dependent and/or water-related. (WAC 173-26-241(3)(f))

C. Nonwater-oriented industrial uses limited. In areas designated for industrial use, new nonwater-oriented industrial uses are allowed only if the site is physically separated from the shoreline by another property or public right-of-way or railroad prior to adoption of this SMP. On properties fronting the shoreline, new nonwater-oriented industrial development is prohibited in shoreline jurisdiction, except where such use provides a significant public benefit with respect to the Act's objectives, such as providing public access and ecological restoration, and meets one of the following conditions:

1. The use is part of a mixed-use project that includes water-dependent uses; or
2. Navigability is severely limited at the proposed site

D. Accessory uses to water-dependent or water-related industrial activities. Accessory industrial development that is not water-dependent and does not require a shoreline location shall be located upland of the water-dependent or water-related portions of the development and comply with shoreline buffers) - Accessory development includes, but is not limited to, parking, warehousing, open-air storage, waste storage and treatment, and transportation corridors. (WAC 173-26-201(2)(d), WAC 173-26-241 (2)(a)(iii) ,WAC 173-26-211(3)(b), and WAC 173-26-241(3)(f))

E. Environmental protection. Industrial development shall be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions and without significant adverse impacts to other preferred land uses and public access features. (WAC 173-26-241(3)(f))

F. Public access. See SMP Section 4.4. (WAC 173-26-241(3)(f))

G. Clean up and Restoration. Industrial development and redevelopment are encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated. Federal and state requirements for hazardous materials clean up or management shall be addressed. (WAC 173-26-241(3)(f))

5.12 In-Water Structures

In-water structures include those placed by humans within streams, rivers and lakes for hydroelectric generation, irrigation, water supply, flood control, transportation, utilities, fish habitat enhancement, recreation, or other purpose. Structures placed waterward of the OHWM have the potential to cause water impoundment or the diversion, obstruction, or modification of water, and are therefore regulated by this section.

5.12.1 Policies

A. Long-term compatibility. In-water structures should be planned and designed to be compatible with appropriate multiple uses of resources over the long-term, especially in Shorelines of Statewide Significance. Appropriate multiple uses include, but are not limited to, public access, recreation, and fish migration.Considerations. The location, design, construction and maintenance of in-water structures should give due consideration to the full range of public interests; watershed processes, including prevention of damage to other properties and other shoreline resources from alterations to geologic and hydrologic processes; and ecological functions, with special emphasis on protecting and restoring priority habitats and species.

C. Siting and design. In-water structures shall be sited and designed consistent with appropriate engineering principles, including, but not limited to, guidelines of the Washington Department of Fish and Wildlife, Natural Resources Conservation Service, and the U.S. Army Corps of Engineers. Planning and design of in-water structures should be consistent with and incorporate elements from applicable watershed management and restoration plans and/or surface water management plans.

D. Non-structural and non-regulatory alternatives. Non-structural and non-regulatory methods to protect, enhance, and restore shoreline ecological

functions and processes and other shoreline resources should be encouraged as an alternative to in-water structures. Non-regulatory and non-structural methods may include public facility and resource planning, land or easement acquisition, education, voluntary protection and enhancement projects, or incentive programs.

E. Prohibited development and uses. New or expanding development or uses in the shoreline, including subdivision of land, that would likely require structural flood control works within a stream, lake, river, channel migration zone, or floodway should not be allowed.

F. Enhance ecological function. In-water structure proposals should incorporate native vegetation to enhance ecological functions, create a more natural appearance, improve ecological processes, and provide more flexibility for long-term shoreline management. Such features include vegetated berms; vegetative stabilization including brush matting and buffer strips; and retention of existing trees, shrubs and grasses on stream banks, if possible.

5.12.2 Regulations

A. Prohibited projects. Channelization projects that damage fish and wildlife resources, degrade recreation and aesthetic resources, result in a net loss of ecological functions or result in high flood stages and velocities are prohibited.

B. Soil stabilization. Upland cut-and-fill slopes and back-filled areas resulting from installation of in-water structures shall be stabilized with bioengineering approaches, including, but not limited to brush matting and buffer strips and revegetated with native grasses, shrubs, or trees to prevent loss of shoreline ecological functions and processes. In order to ensure soil stabilization, revegetation must include native shrubs or trees and may not be limited to native grasses.

C. Water quality. In-water structures shall be constructed and maintained in a manner that does not degrade the quality of affected waters. City of Leavenworth shall require reasonable conditions to achieve this objective.

D. Prohibited structures. No motor vehicles, appliances, other similar structures or parts thereof; nor structure demolition debris (except non-toxic, non-chemically contaminating, reclaimed materials); nor any other solid waste shall be used as in-water structures.

E. Natural features. Natural in water features such as snags, uprooted trees, or stumps shall be left in place unless it can be demonstrated that they are actually causing bank erosion or higher flood stages or pose a hazard to navigation or human safety. In-stream structures shall provide for the protection and preservation, of ecosystem-wide processes, ecological functions, and cultural resources, including, but not limited to, fish and fish passage, wildlife and water resources, shoreline critical areas, hydrogeological processes, and natural scenic vistas. The location and planning of in-stream structures shall give due consideration to the full range of public interests, watershed functions and processes, and environmental concerns, with special emphasis on protecting and restoring priority habitats and species.

F. Design. In-water structures shall be designed by a qualified professional. In-water structures shall allow for natural groundwater movement and surface runoff, and shall preserve valuable recreation resources and aesthetic values such

as point and channel bars, islands, and braided channels. In-water structures shall not be a safety hazard or obstruct water navigation as determined by the Shoreline Administrator.

G. Dam siting and design. The design of all dams and the suitability of the proposed site for dam construction shall be certified by a professional engineer licensed in the State of Washington. The professional design shall include a maintenance schedule. Evaluation of the suitability of the dam shall include a downstream safety analysis.

H. Dam maintenance agreement and bond. For all dams that are not regulated by either the Federal Energy Regulatory Commission licensing procedures, or the Ecology reservoir permit requirements, a construction bond and maintenance agreement shall be filed with City of Leavenworth prior to construction. The bond or surety shall be approved by the Shoreline Administrator and shall be in a form acceptable to City of Leavenworth. The construction bond shall be equal to at least one hundred fifty percent of the estimated cost of the improvement(s) to be performed, to be utilized by City of Leavenworth to perform any necessary work, to reimburse the local government for performing any necessary work, and to reimburse the local government for documented administrative costs associated with action on the device. To determine this value, the applicant must submit two cost estimates for the improvements to be performed. If costs incurred by the local government exceed the amount provided by the assurance device, the property owner shall reimburse the local government in full, or the local government may file a lien against the subject property for the amount of any deficit. The maintenance agreement shall specify who is responsible for maintenance, shall incorporate the maintenance schedule specified by the design engineer, shall require annual inspections by a civil engineer licensed in the State of Washington, and shall stipulate abandonment procedures which shall include, where appropriate, provisions for site restoration.

I. Permits. Construction of in-water structures may not commence without having obtained all applicable Federal, State, and local permits and approvals.

J. Public access. Design of in-water structures by public entities, including local governments, state agencies, and public utility districts, shall include access to public shorelines whenever possible, unless it is demonstrated that public access would cause unavoidable public health and safety hazards, security problems, unmitigatable ecological impacts, unavoidable conflicts with proposed uses, or unreasonable cost. At a minimum, in-water structures should not decrease public access or use potential of shorelines.

5.13 Mining

5.13.1 Policies

A. Ecological function. Mining and associated activities should be designed and conducted to result in no net loss of shoreline ecological functions and processes. Mining should not be approved where it could interfere with shoreline ecological functions or processes, or cause irreparable damage to shoreline resources or features. Application of this policy shall include avoidance and mitigation of adverse impacts during the course of mining and reclamation. The determination of whether there will be no net loss of ecological function should be based on an evaluation of the reclamation plan required for the site and shall consider impacts

on ecological functions during operation. Preference should be given to mining proposals that result in the creation, restoration, or enhancement of habitat for priority species. (WAC 173-26-241(3)(h)(ii)(A))

B. Location. Mining should not be located on shorelines where unavoidable adverse impacts, such as noise, vibration, odor, dust or other effects, on other users or resources, taken together, equal or outweigh the benefits from mining. (WAC 173-26-241(3)(h)(ii)(A)) The operator may be required to implement measures such as buffers, limited hours, or other mitigating measures to minimize adverse impacts. Mining of shorelines having high value for public recreation should not be permitted.

C. Post-mining restoration. Mining, particularly surface or strip mining, should provide for timely restoration of disturbed areas to a biologically productive, attractive, semi-natural, or other useful condition through a reclamation process consistent with regulations administered by the Department of Natural Resources and other applicable local standards. (WAC 173-26-241(3)(h)(ii)(B))

D. Where permitted. Mining should only be permitted where detailed operation plans and studies prepared pursuant to Section 4.2.2, Ecological Protection and Critical Areas, and Appendix B, Critical Areas Regulations demonstrate that:

1. Fish habitat, upland habitat and water quality will not be significantly harmed; and

2. The operation will not adversely affect geologic or hydrologic processes, channel alignment, nor increase bank erosion or flood damage.

E. Minimize adverse impacts. Mining operations should be located, designed, and managed so that they do not subject other appropriate uses to substantial or unnecessary adverse impacts from of the operation. The operator may be required to implement measures such as buffers, limited hours, or other mitigating measures to minimize adverse impacts.

5.13.2 Regulations

A. Location.

1. Mining shall not be permitted within shoreline jurisdiction within a 400-foot radius of any fish or aquaculture facility, or dam.

2. Mining shall be allowed in designated fish and wildlife habitat areas only as a part of an approved flood control program or in conjunction with a habitat restoration or enhancement plan.

3. Mining in shoreline jurisdiction shall only be approved when the material proposed to be extracted is only available in a shoreline location. This determination shall be based on an evaluation of geologic factors such as the distribution and availability of mineral resources; the need for such mineral resources; and economic, transportation, and land use factors. This demonstration may rely on analysis or studies prepared for purposes of comprehensive plan designations, and may be integrated with any relevant environmental review conducted under SEPA (Chapter 43.21C RCW), or otherwise be shown in a manner consistent with RCW 90.58.100(1) and WAC 173- 26-201(2)(a), as amended.

4. Mining location shall be consistent with the applicable SMP environment designation and local government designation of mineral resource lands.

B. Required plans and analyses. Application for permits for mining operations shall be accompanied by operation plans, reclamation plans and analysis of environmental impacts in compliance with local ordinances and sufficient to make a determination as to whether the project will result in net loss of shoreline ecological functions and processes during the course of mining and after reclamation. Creation, restoration, or enhancement of habitat for priority species and the future productivity of the site may be considered in determining no net loss of ecological functions. Evaluation of impacts should be appropriately integrated with relevant environmental review requirements of SEPA (RCW 43.21C) and the SEPA rules (WAC 197-11).

C. No Net Loss. Mining operations and any subsequent use or uses shall not cause permanent impairment or loss of floodwater storage, wetland, or other stream corridor features and habitats. Mitigation shall provide for the feature's replacement at equal value.

D. Surface mine reclamation plans. For mining proposals that meet the definition of surface mine in RCW 78.44.031, a reclamation plan that complies with the format and detailed minimum standards of RCW 78.44, Surface mining, shall be included with any shoreline permit application. Reclamation plans proponent shall review and consider incorporating applicable portions of the Shoreline Restoration Plan as well as critical area mitigation, if any, into the applicant’s proposed Reclamation Plan. In reviewing reclamation plans together with permit applications, the Shoreline Administrator shall determine whether or not the plan is also consistent with this SMP, the shoreline restoration plan and other local regulations. An inconsistent reclamation plan shall constitute sufficient grounds for denial of a shoreline permit, provided, the applicant shall be given reasonable opportunity to revise the plan.

E. Reclaimed site use. Subsequent use of reclaimed sites shall be consistent with the provisions of this SMP.

F. Adverse Ecological and Flood Hazard Impacts. Mining waterward of the OHWM or in the floodplain or channel migration zone of any shoreline waterbody shall not be permitted unless:

1. Removal of specified quantities of sand and gravel or other materials at specific locations will not adversely affect the natural processes of gravel transportation for the system as a whole; and

2. The mining and any associated permitted activities will not have significant adverse impacts to habitat for priority species nor cause a net loss of ecological functions of the shoreline.

3. Such uses will not divert flood flows causing channel-shift or erosion, accelerate or amplify the flooding of downstream flood hazard areas, increase the flooding threat to upstream flood hazard areas, or in any other way threaten public or private properties.

The determinations required by Subsections F.1 and F.2 above shall be made consistent with RCW 90.58.100(1) and WAC 173-26-201(2)(a).

G. Continuation of mining at existing site. In considering renewal, extension or reauthorization of other mining operations waterward of the OHWM in locations where they have previously been conducted, City of Leavenworth shall require compliance with Subsection F to the extent that no such review has previously been conducted. Where there has been prior review, City of Leavenworth shall review previous determinations comparable to the requirements of this section to assure compliance with Subsection H under current site conditions. (WAC 173-26-241(3)(h)(ii)(D))

H. Channel migration zones. Any mining in channel migration zone allowed pursuant to the City of Leavenworth's Shoreline Use and Modification Matrix in this Master Program must obtain a Conditional Use Permit.

I Hazardous materials. The use of mercury or other hazardous substances is strictly prohibited.

J. State-owned aquatic lands. Mining proposals shall be consistent with the Washington Department of Natural Resources Surface Mine Reclamation standards (WAC 332-18, RCW 78.44).

5.14 Private Moorage Facilities (Docks and private boat launch facilities are prohibited in the City of Leavenworth and its UGA.)

5.15 Recreational Development

5.15.1 Policies

A. Promote recreation and public access. Developments and uses should be designed and operated to provide the public with recreational areas, facilities, and access to the shorelines. (based on 1975 SMP Policy 17.a)

B. Support facilities and access. Recreational areas should be supported by multi-use trails and parking to prevent undue concentration and pressure on fragile natural areas. Parking is not a preferred shoreline use, and should be located only as necessary to support an authorized use, minimizing environmental and visual impacts. (1975 SMP Policy 17.b and c)

C. Pedestrian-oriented. Direct access to the water should be via paths, walkways, or other pedestrian-oriented features. Vehicular traffic on beaches and fragile shorelines should be prohibited. (1975 SMP Policy 17.c)

D. Public acquisition**.** To reduce overcrowding of current facilities and avoid adverse impacts on adjacent properties, the increased public acquisition and dedication of land for shoreline parks and recreation areas are encouraged. (1975 SMP Policy 17.d)

E. Grounds management. The use of fertilizers, herbicides, and pesticides to maintain recreational facilities such as golf courses and playfields should be closely monitored to prevent contamination of waterbodies by runoff. (1975 SMP Policy 17.e) Management that utilizes organic treatments, integrated pest management, or non-synthetic chemicals is preferred where feasible and practical over management that utilizes synthetic chemicals.

F. Prevent impact to private property. The location, design, construction and operation of recreational facilities should prevent undue adverse impacts on adjacent or nearby private properties. (1975 SMP Policy 17.f)

G. Scenic views and vistas**.** Scenic views and vistas should be preserved in the design of recreational facilities, wherever practical. (1975 SMP Policy 17.g)

H. State and Federal recreation use preferred to local acquisition. As an economical alternative to new acquisition by local agencies, the use of State and Federal lands for recreational facilities should be considered. Federal and state-owned shorelines are particularly adapted to providing wilderness beaches, ecological study areas, and other recreational uses for the public. (1975 SMP Policy 17.i)

I. Maintain and/or increase the amount of publicly owned park properties by protecting the existing facilities from land conversions. (Comprehensive Plan Open Space/Recreation Goal 3, Policy 2)

J. Encourage the preservation of areas that are environmentally sensitive or have historic, cultural, or scenic value. (Comprehensive Plan Open Space/Recreation Goal 1, Policy 3)

5.15.2 Regulations

A. Design. Recreational uses and facilities shall be designed to be primarily related to access, enjoyment and use of the water and shorelines of the state. (WAC 173-26-241(3)(i))

B. Use consistency. Proposed recreation uses shall be designed, located and operated consistent with the purpose and intensity of the shoreline environment designation and environmental conditions. (WAC 173-26-241(3)(i))

C. Accessory uses. Accessory uses and support facilities such as maintenance facilities and parking lots shall be consolidated and located in upland areas outside shoreline, wetland and riparian buffers to the extent feasible, except for access to water-dependent facilities such as boat launches. (WAC 173-26-201(2)(d), WAC 173-26-241 (2)(a)(iii) ,WAC 173-26-211(3)(b), and WAC 173-26-241(3)(i))

D. Public access. See SMP Section 4.4. Where recreation facilities for public access include overwater structures, such as public view or fishing platforms, those overwater structures should comply with relevant requirements of SMP Section 5.5, Boating Facilities (WAC 173-26-241(3)(i))

E. Fertilizer and chemical management. For recreation developments such as golf courses and playfields that use fertilizers, pesticides, or other chemicals, the applicant shall submit plans demonstrating the best management practices and methods to be used to prevent these chemical applications and resultant leachate from entering adjacent waterbodies. Management that utilizes organic treatments, integrated pest management, or non-synthetic chemicals are preferred over management that utilizes synthetic chemicals where feasible and practical. (Implements Policy 5.15.1.E above from 1975 SMP)

F. Compatibility with adjacent private properties. Recreational facilities shall make adequate provisions, such as screening, buffer strips, fences, and signs, to prevent overflow onto adjacent private properties. (WAC 173-26-221(4)(b))

G. Adequate utilities and services. Proposals for recreational development shall include facilities for water supply, wastewater, and garbage disposal in conformance with the City of Leavenworth standards.

H. Environmental protection. Recreational development shall be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions. (WAC 173-26-241(3)(i))

I. Management Plans. In order to simplify the review of exempt and non-exempt activities that are ongoing, City of Leavenworth shall - develop and - review 5-year recreation management plans addressing public recreation facility operations and maintenance, use of best management practices, and other measures to assure no net loss of shoreline ecological function.

1. New public recreational proposals or redevelopment of public recreational areas shall prepare a plan that shall minimally contain the following categories when applicable:

   a. Description of in-stream or in-lake habitat protection measures, and commitment to implement mitigation for any new or expanded development that has adverse impacts;

   b. Description of riparian and wetland protection measures, and commitment to implement mitigation for any new or expanded development that has adverse impacts;

   c. Description of site-appropriate water use management activities, including use of less water-dependent landscaping, maximizing the efficiency of the application system, and reducing the area irrigated;

   d. Description of stormwater management practices to treat stormwater runoff to reduce both water quantity and water quality impacts, including maximizing use of infiltration, bio-filtration, and detention;

   e. Description of erosion and sediment control practices that prevent off-site movement of sediment for new construction, stored soils, and potential surface erosion areas; and

   f. Description of chemical and nutrient use and containment practices that demonstrate minimization of overall inputs of these contaminants, restrict the type of inputs, and develop an acceptable method of application through a comprehensive management program, such as Integrated Pest Management (IPM).

2. Each category specified in I.1 above shall be comprised of one to several standards. Each standard should describe the management objective or desired outcome for habitat conditions, specific performance requirements for each standard, and corrective actions that would be implemented if the performance requirement(s) is not met.

Public Recreation Performance Standards in Lieu of Buffers: The following standards shall guide new development and redevelopment of public access and public recreation facilities in lieu of a fixed-dimension buffer. Standards buffers are applicable on all islands within public access and public recreational developments. Applicants shall submit a management plan that addresses compliance with each of the following applicable standards and principles. City

of Leavenworth shall review and condition the project to fully implement the standards below.

Table 6. Recreation Design and Management Standards

Design Element	Design and Management Standards
1. Category of Use	• Only water-dependent-uses shall be located immediately upland of the OHWM. • Accessory and primary water-oriented uses shall be located upland of a water-dependent- use except that parking for those with disabilities when no other location is feasible may be located per "3" below. [City of Leavenworth may establish a setback for the nonwater-oriented use based on their own unique conditions] • New or expanded water-oriented development shall avoid existing riparian areas and comply with vegetation management requirements below. • Existing primary nonwater-oriented uses may only expand if they are located upland of water-oriented uses and if the expansion does not displace water-oriented uses. • Water-enjoyment recreational uses may be expanded. • Existing water-oriented uses may not be converted to a nonwater-oriented use except when the existing water-oriented use except when the existing water-oriented use is separated from the OHWM by a levee or another property.
2. Impervious Surface and Stormwater Management	• New and expanded pollution-generating impervious surfaces (e.g., surfaces used predominantly by vehicles, such as parking areas, roads, or boat launches) must provide water quality treatment before discharging to a waterbody, through use of oil-water separators, bioswales, or other approved technique. -Treated runoff from pollution-generating impervious surfaces and runoff from non-pollution-generating impervious surfaces shall be infiltrated or otherwise treated and discharged in accordance with water quality standards of City of Leavenworth. • New or expanded pollution-generating impervious surfaces within 50 feet of the OHWM or within already disturbed areas shall be limited to those necessary to provide vehicle access to boat launches, to improve existing informal parking areas, to expand existing parking, or to provide ADA parking as outlined below under 3. Parking. • New or expanded trail systems shall avoid existing riparian areas and comply with vegetation management requirements below. Existing trail systems feet may only be expanded in response to increased demand, and shall be expanded in the following order of preference, with 1) being the most preferred: 1) upland outside required buffers, 2) landward of existing trail and 3) laterally.
3. Parking	• New parking accessory to shoreline parks shall be at least 100 feet upland of the OHWM, except where a minimum number of parking spaces are provided closer than 100 feet to accommodate those with disabilities,

Design Element	Design and Management Standards
	where parking is provided in existing impervious surfaces or areas that are already currently used for parking or vehicular travel, or are disturbed and provide no ecological function. • Existing parking closer than 100 feet upland of the OHWM may only be expanded in response to increased demand, and shall be expanded in the following order of preference, with 1) being the most preferred: 1) upland, 2) landward of existing parking and 3) laterally - of the existing parking, if it is serving a previously existing authorized use and is located on existing impervious surface or existing vehicular travel area. Parking shall not be located closer than 100- feet upland of the OHWM unless the proposed expansion area is already an impervious surface, is disturbed and provides no ecological function, or is necessary to accommodate those with disabilities.
4. Vegetation Management	• New and expanded uses shall be located to avoid and minimize intrusion into riparian areas, as well as avoid tree and shrub removal. • Significant tree removal shall be mitigated at a 2:1 ratio and as otherwise consistent with SMP Section 11.4.5.D. • Other trees and shrubs shall also be replaced at a 2:1 ratio using the same preference for location established for significant trees. • Landscape designs for new and expanded recreation facilities shall incorporate the following: 1. Select species that are suitable to the local climate, having minimal demands for water, minimal vulnerability to pests, and minimal demands for fertilizers. Native species to comprise 50 percent of the landscaped area, not counting lawn area. Redevelopment of lawn areas shall be no closer than 20 feet upland of the OHWM. Native grasses may be used within 20 feet upland of the OHWM and shall be managed appropriate to the species and in accordance with park management plans. If lawn areas are not currently established within buffers found in Table 4.5-1, the existing riparian vegetation within the buffer shall be maintain, unless a mitigation management plan demonstrates ecological lift through a different planting plan. 2. Preserve existing soil and vegetation (especially trees) where possible. Amend disturbed soils with compost. Mulch existing and proposed landscapes regularly with wood chips, coarse bark, leaves or compost. 3. Group plants by water need, use more efficient irrigation methods like drip and soakers under mulch, and design and maintain irrigation systems to reduce waste. 4. Place vegetation to maximize the following benefits: – development or supplementation of a native vegetated wildlife corridor,

Design Element	Design and Management Standards
	– development or supplementation of riparian vegetation adjacent to the water's edge, – screening parking areas from views from the water or the park, and/or – discouragement of wildlife that may directly or indirectly interfere with park use or human health (e.g., geese), 5. While a specified buffer is not required for public park areas, recreational improvement projects shall place an emphasis on shoreline restoration/enhancement inside of those buffers found in Table 4.5-1. This emphasis shall not require the removal of existing lawn areas, but should place an emphasis on incorporation of riparian plantings if the public access area is underutilized or public access would not be impaired by the plantings.
5. Chemical Applications	• A lawn and landscape management strategy shall be developed that incorporates the following principles and practices: 3. A site-specific plan for use of integrated pest management technique, if applicable. 4. A detailed plan identifying anticipated use of fertilizers, herbicides and pesticides, to include method of application that ensures these materials will not enter the water. Phosphorus-containing fertilizer treatments shall not be applied to turf or landscaping within 50 feet of the OHWM. Natural applications and hand removal are preferred over synthetic applications.
6. Pools	• Pools and other upland recreational uses that utilize chemically treated water must either be connected to a sewer system or must collect the water for later discharge into a sewer system. • Pools and other upland recreational uses that utilize chemically treated water shall be located 75 feet upland of the OHWM.
7. Lighting	• Outdoor lighting fixtures and accent lighting must be shielded and aimed downward, and shall be installed at the minimum height necessary. The shield must mask the direct horizontal surface of the light source. The light must be aimed to ensure that the illumination is only pointing downward onto the ground surface, with no escaping direct light permitted to contribute to light pollution by shining upward into the sky. • Outdoor lighting fixtures and accent lighting shall not directly illuminate the lake or river, unless it is a navigational light subject to state or federal regulations.

1 Public/Park development or redevelopment application requirements:

a. Existing Drawings of park facilities which provides a narrative to include area (sq. feet or sq. meters) description of trails, parking, riparian vegetation, campsites, recreational facilities (ball parks, picnic table, grilling areas) upland vegetation and lawn areas.

b. Proposed Drawings of park facilities which provides a narrative to include area (sq. feet or sq. meters) description of trails, parking, riparian vegetation, campsites, recreational facilities (ball parks, picnic table, grilling areas) upland vegetation and lawn areas.

c. Any increases in impervious surfaces (trail size, parking facilities, recreational facilities, etc.) shall be accompanied by a needs analysis that addressed the requirement for increased public facilities, what size facilities are needed citizens and where these facilities are or are not provided nearby.

d. Expansion of public/park facilities shall be accompanied by a mitigation management plan that addresses the design elements and the design and management standards above, address critical area impacts, and addresses the incorporation of applicable SMP restoration goals that have been accomplished by the development and demonstrates an ecological lift to shoreline functions.

5.16 Residential Development

5.16.1 Policies

A. Compatibility with shoreline. All subdivisions and residential development should be designed at a level of site coverage and density compatible with the physical capabilities of the shoreline and water in order to minimize probabilities of damage to life, property and the environment. (1975 SMP Policy 5a)

B. Cluster development. Cluster development should be encouraged outside shoreline jurisdiction wherever feasible to minimize shoreline impacts by residential development, to maintain both on-site and off-site aesthetic appeal, and to minimize disruption of the natural shoreline. (1975 SMP Policy 5b)

C. Encourage restoration and environmental design. Ecological restoration and measures to minimize environmental impacts, such as low impact development and vegetation conservation and enhancement, should be encouraged. (based on principles of environmental impact mitigation in WAC 173-26-201(2)(e), vegetation conservation in WAC 173-26-221(5), low impact development principles, and example SMPs)

D. Aesthetics. All subdivisions and residential development should be designed to adequately protect and/or improve the water and shoreline aesthetic qualities. (1975 SMP Policy 5c)

E. Overwater residential development. New over-water residential development should be prohibited. (1975 SMP Policy 5d)

F. Floating homes. prohibited. (1975 SMP Policy 5h and WAC 173-26-241(3)(j))

G. Liveaboards. prohibited (WAC 173-26-241(3)(c)(v))

H. Adequate utilities. Residential development should have adequate provision for sanitary sewage disposal, storm drainage, and water supply which minimizes harmful effects on shorelines. (1975 SMP Policy 5f)

I. Focus residential development into areas with utilities and streets. Residential development should be encouraged upland of areas presently having such

improvements as utilities and streets so as to minimize additional expenditures of public funds, maximize use of existing public facilities, and not decrease availability of open space. (1975 SMP Policy 5g)

J. Provide public access. In order to minimize impacts to vegetation conservation areas and minimize impacts of vehicular use and parking upon shoreline aesthetics all residential developments should be encouraged to provide public access to the shoreline. (1975 SMP Policy 5i)

K. Scenic views. Residential development should be designed to avoid impacts to scenic views and vistas. (based on 1975 SMP Policy 5j)

L. Infilling compatible with surrounding neighborhoods should be encouraged on remaining buildable lands within the City of Leavenworth. (Comprehensive Plan Residential Goal 1, Policy 1) Encourage the infill of vacant, partially used, and underutilized land in existing residential developments located within urban growth areas.

M. New residential developments within the City of Leavenworth should include provisions for paved streets, curbs, and gutters at the time of development and be consistent with City development standards. (Comprehensive Plan Residential Goal 1, Policy 3)

N. Cluster developments with density mixes should be encouraged in both the City of Leavenworth and the urban growth area. (Comprehensive Plan Residential Goal 2, Policy 1)

5.16.2 Regulations

A. Residential uses shall be allowed in conformance with City zoning requirements and the provisions of this SMP, including, but not limited to, SMP Sections 5.16.2.

B. Subdivisions and plats. Subdivisions and plats shall: (WAC 173-26-241(3)(j))

1. Comply with all applicable subdivision, critical area, and zoning regulations.

2. Include facilities for water supply, wastewater, stormwater, solid waste, access, utilities and other support facilities in conformance with the City of Leavenworth standards and which do not result in harmful effects on the shoreline or waters. See Section 4.6.2.E for specific wastewater requirements.

3. Be designed to prevent the need for new hard or soft shoreline stabilization or flood hazard reduction measures per Section 4.3. A note limiting shoreline stabilization shall be placed on the face of the plat at the time of subdivision.

4. Be designed, configured and developed in a manner that assures that no net loss of ecological functions results from division of land at full build-out of all lots and throughout all phases of development.

5. Be required to cluster residential units and structures where necessary and when allowed by City of Leavenworth to avoid critical areas and to preserve natural features and minimize physical impacts.

6. Lots shall be configured in a way so as not to require a Shoreline Variance in the future for residential development. Lot configurations shall plan for building sites behind the required shoreline buffer. Shoreline buffer reductions shall be determined at the time of residential development; not at the time of subdivision.

C. Environmental protection. Residential development including accessory uses and appurtenant structures shall: (WAC 173-26-241(3)(j))

1. Meet all applicable critical area, vegetation conservation, and water quality standards of Chapter 4 and Appendix B of this SMP.

2. Be sufficiently set back from steep slopes and shorelines vulnerable to erosion so that structural improvements, including bluff walls and other stabilization structures, are not required to protect such structures and uses. To accomplish this, City of Leavenworth shall apply critical area buffers established in Appendix B and shoreline buffers found in Vegetation Conservation sections of this SMP. City of Leavenworth may require greater buffers to protect health and safety based on a geotechnical analysis or other information in the application record.

3. Be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions.

D. Public access. New multiunit residential development, including the subdivision of land for more than four parcels should provide community and/or public access.

E. Over-water residences and floating homes. Prohibited

E. Liveaboards. Prohibited

F. Accessory uses. Residential accessory uses or appurtenances shall not be located in required shoreline buffers unless specifically authorized in Vegetation Conservation standards and Appendix B. Residential accessory uses shall be prohibited over the water unless clearly water-dependent -. The primary use shall be established prior the accessory use, in those cases where uses or development are proposed that would normally be considered ‘accessory or appurtenant uses’, they shall be considered primary development. (Based on WAC 173-26-241 (2)(a)(iii) and 173-26-211(3)(b))

G. Underground Utilities. See Section 5.20.

5.17 Shoreline Habitat and Natural Systems Enhancement Projects

Shoreline habitat and natural systems enhancement and restoration projects include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines. Examples of shoreline habitat and natural systems enhancement projects include floodplain restoration projects, fish passage barrier removal or improvement, and projects to increase shoreline habitat complexity, among others. Stabilization of eroding banks may be considered under this section provided that the purpose of the project is clearly restoration of the natural character and ecological functions of the shoreline, and the project uses bioengineering approaches, including limited use of rock as a stabilization only at the toe of the bank as necessary, and with primary emphasis on using native vegetation to control erosive forces. Projects that qualify as streamlined fish enhancement projects per RCW 77.55.181 will be considered under this section.

5.17.1 Policies (based on WAC 173-26-231(3)(g))

A. Design. Restoration and enhancement of shorelines should be designed using principles of landscape and conservation ecology and should restore or enhance chemical, physical, and biological watershed processes that create and sustain shoreline habitat structures and functions.

B. Improve shoreline ecological functions. Restoration and enhancement actions should improve shoreline ecological functions and processes and should target meeting the needs of sensitive plant, fish and wildlife species as identified by Washington Department of Fish and Wildlife, Washington Department of Natural Resources, National Marine Fisheries Service and/or U.S. Fish and Wildlife Service.

C. Pursue funding. City of Leavenworth should, and private entities are encouraged to, seek funding from State, Federal, private and other sources to implement restoration, enhancement, and acquisition projects, particularly those that are identified in the Restoration Plan of this SMP or the local watershed plans.

D. Streamline review. City of Leavenworth should develop processing guidelines that will streamline the review of restoration-only projects.

E. Coordination. Restoration and enhancement projects should be coordinated with local public utility and conservation districts.

F. Alternative mechanisms. Allow for the use of tax incentive programs, mitigation banking, grants, land swaps, or other programs, as they are developed, to encourage restoration and enhancement of shoreline ecological functions and to protect habitat for fish, wildlife and plants.

5.17.2 Regulations (based on WAC 173-26-231(3)(g))

A. Approved plan. Restoration and enhancement shall be carried out in accordance with an approved shoreline restoration plan.

B. Protect adjacent resources. All shoreline restoration and enhancement projects shall protect the integrity of adjacent natural resources, including aquatic habitats and water quality.

C. Maintenance and monitoring. Long-term maintenance and monitoring (minimum of three years, but preferably longer) shall be arranged by the project applicant and included in restoration or enhancement proposals.

D. Adverse affects. Shoreline restoration and enhancement may be allowed if the project applicant demonstrates that no significant change to sediment transport or river current will result and that the enhancement will not adversely affect ecological processes, properties, or habitat.

E. Use of best information and BMPs. Shoreline restoration and enhancement projects shall be designed using the best available scientific and technical information, and implemented using best management practices.

F. Public use of waters. Shoreline restoration and enhancement shall not significantly interfere with the normal public use of the navigable waters of the state, as determined by the Shoreline Administrator, without appropriate mitigation. For projects on state-owned aquatic lands, prior to the solicitation of permits from regulatory agencies, project proponents must coordinate with the

Washington Department of Natural Resources to ensure the project will be appropriately located.

G. Permitted. Shoreline restoration and ecological enhancement projects may be permitted in all shoreline environments, provided the project's purpose is the restoration of the natural character and ecological functions of the shoreline.

H. Relief for OHWM shifts. Applicants seeking to perform restoration projects are advised to work with City of Leavenworth to assess whether and how the proposed project is allowed relief under RCW 90.58.580, in the event that the project shifts the OHWM landward.

5.18 Shoreline Stabilization

Shoreline stabilization includes actions taken to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods. Nonstructural methods include shoreline buffers or setbacks, relocation of the structure to be protected, groundwater management, planning and regulatory measures to avoid the need for structural stabilization.

Shorelines are by nature unstable, although in varying degrees. Erosion and accretion are natural processes that provide ecological functions and thereby contribute to sustaining the natural resource and ecology of the shoreline. Human use of the shoreline has typically led to hardening of the shoreline for various reasons including reduction of erosion or providing useful space at the shore or providing access to docks. The impacts of hardening any one property may be minimal, but cumulatively the impact of this shoreline modification is significant.

Shoreline hardening typically results in adverse impacts to shoreline ecological functions such as:

- Beach starvation. Sediment supply to nearby beaches is cut off, leading to "starvation" of the beaches for the gravel, sand, and other fine-grained materials that typically constitute a beach.
- Habitat degradation. Vegetation that shades the upper beach or bank is eliminated, thus degrading the value of the shoreline for many ecological functions, including spawning habitat for salmonids and forage fish.
- Sediment impoundment. As a result of shoreline hardening, the sources of sediment on beaches (eroding "feeder" bluffs) are progressively lost and longshore transport is diminished. This leads to lowering of down-drift beaches, the narrowing of the high tide beach, and the coarsening of beach sediment. As beaches become more coarse, less prey for juvenile fish is produced. Sediment starvation may lead to accelerated erosion in down-drift areas.
- Exacerbation of erosion. The hard face of shoreline armoring, particularly concrete bulkheads, reflects wave energy back onto the beach, exacerbating erosion.
- Groundwater impacts. Erosion control structures often raise the water table on the landward side, which leads to higher pore pressures in the beach itself. In some cases, this may lead to accelerated erosion of sand-sized material from the beach.

- Hydraulic impacts. Shoreline armoring generally increases the reflectivity of the shoreline and redirects wave energy back onto the beach. This leads to scouring and lowering of the beach, to coarsening of the beach, and to ultimate failure of the structure.
- Loss of shoreline vegetation. Vegetation provides important "softer" erosion control functions. Vegetation is also critical in maintaining ecological functions.
- Loss of large woody debris. Changed hydraulic regimes and the loss of the upper beach, along with the prevention of natural erosion of vegetated shorelines, lead to the loss of beached organic material. This material can increase biological diversity, can serve as a stabilizing influence on natural shorelines, and is habitat for many aquatic-based organisms, which are, in turn, important prey for larger organisms.
- Restriction of channel movement and creation of side channels. Hardened shorelines along rivers slow the movement of channels, which, in turn, prevents the input of larger woody debris, gravels for spawning, and the creation of side channels important for juvenile salmon rearing, and can result in increased floods and scour.

Additionally, hard structures, especially vertical walls, often create conditions that lead to failure of the structure. In time, the substrate of the beach coarsens and scours down to bedrock or a hard clay. The footings of bulkheads are exposed, leading to undermining and failure. This process is exacerbated when the original cause of the erosion and "need" for the bulkhead was from upland water drainage problems. Failed bulkheads and walls adversely impact beach aesthetics, may be a safety or navigational hazard, and may adversely impact shoreline ecological functions.

"Hard" structural stabilization measures refer to those with solid, hard surfaces, such as concrete bulkheads, while "soft" structural measures rely on less rigid materials, such as biotechnical vegetation measures or beach enhancement. There is a range of measures varying from soft to hard that include: vegetation enhancement, upland drainage control, biotechnical measures, beach enhancement, anchor trees, gravel placement, rock revetments, gabions, concrete groins, retaining walls and bluff walls, and bulkheads.

Generally, the harder the construction measure, the greater the impact on shoreline processes, including sediment transport, geomorphology, and biological functions.

Structural shoreline stabilization often results in vegetation removal and damage to near-shore habitat and shoreline corridors. Therefore, master program shoreline stabilization provisions shall also be consistent with SMP Section 4.5, Vegetation Conservation and Shoreline Buffers, and critical areas regulations found in Appendix B.

In order to implement RCW 90.58.100(6) and avoid or mitigate adverse impacts to shoreline ecological functions where shoreline alterations are necessary to protect single-family residences and primary appurtenant structures in danger from active shoreline erosion, master programs should include standards setting forth the circumstances under which alteration of the shoreline is permitted, and for the design and type of protective measures and devices.

5.18.1 Policies

A. Ecological functions and processes. Shoreline stabilization should be located, designed, and maintained to protect and maintain shoreline ecological functions, ongoing shoreline processes, and the integrity of shoreline features. Ongoing

stream or lake processes and the probable effects of proposed shoreline stabilization on other properties and shoreline features should be considered. Shoreline stabilization should not be developed for the purpose of filling shorelines or creating additional property.

B. Alternatives. Structural shoreline stabilization measures should only be used when more natural, flexible, non-structural methods such as placing the development farther from the OHWM, planting vegetation, or installing on-site drainage improvements, beach nourishment and bioengineering have been determined infeasible. Alternatives for shoreline stabilization should be based on the following hierarchy of preference:

1. No action. Allow the shoreline to retreat naturally, increase buffers, and relocate structures.
2. Flexible defense works constructed of natural materials including soft shore protection, bioengineering, including beach nourishment, protective berms, large woody debris, or vegetative stabilization.
3. Rigid works constructed of artificial materials such as riprap or concrete.

C. Future stabilization. Structures should be located and designed to avoid the need for future shoreline stabilization where feasible. Land subdivisions should be designed to assure that future development of the created lots will not require shoreline stabilization for reasonable development to occur.

D. Protect existing structures. New or expanded structural shoreline stabilization should only be permitted where demonstrated to be necessary to protect an existing primary structure, including residences, that is in danger of loss or substantial damage, and where mitigation of impacts would not cause a net loss of shoreline ecological functions and processes.

E. Enhancement, restoration and remediation. New or expanded structural shoreline stabilization for enhancement, restoration, or hazardous substance remediation projects should only be allowed when non-structural measures, native vegetation planting, or on-site drainage improvements would be insufficient to achieve enhancement, restoration or remediation objectives.

F. Site-specific design. Shoreline stabilization on streams should be located and designed to fit the physical character and hydraulic energy potential of a specific shoreline reach, which may differ substantially from adjacent reaches.

G. Public access and other uses. Shoreline stabilization should not be permitted when it interferes with public access to shorelines of the state, nor with other appropriate shoreline uses including, but not limited to, navigation or private recreation.

H. Non-regulatory methods. In addition to conformance with the regulations in this section, non-regulatory methods to protect, enhance, and restore shoreline ecological functions and other shoreline resources should be encouraged for shore stabilization. Non-regulatory methods may include public facility and resource planning, technical assistance, education, voluntary enhancement and restoration projects, or other incentive programs.

I. Coordination. Shoreline stabilization should be developed in a coordinated manner among affected property owners and public agencies, particularly those that cross boundaries between local governments or other entities with authority

over specific land or water areas, to address ecological and geo-hydraulic processes, sediment conveyance, and beach management issues. Where beach erosion threatens existing development, a comprehensive program for shoreline management should be established by the multiple affected property owners.

J. Public or quasi-public developments. Provisions for multiple use, restoration, and/or public shoreline access should be incorporated into the location, design and maintenance of shoreline stabilization for public or quasi-public developments whenever safely compatible with the primary purpose. Shoreline stabilization on publicly owned shorelines should not be allowed to decrease long-term public use of the shoreline. For the purposes of this section, a 'quasi-public development' shall mean a privately-owned development with a public mandate and/or public funding.

K. Materials. Materials used for construction of shoreline stabilization should be selected for long-term durability, ease of maintenance, compatibility with local shoreline features including aesthetic values, and flexibility for future uses.

L. Adjacent properties. New development that would require shoreline stabilization which causes adverse impacts to adjacent or down-current properties and shoreline areas should not be allowed.

5.18.2 Regulations

A. General. The purpose of this section is to provide standards and guidelines for the location and design of hard structural and soft structural shoreline stabilization measures that have the potential to adversely impact the shoreline natural environment. New development, however, shall be located and designed to avoid the need for future shoreline stabilization to the extent feasible. Land subdivisions shall be designed to assure that future development of the created lots will not require shoreline stabilization for reasonable development to occur. New development on steep slopes or bluffs shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure, as demonstrated by a geotechnical analysis. New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas should not be allowed. In all cases, the feasibility of soft structural shoreline stabilization shall be evaluated prior to hard structural stabilization. Shoreline stabilization shall be designed so that net loss of ecological functions does not occur. (WAC 173-26-231(3)(a)(iii)(A))

B. New or enlarged structural shoreline stabilization. New structural shoreline stabilization measures, including both hard and soft structural shoreline stabilization measures, shall include measures installed to address erosion impacts. Enlargement of an existing structural shoreline stabilization shall include additions to or increases in size (such as height, width, length, or depth) to existing shoreline stabilization measures and these enlargements shall be considered new structures. New or enlarged structural stabilization measures shall not be allowed, except as follows:

1. To protect an existing primary structure, including residences, when conclusive evidence, documented by a geotechnical analysis, is provided that the structure is in danger from shoreline erosion caused by currents or waves. Normal sloughing, erosion of steep bluffs, or shoreline erosion

itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis should evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering hard or soft structural shoreline stabilization. OR (WAC 173-26-231(3)(a)(iii)(B)(I))

2. In support of new nonwater-dependent development, including single-family residences, when all of the conditions below apply:

    a. The erosion is not being caused by upland conditions, such as drainage and the loss of vegetation.

    b. Nonstructural measures, such as placing the proposed development farther from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient to adequately address erosion impacts.

    c. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical analysis. The damage must be caused by natural processes, such as currents or waves. OR (WAC 173-26-231(3)(a)(iii)(B)(II))

3. In support of water-dependent development when all of the conditions below apply:

    a. The erosion is not being caused by upland conditions, such as drainage and the loss of vegetation.

    b. Nonstructural measures, such as planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient to adequately address erosion causes or impacts.

    c. The need to protect primary structures, including residences, from damage due to erosion is demonstrated through a geotechnical analysis. OR (WAC 173-26-231(3)(a)(iii)(B)(III))

4. To protect projects for the restoration of ecological functions or for hazardous substance remediation projects pursuant to Chapter 70.105D RCW when nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient to adequately address erosion causes or impacts. (WAC 173-26-231(3)(a)(iii)(B)(IV))

5. To protect cultural or historic resources when nonstructural measures, planting vegetation, or installing on-site drainage improvements are not feasible or not sufficient to avoid continued degradation, disturbance or erosion of a site. Cultural resource protection projects shall be coordinated with any affected Indian tribes and comply with applicable provisions of Section 4.1.2 of this SMP.

C. Repair of existing shoreline stabilization measures. This section allows repair and maintenance of existing legally established shoreline stabilization measures, subject to all of the following standards. [Note: repair of shoreline stabilization structures may meet the criteria for exemption from a Shoreline Substantial Development Permit, but they are not exempt from the policies and regulations of this Section or the SMP.]

1. Maintenance and repair shall include modifications or improvements to an existing shoreline stabilization measure that are designed to ensure the continued function of the stabilization measure by preventing failure of any part of the stabilization measure.

2. Modifications or improvements that include additions to or increases in size of existing shoreline stabilization measures shall be considered new structures, and are not maintenance and/or repair.

3. Replacement of greater than 50 percent or 35 feet, whichever is smaller, of linear length of existing shoreline stabilization on a waterfront parcel is not considered a repair or maintenance for purposes of these regulations, and must be designed and reviewed as a replacement subject to the provisions contained in Subsection 5.18.2.D below. For shoreline stabilization projects, “replacement” occurs when the existing structure, including its footing or bottom course of rock, is removed prior to placement of new shoreline stabilization materials. Repairs and maintenance that involve only removal of material above the footing or bottom course of rock are not considered replacements. Replacement of existing shoreline stabilization may still qualify for an exemption from a Shoreline Substantial Development Permit as listed in Section 7.6.3 of this SMP. Further limitations on non-conforming shoreline stabilization are located in the City of Leavenworth’s Nonconforming Uses and Development Standards section of this Master Program.

4. Areas of temporary disturbance within the shoreline buffer shall be expeditiously restored to their pre-project condition or better.

5. The placement of a new shoreline stabilization structure landward of a failing shoreline stabilization structure shall be considered a new structure, and is not maintenance or repair.

D. Replacement. The following standards apply to replacement of existing hard and soft structural shoreline stabilization measures [Note: repair of shoreline stabilization structures may meet the criteria for exemption from a Shoreline Substantial Development Permit, but they are not exempt from the policies and regulations of this Section or the SMP]:

1. For purposes of this section, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure that can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall also be considered new structures. (WAC 173-26-231(3)(a)(iii)(C))

2. Replacement shall be treated as a new shoreline stabilization measure subject to the restrictions of Subsection 5.18.2.B. above, as well as the submittal requirements of Subsection 5.18.2.-H. below, except for the requirement to prepare a geotechnical analysis. A geotechnical analysis is not required for replacements of existing hard or soft structural shoreline stabilization with a similar or softer measure if the applicant demonstrates need to protect principal uses or structures from erosion caused by waves or other natural processes operating at or waterward of the OHWM. (WAC 173-26-231(3)(a)(iii)(C))

3. Replacement hard structural shoreline stabilization measures shall not encroach waterward of the OHWM or waterward of the existing shoreline stabilization measure unless the primary residence was constructed prior to January 1, 1992, and there is overriding safety or environmental concerns. In such cases, the replacement structure shall abut (attached to and waterward of) the existing shoreline stabilization structure. All other replacement hard structural shoreline stabilization measures shall be located at or landward of the existing shoreline stabilization structure. (WAC 173-26-231(3)(a)(iii)(C))

4. Limited fill associated with hard and soft shoreline stabilization measures may be allowed waterward of the OHWM to provide enhancement of shoreline ecological functions through creation of nearshore shallow-water habitat. (WAC 173-26-231(3)(a)(iii)(C))

E. General design standards. When a hard or soft structural shoreline stabilization measure is demonstrated to be necessary, the following design standards shall be incorporated into the stabilization design:

1. Soft structural shoreline stabilization measures shall be used to the maximum extent practicable for new, enlarged, or replacement shoreline stabilization measures. Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses. Hard structural shoreline stabilization shall be limited to measures to protect the portion or portions of the site where demonstrated necessary to protect primary structures, dwellings, or businesses -or where necessary to connect to existing shoreline stabilization measures on adjacent properties. Hard structural shoreline stabilization transition areas between the applicant's otherwise soft shoreline measure and the adjacent hardened shoreline, when needed on the subject property to prevent destabilization of adjacent hardened shorelines, should be minimized and extend into the subject property from the property line no more than 10 feet.

2. For enlarged or replacement soft and hard structural shoreline stabilization measures, the following location and design standards are preferred in descending order:

   a. Conduct excavation and fill activities associated with the soft or hard structural shoreline stabilization landward of the existing OHWM to the maximum extent practicable.

   b. Where a, above, is not practicable because of overriding safety or environmental concerns, conduct necessary excavation and fill activities waterward of the existing OHWM as needed to implement a soft structural shoreline stabilization technique or to mitigate the impacts of hard structural shoreline stabilization. Fill material waterward of the OHWM may be sand, gravel, cobble or boulders provided the placement of boulders does not effectively present a continuous wall or face to oncoming waves (also known as rip rap).

3. All approved new, enlarged, repair, or replacement shoreline stabilization measures must minimize and mitigate any adverse impacts

to ecological functions resulting from short-term construction activities, consistent with Section 4.2, Ecological Protection and Critical Areas and Appendix B, Critical Areas Regulations. Impact minimization techniques may include compliance with appropriate timing restrictions, use of best management practices to prevent water quality impacts related to upland or in-water work, and stabilization of exposed soils following construction.

4. All new, enlarged, or replacement hard structural shoreline stabilization measures shall minimize any long-term adverse impacts to ecological functions by incorporating the following measures into the design:

    a. Limiting the size of hard structural shoreline stabilization measures to the minimum necessary, including height, depth, and mass.

    b. Shifting the hard structural shoreline stabilization landward and/or sloping the hard structural shoreline stabilization landward to provide some dissipation of wave energy and increase the quality or quantity of nearshore shallow-water habitat.

5. Approved new and enlarged shoreline stabilization measures shall mitigate any adverse impacts to ecological functions by incorporating the following measures at a minimum into the design if appropriate for local conditions:

    a. Restoration of appropriate substrate conditions waterward of the OHWM, to include substrate composition and gradient. The material should be sized and placed to remain stable during a two-year flood event on rivers and under typical boat- and wind-driven wave conditions on lakes, including storm events.

    b. Plant native riparian vegetation, as necessary, along at least 75 percent of the shoreline linear frontage affected by the new or enlarged stabilization, located along the water's edge. The vegetated portion of the shoreline buffer shall average 10 feet in depth from the OHWM, but may be a minimum of 5 feet wide to allow for variation in landscape bed shape and plant placement. Restoration of native vegetation shall consist of a mixture of trees, shrubs and groundcover and be designed to improve habitat functions. At least 3 trees per 100 linear feet of shoreline must be included in the plan. Plant materials must be native to the ecosystem of the project area. An alternative planting plan or mitigation measure in lieu of meeting these requirements may be allowed if approved by other State and Federal agencies.

    c. Additional mitigation measures may be required by City of Leavenworth, or State or Federal agencies, depending on the level of impact.

6. The shoreline stabilization measure shall be designed to not significantly interfere with normal surface and/or subsurface drainage into the adjacent waterbody.

7. The shoreline stabilization measure shall be designed so as not to constitute a hazard to navigation.

8. Stairs or other water access measures may be incorporated into the shoreline stabilization (e.g., steps integrated into the bulkhead, coved area with shallow entry), but shall not extend waterward of the shoreline stabilization measure and the OHWM.

9. The shoreline stabilization measure shall be designed to ensure that it does not restrict appropriate public access to the shoreline. When a structural shoreline stabilization measure is required at a public access site, provisions for safe access to the water shall be incorporated into the shoreline stabilization structure design (e.g., steps integrated into the bulkhead, coved area with shallow entry). Access measures should not extend farther waterward than the face of the shoreline stabilization measure and the OHWM.

10. Shoreline stabilization measures shall not extend waterward more than the minimum amount necessary to achieve effective stabilization, except for those elements that enhance shoreline ecological functions and minimize impacts.

11. When repair or replacement shoreline stabilization measures intended to improve ecological functions shift the OHWM landward of the pre-modification location, any buffers from the OHWM or lot area for the purposes of calculating lot coverage shall be measured from the pre-modification location. The pre-modification OHWM shall be recorded in a form approved by City of Leavenworth and recorded at the Chelan County Auditor's Office.

12. If repair or replacement shoreline stabilization measures intended to improve ecological functions shift the OHWM landward of the pre-modification location and result in expansion of the shoreline jurisdiction on any property other than the subject property, the plan shall not be approved until the applicant submits a copy of a statement signed by the property owners of all affected properties, in a form approved by City of Leavenworth and recorded at the Chelan County Auditor's Office, consenting to the shoreline jurisdiction creation and/or increase on such property.

F. Specific hard structural shoreline stabilization design standards. In those limited instances when hard structural shoreline stabilization measures, such as bulkheads, are demonstrated to be necessary as outlined in H.1 below, the following standards shall be incorporated into the design:

1. In those limited cases when hard structural shoreline stabilization is proposed on a site where hard structural shoreline stabilization is not located on adjacent properties, the construction of hard structural shoreline stabilization shall tie in with the existing contours of the adjoining properties, as feasible, such that the proposed stabilization would not cause erosion of the adjoining properties.

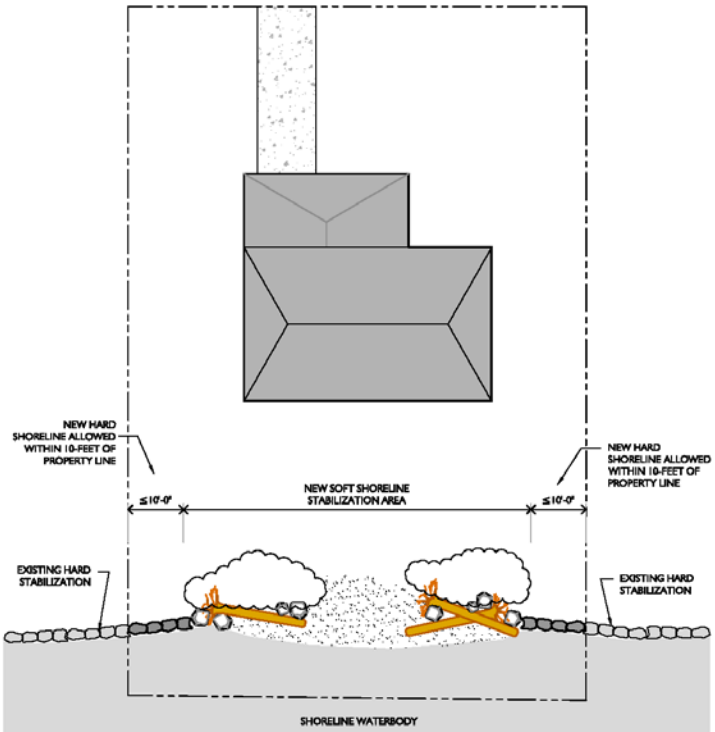
2. When hard structural shoreline stabilization is proposed on a site where hard structural shoreline stabilization is located on adjacent properties, the proposed stabilization may tie in flush with existing stabilization

measures on adjoining properties, provided that the new stabilization does not extend waterward of the OHWM, except as necessary to make the connection to the adjoining stabilization, and does not extend onto the adjacent property. In such circumstances, the remaining portion of the stabilization shall be placed landward of the existing OHWM such that no net intrusion into the waterbody occurs nor does net creation of uplands occur. The length of hard structural shoreline stabilization transition area to adjacent properties should be minimized to the maximum extent practicable, and extend into the subject property from adjacent properties no more than 10 feet.

3. Fill behind hard structural shoreline stabilization shall be limited to 1 cubic yard per running foot of stabilization. Any filling in excess of this amount shall be considered a regulated activity subject to the regulations in this Chapter pertaining to fill activities and the requirement for obtaining a Shoreline Substantial Development Permit or Shoreline Conditional Use Permit.

G. Specific soft structural shoreline stabilization design standards. In addition to applicable general design standards and hard structural shoreline stabilization standards above, the following standards shall be incorporated into the design:

1. The soft shoreline stabilization design shall provide sufficient protection of adjacent properties by tying in with the existing contours of the adjoining properties to prevent erosion at the property line, provided the stabilization measure does not extend onto the adjacent property. Soft shoreline stabilization projects that include necessary use of hard structural shoreline stabilization measures, as indicated by the appropriate study prepared per H below, only near the property lines to tie in with adjacent properties shall be permitted as soft shoreline stabilization measures. The length of hard structural shoreline stabilization transition area to adjacent properties shall be minimized to the maximum extent practicable, and extend into the subject property from adjacent properties no more than 10 feet (see diagram below). The hard structural shoreline stabilization transition area shall not extend waterward of the OHWM, except as necessary to make the connection to the adjoining stabilization, and shall not extend onto the adjacent property.



2. The soft shoreline stabilization design shall size and arrange any gravels, cobbles, logs, and boulders so that the project remains stable during a two-year flood event on rivers and under typical boat- and wind-driven wave conditions on lakes, including storm events, and dissipates wave and current energy, without presenting extended linear faces to oncoming waves or currents.

H. Submittal requirements. In addition to submitting an application for the appropriate shoreline permit, the applicant shall submit the following as part of a request to construct a new, enlarged, or replacement shoreline stabilization measure:

1. For a new or enlarged hard or soft structural shoreline stabilization measure, a geotechnical analysis prepared by a qualified professional with an engineering license. The analysis shall include the following:

a. An assessment of the necessity for structural shoreline stabilization by estimating time frames and rates of erosion and reporting on the urgency associated with the specific situation. New hard structural shoreline stabilization measures shall not be authorized, except when an analysis confirms that that there is a significant possibility that an existing structure will be damaged within three years as a result of shoreline erosion in the absence of such hard structural shoreline stabilization measures, or where waiting until the need is immediate results in the loss of opportunity to use measures that would avoid impacts on ecological functions. Where the geotechnical analysis confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as three years, that analysis may still be

used to justify more immediate authorization to protect against erosion using soft measures. (WAC 173-26-231(3)(a)(iii)(D))

b. An assessment of the cause of erosion, looking at processes occurring both waterward and landward of the OHWM. (WAC 173-26-231(3)(a)(iii)(B)(I))

c. An assessment of alternative measures to shoreline stabilization, including:

(1) Placing the structure farther from the OHWM.

(2) Correcting any on-site groundwater or drainage issues that may be causing shoreline erosion.

d. Where structural shoreline stabilization is determined to be necessary, the assessment must evaluate the feasibility of using soft shoreline stabilization measures in lieu of hard structural shoreline stabilization measures. Soft shoreline stabilization may include the use of gravels, cobbles, boulders, and logs, as well as vegetation. (WAC 173-26-231(3)(a)(iii)(E))

e. Design recommendations for minimum sizing of hard structural or soft structural shoreline stabilization materials, including gravel and cobble beach substrates necessary to dissipate wave energy, eliminate scour, and provide long-term shoreline stability.

2. For replacements of existing hard structural shoreline stabilization measures with a similar measure, the applicant shall submit a written narrative providing a demonstration of need. The narrative must be prepared by a qualified professional. The demonstration of need shall consist of the following: (WAC 173-26-231(3)(a)(iii)(C))

a. An assessment of the necessity for continued structural shoreline stabilization, considering site-specific conditions such as water depth, orientation of the shoreline, wave fetch or flow velocities, and location of the nearest primary structure.

b. An assessment of erosion potential resulting from the action of waves or other natural processes operating at or waterward of the OHWM in the absence of the hard structural shoreline stabilization.

c. An assessment of alternative measures to shoreline stabilization, including:

(1) Relocating the development farther from the OHWM.

(2) Correcting any on-site groundwater or drainage issues that may be causing shoreline erosion.

d. An assessment of the feasibility of using soft shoreline stabilization measures in lieu of hard structural shoreline stabilization measures. Soft structural shoreline stabilization may include the use of gravels, cobbles, boulders, and logs, as well as vegetation.

e. Design recommendations for minimizing impacts of any necessary hard structural shoreline stabilization.

3. A demonstration of need may be waived when an existing hard structural shoreline stabilization measure is proposed to be repaired or replaced using bio-engineered soft structural shoreline stabilization measures, resulting in significant restoration of shoreline ecological functions or processes.

4. For all structural shoreline stabilization measures, including bio-engineered soft structural shoreline stabilization, detailed construction plans, including, but not limited to, the following:

   a. Plan and cross-section views of the existing and proposed shoreline configuration, showing accurate existing and proposed topography and OHWMs.

   b. Detailed construction sequence and specifications for all materials, including gravels, cobbles, boulders, logs, and vegetation. The sizing and placement of all materials shall be selected to accomplish the following objectives:

      (1) Protect the primary structures from erosion and other damage over the long term, and accommodate the normal amount of alteration from currents and wind- or boat-driven waves;

      (2) Allow safe passage and migration of fish and wildlife; and

      (3) Minimize or eliminate juvenile salmon predator habitat.

   c. For projects that include native vegetation, a detailed five-year vegetation maintenance and monitoring program to include the following:

      (1) Goals and objectives of the shoreline stabilization plan;

      (2) Success criteria by which the implemented plan will be assessed;

      (3) A five-year maintenance and monitoring plan, consisting of at least one site visit per year by a qualified professional, with annual progress reports submitted to the Shoreline Administrator and all other agencies with authority;

      (4) A performance standard of 100 percent survival for the first year of growth post installation, with no less than 80 percent survival at the end of the third year; and

      (5) A contingency plan and a bond in an amount and form acceptable to City of Leavenworth in case of failure.

5.19 Transportation and Parking

5.19.1 Policies

A. Circulation. Public agencies and developments should provide circulation facilities including roads, streets, alleys, pedestrian, bicycle, and public transportation facilities, consistent with federal, state, or local standards and sufficient to meet adopted levels of service. (WAC 173-26-241(3)(k) and Growth Management Act RCW 36.70A.070)

B. Essential public facilities. Comprehensive Plans, which include the goals and policies of Shoreline Master Programs, may not preclude the siting of essential public facilities, which include state or regional transportation facilities as defined in RCW 47.06.140. If identified as an essential public facility, preclusion of siting is not allowed, these facilities are required to be in compliance with the rest of the regulations of the SMP, as well as other local land use regulations.

C. Minimize land consumption. When transportation facilities must be located along shorelines, efforts should be made to minimize the amount of land consumed. Where feasible, such transportation facilities should be sufficiently set back so that a usable shoreline area remains. Where feasible, roads should not run parallel to shorelines. (1975 SMP Policy 15a)

D. Erosion and groundwater. Roads in shoreline areas should be designed and maintained to prevent erosion and to permit a natural movement of groundwater. (1975 SMP Policy 15b)

E. Protect shorelands. All construction should be designed to protect the adjacent shorelands from erosion, uncontrolled drainage, slides, pollution, and other factors detrimental to the environment. (1975 SMP Policy 15c) Transportation facilities and parking facilities should be planned, located, and designed where routes will have the least possible adverse effect on unique or fragile shoreline features, will not result in a net loss of shoreline ecological functions or adversely impact existing or planned water-dependent uses.

F. Fit topography**.** Road locations should be planned to fit the topography so that minimum alterations of natural conditions will be necessary. (1975 SMP Policy 15d)

G. Scenic highways and bridges. Scenic highways and major bridge crossings should have provisions for safe pedestrian and other non-motorized travel. Also, provision should be made for sufficient viewpoints, rest areas and picnic areas along shorelines of the state, if feasible. (based on 1975 SMP Policy 15e)

H. Maintain old highways**.** Extensive loops or sections of old highways with high aesthetic quality or multi-use potential should be kept in service. (based on 1975 SMP Policy 15f)

I. General maintenance and reconstruction. Road maintenance and reconstruction should be allowed in accordance with best management practices adopted by City of Leavenworth and the State of Washington Department of Transportation.

J. Trails. Multi-purpose trails should be encouraged in shoreline jurisdiction consistent with public access policies and regulations in Section 4.4.

K. Appropriate bridges and culverts. Road design for stream crossings should consider appropriate bridge and culvert designs based on federal, state, or local standards, for example, Washington Department of Fish and Wildlife's 2003 *Design of Road Culverts for Fish Passage*. (Based on 1975 SMP Policy 15g)

L. Coordinate land use and transportation. Since land use and transportation facilities are so highly interrelated, the plans for each should be closely coordinated and consider shoreline goals, objectives, policies, and standards. (1975 SMP Policy 15h)

M. Parking. Parking facilities in shorelines are not a preferred use and should be allowed only as necessary to support an authorized use. Parking facilities should be located as far inland as possible from the OHWM. (1975 SMP Policy 6c)

N. Maintain and improve the system of collectors, subcollectors, and local streets to serve present and future needs. (Comprehensive Plan Transportation Goal 3)

O. Existing City right-of-way above the minimum right-of-way requirement should be surplused and sold. (Comprehensive Plan Transportation Goal 3, Policy 5)

P. Bicycle, pedestrian, and cross-country ski trails should be recognized and supported for their value as part of the local transportation system (Comprehensive Plan Transportation Goal 4, Policy 6)

5.19.2 Regulations

A. Roads and railroads limited in shoreline jurisdiction. Where other options are available and feasible, new roads, road expansions or railroads shall not be built within shoreline jurisdiction. If subdivisions are being proposed, new road placement shall be evaluated at the time of the plat application, or site development planning. (WAC 173-26-241(3)(k))

B. Criteria if roads or railroads are unavoidable. When railroads, roads or road expansions are unavoidable in the shoreline jurisdiction, proposed transportation facilities shall be planned, located, and designed to achieve the following: (WAC 173-26-241(3)(k))

1. Minimize possible adverse effects on unique or fragile shoreline features;
2. Maintain no net loss of shoreline ecological functions and implement mitigation standards of Section 4.2, Ecological Protection and Critical Areas and Section 4.5, Vegetation Conservation and Shoreline Buffers;
3. Avoid adverse impacts on existing or planned water-dependent uses; and
4. Set back from the OHWM to the maximum feasible to allow for a usable shoreline area for vegetation conservation and planned shoreline uses unless infeasible, standards for ADA accessibility and functionality cannot be met, or the cost is disproportionate to the cost of the proposal. For the purposes of this Section, disproportionate means the shoreline buffer requirement would add more than 20% to the total project cost.

C. Visual access. Public roads, within shoreline jurisdiction, shall, where possible, provide and maintain visual access to scenic vistas. Visual access may include, but is not limited to, turn-outs, rest areas, and picnic areas. (1975 SMP Section 26(d))

D. Shoreline crossings. Shoreline crossings and culverts shall be designed to minimize impact to riparian and aquatic habitat and shall allow for fish passage. Crossings shall occur as near to perpendicular with the waterbody as possible, unless an alternate path would minimize disturbance of native vegetation or result in avoidance of other critical areas such as wetlands.

E. Shoreline crossings for private property. Crossings that are to be used solely for access to private property shall be designed, located, and constructed to provide access to more than one lot or parcel of property, where feasible, to minimize the number of crossings. (1975 SMP Section 26(f))

F. Floodway. See Section 4.3.

G. Construction standards. Construction standards of the appropriate governmental agency, together with SMP standards, shall be conditions for granting shoreline permits. Seasonal work windows may be required based on federal or state requirements, or if the proposal involves crossing shorelines or altering the waterbody. (1975 SMP Section26(c))

H. Trails. See public access standards in Section 4.4.

I. Parking facilities. Parking facilities in shorelines are not a preferred use and shall be allowed only as necessary to support an authorized use and when minimizing environmental and visual impacts. For the purposes of this section, authorized means a use or activity included in the use matrix and associated definitions in Chapter 8. New or expanded parking areas shall: (WAC 173-26-241(3)(k))

1. Be sited outside of shoreline jurisdiction unless no feasible alternative location exists; for example where a property does not extend outside jurisdiction;

2. Be planted or landscaped to provide a visual and noise buffer for adjoining dissimilar uses or scenic areas. The Shoreline Administrator may condition proposals to incorporate the following performance standards:

   a. Select species that are suitable to the local climate, having minimal demands for water, minimal vulnerability to pests, and minimal demands for fertilizers; and

   b. Incorporate native species.

3. Observe critical area and shoreline buffers. Parking shall be located outside critical area and shoreline buffers unless one of the following is met:

   a. ADA parking requirement are not met and placing the limited number of needed ADA parking spaces within the shoreline buffer facilitates better and safer public access to the shoreline.

   b. Parking is located on parcel a landward of allowed uses and the applicant’s lot/site has topographical constraints where no other location outside the buffer yet within the proposed development is feasible (e.g., the use or activity is located on a parcel entirely or substantially encumbered by the required buffer)

In the above cases, parking shall be located as far upland from the OHWM as feasible, recognizing the limited supply of shoreline areas and parking allowed in buffer shall follow mitigation sequencing; and

4. Be designed to incorporate low-impact development practices, such as pervious surfaces and bioswales, to the extent feasible.

J. Modifications of Existing Roads and Parking Areas: Existing roads and parking areas that are of a non-paved surface (e.g. gravel) may be paved provided such facilities comply with all applicable water quality, stormwater, landscaping, and other applicable requirements of this SMP. Roadways or paved parking areas shall be designed to incorporate low-impact development practices, such as pervious surfaces and bioswales, to the extent feasible.

K. Private Driveways: A driveway for an individual single family home is considered a residential appurtenance and is considered part of the primary use, and subject to Residential standards of this SMP. Private driveways or private roads serving more than one home are subject to the standards of Section 5.19, Transportation and Parking.

L. Maintenance Standards for New or Expanded Road or Parking Facility: When a new or expanded roadway or new or expanded parking facility is proposed, City of Leavenworth may condition the proposal to provide a maintenance plan that promotes best management practices to achieve no-net-loss of shoreline ecological function. For example, maintenance standards may include restrictions on the use of herbicides, hazardous substances, sealants or other liquid oily substances, or de-icing practices adjacent to shoreline buffers or critical areas and their buffers. See also Section 5.21.

M. Essential public facilities. If identified as an essential public facility, preclusion of siting is not allowed, these facilities shall be required to be in compliance with the rest of the regulations of the SMP, as well as other local land use regulations.

5.20 Utilities

Utilities provisions apply to services and facilities that produce, convey, store, or process power, gas, sewage, stormwater, communications, oil, waste, and the like. On-site utility features serving a primary use, such as a water, sewer or gas line to a residence, are "accessory utilities" and shall be considered a part of the primary use. Consult standards of the primary use of the property, e.g. Residential, Commercial, Industrial, or Recreational, for any additional standards relevant to the placement of accessory activities such as utilities. Water intake and water and/or fish conveyances between a waterbody and an aquaculture facility are not considered a “utility” under this section of the SMP; consult standards for Aquaculture.

5.20.1 Policies

A. Meet demand for utilities. Utilities should be located to meet the needs of current underserved areas or future growth. (base d on 1975 SMP Policy 14d)

B. Use existing corridors. Intensified use of existing utility corridors should be encouraged, as opposed to the addition of new corridors. Efforts should be made to reduce the visual impact of existing utility corridors. (based on 1975 SMP Policy 14c)

C. Minimize visual impact. Whenever utilities must be placed in a shoreline area, the location should be chosen so as to minimize their visual impact. Whenever

feasible, utilities should be placed underground or designed to do minimal damage to aesthetic qualities of the shoreline area. (1975 SMP Policy 14b)

D. Upland and underwater utilities. Upland locations are recommended for utility pipelines and cables. If an underwater location becomes necessary, easements for the utility must include proper provisions to insure against substantial or irrevocable damage to the waterway or the resident aquatic ecosystems. (1975 SMP Policy 14e)

E. Restoration of disturbed areas. Upon completion of installation or maintenance projects on shorelines, all disturbed areas within shoreline jurisdiction should be restored to pre-project configuration where feasible, replanted with suitable plant species, and maintained until the newly planted vegetation is established consistent with Vegetation Conservation policies and standards in Section 4.5. (1975 SMP Policy 14a)

F. Outfalls. Site outfalls to avoid impacts to critical areas. Design outfalls to reduce impacts to aquatic vegetation and water quality.

G. Require effective and timely coordination of all public and private utility trenching activities. (Comprehensive Plan Utility Goal 1, Policy 1)

H. Require the undergrounding of all new electrical distribution and communication lines where reasonably feasible and not a health threat. Encourage the undergrounding of all existing electrical distribution and communication lines where reasonably feasible and not a health threat. (Comprehensive Plan Utility Goal 1, Policy 2)

I. Encourage the consolidation of utility and communication facilities where reasonably feasible. (Comprehensive Plan Utility Goal 1, Policy3)

5.20.2 Regulations

A. Design considerations. Utility systems are permitted provided such systems: (WAC 173-26-241(3)(l))

1. Are designed and constructed to meet all adopted engineering standards of City of Leavenworth; (based on 1975 SMP Section 25.1.10)

2. Avoid paralleling the shoreline or following a down-valley course near the channel, except where located in an existing road or easement footprint; and

3. Do not alter processes affecting the rate of channel migration or shoreline erosion; the Shoreline Administrator may require a monitoring plan and adaptive management measures prepared by a qualified professional as appropriate.

B. Preference – existing footprints. Preference shall be given to utility systems contained within the footprint of an existing right-of-way or utility easement over new locations for utility systems. (WAC 173-26-241(3)(l))

C. Undergrounding. All new permanent utility systems shall be underground except where environmental or geological conditions makes undergrounding prohibitive; provided that facilities which are temporary or infeasible to underground are exempt from undergrounding, including but not limited to electric transmission lines in excess of 15kV, utilities attached to undersides of

bridges, and public stormwater facilities, outfalls, and associated structures . (1975 SMP Section 25.1.2)

D. Minimum clearing. Where utility systems must be located in shoreline jurisdiction areas, clearing necessary for installation or maintenance shall be kept to the minimum width necessary to prevent interference by trees and other vegetation with proposed transmission facilities. Impacts associated with removal of vegetation or clearing shall be mitigated on the property. (1975 SMP Section 25.1.2)

E. Restoration of disturbed areas. Upon completion of utility system installation, or any maintenance project, the disturbed area shall be regraded to compatibility with the natural terrain and replanted to prevent erosion and provide appropriate vegetative cover, including meeting standards of Section 4.5, Vegetation Conservation and Shoreline Buffers and Appendix B, Critical Areas Regulations. (1975 SMP Section 25.1.2)

F. Underwater utilities. If an underwater location is necessary, the following performance standards apply:

1. The design, installation and operation shall minimize impacts to the waterway or the resident aquatic ecosystems. (Based on 1975 SMP 25.1.2)
2. Seasonal work windows may be made a condition of approval.
3. Standards of Section 5.8, Dredging and Dredge Material Disposal; Section 4.2, Ecological Protection and Critical Areas; Section 4.5, Vegetation Conservation and Shoreline Buffers (for any aquatic vegetation impacts); and Section 5.2, General Aquatic Shoreline Modification and Use Regulations must be met.
4. All federal or state permits must be obtained.
5. A maintenance schedule and emergency repair protocol shall be prepared and recorded.

G. Nonwater-oriented processing and production facilities. Nonwater-oriented utility production and processing facilities, such as power plants and sewage treatment plants, or parts of those facilities that are nonwater-oriented, shall not be allowed in shoreline jurisdiction unless it can be demonstrated that no other feasible option is available. Where no other practical alternative exists to the excavation for and placement of wells, tunnels, utilities, or on-site septic systems in a shoreline and critical area buffer, while permitted a mitigation plan must be prepared by a qualified professional, and must be consistent with the provisions of Section 4.2, Ecological Protection and Critical Areas, and appropriate requirements of Appendix B.

H. Outfall design principles. New and reconfigured outfalls, diffuser, and discharge points shall be located to avoid impacts to shorelines and must be in compliance with the most recent local and state standards. The Shoreline Administrator may require a mixing zone analysis for the outfall from a qualified party to determine the diffuser or discharge point.

I. No net loss of ecological function. All utility system projects and maintenance shall be designed, located and installed in a manner which results in no-net-loss of ecological function.

5.21 Redevelopment, Repair, and Maintenance

5.21.1 Policies

A. The SMP should recognize existing legally established uses and developments in the shoreline and allow them to continue consistent with their lawfully established condition.

B. City of Leavenworth should apply relevant SMP provisions in proportion to the shoreline use or development proposed.

5.21.2 Regulations

A. SMP provisions shall not apply retroactively to existing uses and developments.

B. Legally established uses and developments may be maintained, repaired, and operated within shoreline jurisdiction and within shoreline and critical area buffers established in this SMP. Normal maintenance and repair, as specified in Section 7.6.3, Exemptions, do not require shoreline permits.

C. Consistent with the Applicability provisions of Section 1.3, SMP standards shall apply to expansions or alterations of uses or developments and to new development or redevelopment of a property as follows:

1. The Shoreline Administrator shall determine the extent of compliance with SMP provisions.

2. The required provisions shall be related to and in proportion to the proposal. For example, if an upper story is added to a structure, requirements related to building heights and views may apply. If vegetation is removed beyond normal maintenance pursuant to 7.6.3.B, vegetation conservation and shoreline buffer standards may apply.

D. Maintenance or repair activities which exceed the specifications of 7.6.3.B in Exemptions or which are required for new development or re-development may be authorized through the establishment of multi-year maintenance or repair plans, as follows:

1. Five-year recreation management plans consistent with Section 5.15.2.

2. Five-year dredging maintenance plans consistent with Section 5.8.2.

3. Other multi-year plan for other maintenance or repair activities that are used to establish best management practices or protocols to ensure no-net-loss of shoreline ecological function such as roadway, utility, or other facility maintenance. Other maintenance or repair management plans shall be prepared to address the following:

1. Description of proposed maintenance activities and best management practices;

2. Type, methods, and frequency of maintenance or repair activities;

3. Description of in-stream or in-lake habitat protection measures;

4. Description of riparian and wetland protection measures;

5. Description of stormwater management practices to reduce both water quantity and water quality impacts;

6. Description of erosion and sediment control practices that prevent off-site movement;
7. Description of re-vegetation or restoration activities following maintenance or repair; and
8. Description of chemical and nutrient use and containment practices such as Integrated Pest Management (IPM).

6 NONCONFORMING STRUCTURES AND USES (WAC 173-27-080)

6.1 Policies

The following policies on nonconforming structures, uses, and lots are intended to guide the application of the City of Leavenworth nonconforming standards:

A. Continuation of nonconforming uses and structures. Nonconforming existing legal uses and structures may continue according to the City of Leavenworth standards.

B. Transition to conforming uses. Transitions from nonconforming uses to conforming uses should be encouraged.

C. Expansion of nonconforming structures. Owners of nonconforming structures that wish to expand the structure should not increase the nonconformity according to the City of Leavenworth standards.

D. No-net-loss of ecological function. The SMP no-net-loss of ecological function objective should guide review of proposed expansions or other changes to nonconforming uses and new development on nonconforming vacant lots. This objective may be addressed in an area-wide manner consistent with the SMP cumulative impacts analysis.

E. Balance historic character. The City of Leavenworth should consider balancing historic character of the community with conformity to SMP rules when considering changes to nonconforming uses, structures, and lots.

6.2 Regulations

Residential structures and appurtenant structures that were legally established and are used for a conforming use, but that do not meet standards for the following shall be considered a conforming structure: Setbacks, buffers, or yards; area; bulk; height; or density.

Redevelopment, expansion, change with the class of occupancy, or replacement of the residential structure shall be consistent with the master program, including requirements for no net loss of shoreline ecological functions.

For purposes of this section, "appurtenant structures" means garages, sheds, and other legally established structures. "Appurtenant structures" does not include bulkheads and other shoreline modifications or over-water structures.

Nothing in this section: (a) restricts the ability of this master program to limit redevelopment, expansion, or replacement of over-water structures located in hazardous areas, such as floodplains and geologically hazardous areas; or (b) affects the application of other federal, state, or local government requirements to residential structures.

Establishment

The burden of establishing that any nonconformity is a legal nonconformity as defined herein shall, in all cases, be upon the owner of such alleged nonconformity and not upon the city. Determination of the nonconforming status of a lot, use, building or structure is an administrative function of the Shoreline Administrator. Property owners asserting existing nonconforming status shall submit such information as the director deems necessary to substantiate or document the claim to the existing nonconformance. Documentation submitted by the property owner must ascertain the date the nonconformity was established and that it conformed to the applicable SMP regulations

in effect at that time. Documentation may consist of such historical items as utility statements, property tax bills, real estate contracts, leases, building permits, dated photographs, newspaper clippings and other relevant documentation, when applicable. Unsubstantiated anecdotal evidence cannot be accepted for the determination of existing nonconforming status.

Nonconforming lots of record

In any district in which single-family dwellings are permitted, a single-family dwelling and allowed accessory buildings may be erected on nonconforming lots of record. This provision shall apply even though such lot fails to meet the requirements for area or width, or both, that are generally applicable to the use environment, provided all other current regulations shall apply, including, without limitation, required yards/setbacks, lot coverage, density, parking, storm drainage, landscaping, access and road improvements, variance to these standards shall not be allowed. Nonconforming lots of record which have become more non-conforming due to subsequent action of the owner/s shall still be allowed to develop if they retain more than 75% of the area of the original "lot of record." This is intended to accommodate minor past modifications made to parcels, to allow for infill development and takes into account those adjustments made prior to the time that the City allowed construction on such parcels and owners were unaware of the ramifications that this could have on the development potential of the lot, if re-assembly is allowed, however no lot re-assembly which creates awkwardly shaped parcels shall be allowed.

Nonconforming uses, buildings, structures

A. Continuance of Nonconforming uses, buildings, and structures. A nonconforming use, building and/or structure lawfully established under this SMP and which became or becomes nonconforming by amendment to this SMP may continue as long as it remains otherwise lawful. No nonconforming use, building and/or structure shall be enlarged, increased or extended to occupy a greater area of land, nor shall it be moved in whole or in part to any other portion of the lot or parcel being occupied by such use, at the effective date of the adoption or amendment of this SMP except as provided for in this chapter.

B. Damaged, demolished or destroyed nonconforming use. The following provisions shall apply when a nonconforming use is damaged, demolished or destroyed by any means:

1. When a nonconforming use and associated building/structure are damaged by any means, and reconstruction costs do not exceed seventy-five percent of the value of the building/structure (as determined by using a contractor's estimate for reconstruction and the most recent assessed value as stated in the Chelan County Assessor's records, or an appraisal submitted by a licensed real estate appraiser), the nonconforming use, building, and/or structure may be replaced or rebuilt as it was immediately prior to the damage, or in a manner that is more conforming. No replacement or reconstruction of a nonconforming building/structure shall be performed without issuance of a development permit(s) as appropriate. The property owner shall provide the information necessary to reasonably assure the Shoreline Administrator that the replacement or reconstruction complies with this section. The review authority may approve replacement or reconstruction in conformance with the submitted and verifiable plans or in a manner that

is more conforming to the applicable provisions of this SMP and the use environment in which the building/structure is located. The proposed replacement or reconstruction cannot be completed in such a manner as to constitute an expansion of the nonconforming use, building and /or structure.

2. Provisions contained within this section do not supersede or relieve a property owner from compliance with the requirements of the uniform building and fire codes, and the provisions of the development regulations that are beyond the specific nonconformance addressed by this SMP.

Accessory buildings shall meet all applicable requirements set forth in this SMP, include bulk and dimensional standards.

C. Single-family residential dwellings lawfully permitted and established within a commercial district. Single-family residential dwellings lawfully permitted and established within a commercial district prior to adoption or amendment of this chapter may be maintained, repaired or reconstructed in accordance with the provisions of this SMP, provided the dwelling meets City zoning requirements. Additionally, accessory buildings which are allowed with single-family residences may be erected provided the following conditions and/or regulations are complied with:

1. The structure(s) shall meet the applicable provisions of LMC Chapter 18.20 and LMC Chapter 18.24; and

2. The single-family residence has not been converted to a more conforming, nonresidential use at any previous time.

D. Effect of the sale or transfer of a nonconforming use or building/structure. The sale or transfer of a nonconforming use or building/structure does not alone affect the right to continue the nonconforming use or use of a nonconforming building/structure.

E. Abatement of buildings/structures, lots, required improvements, uses and/or developments not legally established. Buildings/structures, lots, required improvements, uses and/or developments which were not legally established or not legally existing as of the effective date of this SMP retain their illegal status and must be abated or fully conform and comply with the procedural and substantive provisions of this SMP.

F. “Nonconforming Use” terminology. The term “nonconforming use” refers only to the single existing use and does not include all uses which the property could have been used for under a prior zoning ordinance or zoning classification.

G. Normal structural repair and maintenance of nonconforming building / structure. Nothing in this chapter shall be construed to restrict normal structural repair and maintenance of a nonconforming building/structure, including the replacement of walls, fixtures, and plumbing, provided that the value of work and materials in any twelve-month period does not exceed twenty-five percent of the assessed value of the building/structure, as described in Section 6.3(B)(1), prior to such work.

H. Limitations on expansion of nonconforming structures. Expansions of structures that are nonconforming with respect to a required yard may not encroach any

further into the required yard, and are limited to extensions adding no more than twenty-five percent of the length of the original wall as it existed prior to SMP adoption, subject to other applicable requirements of City development regulations. Nothing in this section will prohibit vertical expansion in the side or rear yards up to the height allowed in the applicable use environment, provided all other applicable requirements of City development regulations are met. Nothing in this section will prohibit vertical expansion in the front yard up to the height allowed in the applicable zoning district if the portion of the nonconforming structure be expanded is fifteen feet or greater from the property line. If the portion of the nonconforming structure to be expanded is less than fifteen feet from the front property line, that portion of the structure can be extended vertically up to twenty-five percent of the existing height of the structure, provided all other applicable requirements of the City development regulations are met.

Discontinuance

A. Conditions under which nonconforming use, building, and/or structure discontinued. A nonconforming use, building, and/or structure shall be discontinued when it is:

1. Succeeded by another use, building, and/or structure that is more conforming; or
2. Discontinued and not re-established within one year; or
3. Damaged, demolished, removed or destroyed, by any means, to the extent that replacement and/or reconstruction costs exceed seventy-five percent of its value as described in Section 6.3(B)(1) and when a complete application for such replacement and/or reconstruction is not made within one year of such damage.

B. Nonconforming use ceases to exist when discontinued. When a nonconforming use becomes discontinued as defined above, it shall be deemed that such use has ceased to exist and thus loses its status as a legal nonconforming use. Any subsequent use shall conform to the provisions of this SMP.

Nonconforming Signs

Existing nonconforming signs as defined in the SMP are permitted, but shall be removed or brought into compliance with the SMP, as amended, any time the basic design, size, color or structure of the sign is altered, unless the proposed alteration renders the sign more in compliance with the SMP and the cost of the alteration is less than 50 percent of the replacement value of the sign. Signs damaged or altered, in any manner, by more than 50 percent of their replacement value shall be replaced with a sign that meets the requirements of the SMP.

7 SHORELINE PERMITS, PROCEDURES AND ADMINISTRATION

7.1 Roles and Responsibilities

A. The Shoreline Master Program Administrator in the City of Leavenworth is the City Administrator and/or designee and shall have overall administrative responsibility of the SMP. The Administrator, or his/her designee, shall make administrative decisions and interpretations of the policies and regulations of this SMP and the Act.

B. In the City of Leavenworth, the Shoreline Master Program Administrator shall have the authority to grant or deny Shoreline Substantial Development Permits, time extensions to shoreline permits, and minor revisions under this SMP.

C. In the City of Leavenworth, the Hearing Examiner shall have the authority to grant or deny major revisions, Shoreline Variances, and Shoreline Conditional Use Permits under this SMP. The Hearing Examiner shall also decide on appeals of administrative decisions issued by the Administrator of this SMP.

D. The Leavenworth City Council shall maintain a policy role, adopting all amendments to this SMP, after consideration of the recommendation of the City of Leavenworth Planning Commission.

E. The City of Leavenworth Planning Commission shall make recommendations for amendments of this SMP to the Leavenworth City Council.

7.1.2 SEPA Official

The responsible SEPA official or his/her designee is authorized to conduct environmental review of all use and development activities subject to this SMP, pursuant to WAC 197-11 and RCW 43.21C. The responsible SEPA official is designated in accordance with the City of Leavenworth’s SEPA implementation ordinance.

7.1.3 Hearing Examiner

Where a hearing examiner system has been adopted by City of Leavenworth, the Hearing Examiner shall have the authority to:

A. Decide on Shoreline Substantial Development Permits for which the Hearing Examiner is the designated decision maker, as well as decide on appeals from administrative decisions issued by the Administrator of this SMP.

B. Grant or deny conditional uses under this SMP not issued administratively.

C. Grant or deny variances from this SMP.

7.1.4 Planning Commission

Planning Commissions, where established, are vested with the responsibility to review the Master Program as part of regular SMP updates required by RCW 90.58.080 as a major element of the City of Leavenworth's planning and regulatory program, and make recommendations for amendments thereof to the Board of County Commissioners or City Councils.

7.1.5 City Council

The City Council is vested with authority to:

A. Initiate an amendment to this SMP according to the procedures prescribed in WAC 173- 26-100.

B. Adopt all amendments to this SMP, after consideration of the recommendation of the planning commission, where established. Amendments shall become effective immediately upon approval by Ecology.

7.2 Interpretation

The Administrator shall provide administrative interpretations in accordance with Leavenworth Municipal Code Section 21.03.020.

7.3 Statutory Noticing Requirements

Noticing requirements for permits issued under the SMP in the City of Leavenworth shall be in accordance with Leavenworth Municipal Code Chapter 21.07.

The following subsections provide a summary of noticing days. City of Leavenworth shall consult the most current version of WAC 173-27-110 and 120 to confirm the days. In case of conflict state statutes or rules shall control:

A. Issuance of notice of application. Notice of application shall be provided within fourteen days after the determination of completeness of the application.

B. Statement of public comment period. The notice of application shall state the public comment period which shall be not less than thirty days following the date of notice of application, unless otherwise specified for limited utility extensions or single family bulkheads below.

C. Notice of application prior to hearing. If an open record predecision hearing, as defined in RCW 36.70B.020, is required for the requested project permits, the notice of application shall be provided at least fifteen days prior to the open record hearing.

D. Limited utility extension or single family bulkhead. An application for a substantial development permit for a limited utility extension or for the construction of a bulkhead or other measures to protect a single-family residence and its appurtenant structures from shoreline erosion shall be subject to all of the requirements of this chapter except that the following time periods and procedures shall be used:

1. The public comment period shall be twenty days. The notice provided shall state the manner in which the public may obtain a copy of the local government decision on the application no later than two days following its issuance;

2. The local government shall issue its decision to grant or deny the permit within twenty-one days of the last day of the comment period specified in subsection (2)(a) of this section; and

3. If there is an appeal of the decision to grant or deny the permit to the local government legislative authority, the appeal shall be finally determined by the legislative authority within thirty days.

7.4 Application Requirements

A. A complete application for a Shoreline Substantial Development, Shoreline Conditional Use, or Shoreline Variance Permit shall contain, at a minimum, the information listed in WAC 173-27-180. In addition, the applicant, including those applying for exemption status, shall provide the following materials:

1. An assessment of the existing ecological functions and/or processes provided by topographic, physical and vegetation characteristics of the site and any impacts to those functions and/or processes, to accompany development proposals, provided that proposals for single-family residences, as long as they meet the exemption criteria, shall be exempt from this requirement if proposal is located outside required critical areas. When the project results in adverse impacts to ecological function and/or processes, a mitigation plan must be provided that describes how proposed mitigation compensates for the lost function or process.

2. Site plan or division of land depicting to scale the location of buildable areas, existing and proposed impervious surfaces (building(s), accessory structures, driveways), and allowed landscaping and yards (including proposed water access trails, view corridors, wildfire defensible space, if applicable), general location of utilities, well and septic system, if applicable and location of storage and staging of materials and equipment during construction. Plans shall show area calculations of each feature.

3. The location of any mapped channel migration zone (see Section 4.3.2, Flood Hazard Reduction), floodplain, and/or floodway boundary and critical Areas, if known, and respective setback/buffer areas on and within 250 ft of the vicinity of the project site and all applicable buffers.

4. Where a view analysis is required per WAC 173-27-180, , due to location of nearby residential or public properties or designated scenic highways, it shall address the following:

    a. The analysis shall include vacant existing parcels of record as well as existing structures. Vacant parcels of record shall be assumed to be developed with structures complying with the applicable regulations of the applicable local government and the maximum height limitation allowed under the SMP.

    b. The view corridor analysis shall include residential buildings or public properties located outside of the shoreline jurisdiction if it can be clearly demonstrated that the subject property has significant water views.

B. The Shoreline Master Program Administrator may vary or waive these additional application requirements (1-4) according to administrative application requirements on a case by case basis, but all applications for a substantial development, conditional use, or variance permit shall contain the information found in WAC 173-27-180. The Shoreline Master Program Administrator may require additional specific information depending on the nature of the proposal and the presence of sensitive ecological features or issues related to compliance with other County or City requirements, and the provisions of this SMP.

C. Chapter 21.05 of the Leavenworth Municipal Code provides the minimum application requirements and codifies the form upon which the application must be submitted..

7.5 Shoreline Substantial Development Permits (WAC 173-27-150)

7.5.1 Permit Required

A Shoreline Substantial Development Permit shall be required for all development of shorelines, unless the proposal is specifically exempt per Section 7.6.

7.5.2 Permit Review Criteria

In order for the permit to be approved, the decision maker must find that the proposal is affirmatively consistent with the following criteria:

A. How is the proposal consistent with the policies and procedures of the Act (RCW 90.58)?

B. How is the proposal consistent with the provisions of Chapter 173-27 WAC, Shoreline Management Permit and Enforcement Procedures?

C. How is the proposal consistent with this SMP?

7.5.3 Conditions of Approval

City of Leavenworth may attach conditions to the approval of permits as necessary to assure consistency of the project with the Act and this SMP. Additionally, nothing shall interfere with the City of Leavenworth's ability to require compliance with all other applicable laws and plans.

7.6 Exemptions from Shoreline Substantial Development Permits

(Section based on WAC 173-27-040; RCW 90.58.030 (3)(e), 90.58.140(9), 90.58.147, 90.58.355 and 90.58.515)

7.6.1 Compliance with Applicable Regulations Required

An exemption from the Shoreline Substantial Development Permit process is not an exemption from compliance with the Act or this SMP, or from any other regulatory requirements. To be authorized, all uses and development must be consistent with the policies, requirements and procedures of this SMP and the Act.

7.6.2 Interpretation of Exemptions

A. Exemptions shall be construed narrowly. Only those developments that meet the precise terms of one or more of the listed exemptions may be granted exemption from the Shoreline Substantial Development Permit process.

B. A development or use that is listed as a conditional use pursuant to this SMP or is an unlisted use, must obtain a Shoreline Conditional Use Permit even though the development or use does not require a Shoreline Substantial Development Permit. When a development or use is proposed that does not comply with the bulk, dimensional and performance standards of this SMP, such development or use can only be authorized by approval of a Shoreline Variance.

C. The burden of proof that a development or use is exempt from the permit process is on the applicant. Local government may require the applicant to provide additional documentation to support their exemption request.

D. If any part of a proposed development is not eligible for exemption, then a Shoreline - Permit is required for the entire proposed development project.

E. Local government may attach conditions to the approval of exempted developments and/or uses as necessary to assure consistency of the project with

the Act and this SMP. Additionally, nothing shall interfere with the City of Leavenworth's ability to require compliance with all other applicable laws and plans.

F. Except for the exemption based on fair market value in 7.6.3.A, activities consistent with the exemptions listed in 7.6.3 are exempt regardless of the value of the project.

7.6.3 Exemptions

City of Leavenworth shall exempt from the Shoreline Substantial Development Permit requirement the shoreline developments listed below, or as thereafter amended in WAC 173-27-040; RCW 90.58.030 (3)(e), 90.58.140(9), 90.58.147, 90.58.355 and 90.58.515. Written Letters of Exemption or other written documenation are required for exempt activities and shall be issued consistent with Section 7.6.4.

A. Any development of which the total cost or fair market value, whichever is higher, does not exceed six thousand, four hundred, sixteen dollars ($6,416) or dollar value as amended by the State of Washington Office of Financial Management provided such development does not materially interfere with the normal public use of the water or shorelines of the state.

B. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment.

C. Construction of the normal protective bulkhead common to single-family residences. A "normal protective" bulkhead includes those structural and nonstructural developments installed at or near, and parallel to, the OHWM for the sole purpose of protecting an existing single-family residence and appurtenant structures from loss or damage by erosion. A normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. When a vertical or near vertical wall is being constructed or reconstructed, not more than one cubic yard of fill per one foot of wall may be used as backfill. When an existing bulkhead is being repaired by construction of a vertical wall fronting the existing wall, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings. When a bulkhead has deteriorated such that an OHWM has been established by the presence and action of water landward of the bulkhead then the replacement bulkhead must be located at or near the actual OHWM. Beach nourishment and bioengineered erosion control projects may be considered a normal protective bulkhead when any structural elements are consistent with the above requirements and when the project has been approved by the department of fish and wildlife.

D. Emergency construction necessary to protect property from damage by the elements. An "emergency" is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with this chapter. Emergency construction does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the administrator to be the appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed or any permit which would have been required, absent an emergency, pursuant to chapter 90.58 RCW, WAC 173-27-040, or this Shoreline Master Program, obtained. All emergency construction shall be consistent with the policies of chapter 90.58 RCW and this Shoreline Master Program. As a general matter, flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency;

E. Construction and practices normal or necessary for farming, irrigation, and ranching activities, including agricultural service roads and utilities on shorelands, construction of a barn or similar agricultural structure, and the construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels: Provided, that a feedlot of any size, all processing plants, other activities of a commercial nature, alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities. A feedlot shall be an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage, or other livestock feed, but shall not include land for growing crops or vegetation for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations;

F. Construction or modification of navigational aids such as channel markers and anchor buoys;

G. Construction on shorelands by an owner, lessee or contract purchaser of a single-family residence for their own use or for the use of their family, which residence does not exceed a height of thirty-five feet above average grade level and which meets all requirements of the state agency or local government having authority thereof, other than requirements imposed pursuant to chapter 90.58 RCW. See Chapter 8 for definitions of single-family residence and residential appurtenances. Construction authorized under this exemption shall be located landward of the OHWM;

H. Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as a part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored ground water from the irrigation of lands;

I. The marking of property lines or corners on state-owned lands, when such marking does not significantly interfere with normal public use of the surface of the water;

J. Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed or utilized primarily as a part of an agricultural drainage or diking system;

K. Any project with a certification from the governor pursuant to chapter 80.50 RCW, Energy Facilities -Site Locations;

L. Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:

1. The activity does not interfere with the normal public use of the surface waters;

2. The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;

3. The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

4. A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to City of Leavenworth to ensure that the site is restored to preexisting conditions; and

5. The activity is not subject to the permit requirements of RCW 90.58.550, Oil or natural gas exploration in marine waters;

M. The process of removing or controlling aquatic noxious weeds, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the department of agriculture or the department of ecology jointly with other state agencies under chapter 43.21C RCW;

N. Watershed restoration projects as defined below. City of Leavenworth shall review the projects for consistency with the Shoreline Master Program in an expeditious manner and shall issue its decision along with any conditions within forty-five days of receiving all materials necessary to review the request for exemption from the applicant. No fee may be charged for accepting and processing requests for exemption for watershed restoration projects as used in this section.

1. "Watershed restoration project" means a public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one or more of the following activities:

a. A project that involves less than ten (10) miles of stream reach, in which less than twenty-five (25) cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings; or

b. A project for the restoration of an eroded or unstable stream bank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or

c. A project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizens of the state, provided that any structure, other than a bridge or culvert or instream habitat enhancement structure associated with the project, is less than two hundred square feet in floor area and is located above the OHWM of the stream.

2. “Watershed restoration plan" means a plan developed or sponsored by the Washington Departments of Fish and Wildlife, Ecology, or Transportation; a federally recognized Indian tribe acting within and pursuant to its authority; a city; a county; or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources, character, and ecology of a stream, stream segment, drainage area, or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act;

O. A public or private project that is designed to improve fish or wildlife habitat or fish passage, when all of the following apply:

1. The project has been approved in writing by the State of Washington department of Fish and wildlife;

2. The project has received hydraulic project approval by the State of Washington Department of Fish and Wildlife pursuant to chapter 77.55 RCW; and

3. City of Leavenworth has determined that the project is substantially consistent with the local shoreline master program. The local government shall make such determination in a timely manner and provide it by letter to the project proponent. Fish habitat enhancement projects that conform to the provisions of RCW 77.55.181 are determined to be consistent with local shoreline master programs, as follows.

a. In order to receive the permit review and approval process created in this section, a fish habitat enhancement project must meet the criteria under P.3.a.i and ii of this subsection:

i. A fish habitat enhancement project must be a project to accomplish one or more of the following tasks:

- Elimination of human-made fish passage barriers, including culvert repair and replacement; or
- Restoration of an eroded or unstable streambank employing the principle of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or
- Placement of woody debris or other instream structures that benefit naturally reproducing fish stocks.

The department of fish and wildlife shall develop size or scale threshold tests to determine if projects accomplishing any of these tasks should be evaluated under the process created in this section or under other project review and approval processes. A project proposal shall not be reviewed under the process created in this section if the department determines that the scale of the project raises concerns regarding public health and safety; and

ii. A fish habitat enhancement project must be approved in one of the following ways:

- By the department of fish and wildlife pursuant to chapter 77.95 or 77.100 RCW; or
- By the sponsor of a watershed restoration plan as provided in chapter 89.08 RCW; or
- By the department as a department of fish and wildlife-sponsored fish habitat enhancement or restoration project; or
- Through the review and approval process for the jobs for the environment program; or
- Through the review and approval process for conservation district-sponsored projects, where the project complies with design standards established by the conservation commission through interagency agreement with the United States Fish and Wildlife Service and the natural resource conservation service; or
- Through a formal grant program established by the legislature or the department of fish and wildlife for fish habitat enhancement or restoration; and
- Through other formal review and approval processes established by the legislature.

b. Fish habitat enhancement projects meeting the criteria of P.3.a of this subsection are expected to result in beneficial impacts to the environment. Decisions pertaining to fish habitat enhancement projects meeting the criteria of P.3.a of this subsection and being reviewed and approved according to the provisions of this section are not subject to the requirements of RCW 43.21C.030 (2)(c).

c. A hydraulic project approval permit is required for projects that meet the criteria of P.3.a of this subsection and are being reviewed and approved under this section. An applicant shall use a joint aquatic resource permit application form developed by the office of regulatory assistance to apply for approval under this chapter. On the same day, the applicant shall provide copies of the completed application form to the department of fish and

wildlife and to each appropriate local government. Local governments shall accept the application as notice of the proposed project. The department of fish and wildlife shall provide a fifteen-day comment period during which it will receive comments regarding environmental impacts. Within forty-five days, the department shall either issue a permit, with or without conditions, deny approval, or make a determination that the review and approval process created by this section is not appropriate for the proposed project. The department shall base this determination on identification during the comment period of adverse impacts that cannot be mitigated by the conditioning of a permit. If the department determines that the review and approval process created by this section is not appropriate for the proposed project, the department shall notify the applicant and the appropriate local governments of its determination. The applicant may reapply for approval of the project under other review and approval processes.

d. Any person aggrieved by the approval, denial, conditioning, or modification of a permit under this section may formally appeal the decision to the hydraulic appeals board pursuant to the provisions of this chapter.

e. No local government may require permits or charge fees for fish habitat enhancement projects that meet the criteria of P.3.a of this subsection and that are reviewed and approved according to the provisions of this section.

7.6.4 Letters of Exemption

Letters of exemption shall be issued by City of LeavenworthCity of Leavenworth when required by the provisions of WAC 173-27-050.

When projects are exempt consistent with this SMP, the Act, and WAC 173-27-040, but do not require a letter of exemption per WAC 173-27-050, agencies may create their own documentation process for record keeping.

Agencies may provide letters of exemptions or written documentation for programatic exempt activities such as those that occur in plans detailing operations and maintenance

7.6.5 Letters of Exemption – Application

Applicants for proposals that meet shoreline exemptions shall contain shall contain, at a minimum, the information listed in WAC 173-27-180, unless waived by the Shoreline Administrator as unnecessary to determine applicability of SMP provisions to the permit exempt activity.

7.7 Shoreline Conditional Use Permits (WAC 173-27-160)

7.7.1 Purpose

This section provides procedures and criteria guiding the review of shoreline conditional use permits, which require careful review to ensure the use can be properly installed and operated in a manner that meets the goals of the Act and this Program in accordance with any needed performance standards.

7.7.2 Determinations of Conditional Use Permits

A. Uses specifically classified or set forth in this Shoreline Master Program as conditional uses shall be subject to review and condition by the Hearing Examiner of City of LeavenworthCity of Leavenworth and by the Department of Ecology.

B. Other uses which are not classified or listed or set forth in this SMP may be authorized as conditional uses provided the applicant can demonstrate consistency with the requirements of this Section and the requirements for conditional uses contained in this SMP.

C. Uses which are specifically prohibited by this SMP may not be authorized as a conditional use.

7.7.3 Review Criteria

A. Conditional use criteria. An applicant proposing a conditional use shall affirmatively demonstrate compliance with review criteria below or as thereafter amended in WAC 173-27-160.

1. How is the proposed use consistent with the policies of RCW 90.58.020 and this SMP?
2. How will the proposed use avoid interference with the normal public use of public shorelines?
3. How will the proposed use of the site and design of the project be compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and this SMP?
4. How will the proposed use cause no significant adverse effects to the shoreline environment in which it is to be located?
5. How will the public interest suffer no substantial detrimental effect?

B. Additional criteria for exceeding maximum height. Applicants proposing to exceed maximum height limits , not otherwise specifically allowed by a Substantial Development Permit in Chapter 5, shall also affirmatively comply with the following criteria:

1. Does the building or structure impact a substantial number of residences? Are the residences involved on or in an area adjoining the project area? Does the building or structure exceed 35 feet in height? Is there an obstruction of view?
2. Has the applicant demonstrated through photographs, videos, photo-based simulations, or computer-generated simulations that the proposed development will obstruct less than 30% of the view of the shoreline enjoyed by a substantial number of residences or from public properties on areas adjoining such shorelines?
3. Has the applicant located and oriented structures on the subject property in a manner that diminishes the potential view impact? For example, side yard setbacks may need to be increased. No side yard setbacks shall be reduced to accommodate the proposed structure.
4. Has the applicant demonstrated extraordinary circumstances?

5. To address "overriding considerations of the public", has the applicant prepared a cumulative impacts analysis that documents the public benefits served by issuance of a Conditional Use Permit?

C. Consideration of cumulative impact. In the granting of all Conditional Use Permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if Conditional Use Permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

1. The applicant shall prepare a cumulative impact analysis by a qualified professional for the type of application proposed: a) documenting other properties or uses on the same waterbody that are similarly situated and could request a similar conditional use permit; b) demonstrating consistency with the policies of RCW 90.58.020 (Legislative findings); and 3) demonstrating no substantial adverse effects to the shoreline environment and achievement of no-net-loss of ecological function. City of Leavenworth shall determine whether the additional potential for conditional use permits will produce substantial adverse effects to the shoreline environment considering the characteristics of the proposed use, the ability to achieve no-net-loss of ecological function principles, and capability of accommodating preferred shoreline uses in the future if the conditional use and cumulative potential requests occur.

2. For requests to exceed maximum heights, the analysis shall address such considerations as cumulative view obstruction results of height adjustments (within a1,000-foot radius) of the proposed development combined with those of other developments that exceed the 35-foot height limitation, environmental benefits (enhancement or restoration), public access/open space benefits, and economic benefits. The cumulative impact analysis shall address overall views that are lost, compromised, and/or retained; available view corridors; and surface water views lost, compromised, and/or retained.

7.7.4 Conditions of Approval

In authorizing a conditional use, special conditions may be attached to the permit by City of Leavenworth and/or Ecology to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the Act and this SMP. Additionally, nothing shall interfere with the City of Leavenworth's ability to require compliance with all other applicable laws, plans, and regulations.

7.8 Shoreline Variance Permits (WAC 173-27-170)

7.8.1 Purpose and Review Process

The purpose of a variance is to grant relief to specific bulk or dimensional requirements set forth in this Shoreline Master Program where there are extraordinary or unique circumstances relating to the property such that the strict implementation of this Shoreline Master Program would impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020. Variances from the use reglations of the SMP are prohibited.

After a Shoreline Variance application has been approved by City of Leavenworth, Ecology shall review the permit and make its final decision, in accordance with WAC 173-27-200.

7.8.2 Review Criteria

Shoreline Variances may be authorized, provided the applicant can demonstrate compliance with the following criteria or as thereafter amended in WAC 173-27-170.

A. General provisions. Shoreline Variance permits should be granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. In all instances the applicant must demonstrate that extraordinary circumstances exist and the public interest shall suffer no substantial detrimental effect.

B. Shoreline variances landward of the OHWM. Shoreline Variance permits for development and/or uses that will be located landward of the OHWM, as defined in RCW 90.58.030 (2)(b), and/or landward of any wetland as defined in RCW 90.58.030 (2)(h), may be authorized provided the applicant demonstrates affirmatively all of the following:

1. How would the strict application of the bulk, dimensional or performance standards set forth in this SMP preclude or significantly interfere with reasonable use of the property?
2. How is the hardship described in B.1 above specifically related to the property, and is the hardship the result of unique conditions such as irregular lot shape, size, or natural features and the application of this SMP, and not, for example, from deed restrictions or the applicant's own actions?
3. How is the design of the project compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program and will the project design not cause adverse impacts to the shoreline environment?
4. How will the variance not constitute a grant of special privilege not enjoyed by the other properties in the area?
5. How is the variance requested the minimum necessary to afford relief?
6. How will the public interest suffer no substantial detrimental effect?

C. Shoreline variances waterward of OHWM. Shoreline Variance permits for development and/or uses that will be located waterward of the OHWM, as defined in RCW 90.58.030 (2)(b), or within any wetland as defined in RCW 90.58.030 (2)(h), may be authorized provided the applicant demonstrates affirmatively all of the following:

1. How would the strict application of the bulk, dimensional or performance standards set forth in this SMP preclude all reasonable use of the property?
2. How is the proposal consistent with the criteria established under subsection 7.8.2.B.2 through B.6 of this section?
3. How will the public rights of navigation and use of the shorelines not be adversely affected?

D. Cumulative impacts. In the granting of all Shoreline Variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. The applicant shall submit a cumulative impact analysis prepared by a qualified professional for the subject of the variance: a) documenting other properties or uses on the same waterbody that are similarly situated and could request a similar variance; b) demonstrating consistency with the policies of RCW 90.58.020; and c) demonstrating no substantial adverse effects to the shoreline environment and achievement of no-net-loss of shoreline ecological function. For example if variances were granted to other developments and/or uses in the area where similar circumstances exist, the total of the variances shall also remain consistent with the policies of the Act and shall not cause substantial adverse effects to the shoreline environment. City of Leavenworth shall determine whether the additional potential for variances will produce substantial adverse effects to the shoreline environment considering the characteristics of the proposed variance request, the ability to achieve no-net-loss of ecological function principles, and capability of accommodating preferred shoreline uses in the future if the variance and cumulative potential requests occur.

7.8.3 Conditions of Approval

In authorizing a variance, special conditions may be attached to the Variance permit by the City of Leavenworth and/or Ecology to prevent undesirable effects of the proposed development or activity and/or to assure consistency of the project with the Act and this SMP. Additionally, nothing shall interfere with the City of Leavenworth's ability to require compliance with all other applicable laws, plans, and regulations.

7.9 Permit Conditions

In granting, revising, or extending a shoreline permit, City of Leavenworth may attach such conditions, modifications, or restrictions thereto regarding the location, character, and other elements of the proposed development deemed necessary to assure that the development will be consistent with the policy and provisions of the Act and this SMP, as well as the supplemental authority provided in RCW 43.21C, as applicable. In cases involving unusual circumstances or uncertain effects, a condition may be imposed to require monitoring with future review or re-evaluation to assure conformance with the Act and this SMP. If the monitoring plan is not implemented, the permittee may be found to be noncompliant and the permit may be rescinded. (based on authority to attach conditions in WAC 173-27-045, 150, 160, 170 and example SMPs)

7.10 Duration of Permits (WAC 173-27-090)

Time duration requirements for Shoreline Substantial Development, Shoreline Variance, and Shoreline Conditional Use Permits shall be consistent with the following provisions.

A. General provisions. The time requirements of this section shall apply to all Shoreline Substantial Development Permits and to any development authorized pursuant to a Shoreline Conditional Use Permit or Shoreline Variance authorized by this Chapter. Timing shall comply with WAC 173-27-090 (1)

B. Commencement. Construction activities shall be commenced or, where no construction activities are involved, the use or activity shall be commenced within two years of the effective date of a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance. Commencement means taking the action on the shoreline project for which the

permit was granted shall begin. For example, beginning actual construction or entering into binding agreements or contractual obligations to undertake a program of actual construction. However, City of Leavenworth may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed with a complete extension application submittal before the expiration date and notice of the proposed extension is given to parties of record on the Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance and to Ecology.

C. Termination. Authorization to conduct development activities shall terminate five years after the effective date of a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance. However, the City of Leavenworth may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed before the expiration date and notice of the proposed extension is given to parties of record on the Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance, and to Ecology.

D. Effective date. The effective date of a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, or Shoreline Variance shall be the date of receipt as provided in RCW 90.58.140(6). The permit time periods in subsections B and C of this section do not include the time during which a use or activity was not actually pursued due to pending administrative appeals or legal actions or due to the need to obtain any other government permits and approvals for the development that authorize the development to proceed, including all reasonably related administrative or legal actions on any such permits or approvals. The applicant shall be responsible for informing City of Leavenworth of the pendency of other permit applications filed with agencies other than City of Leavenworth and of any related administrative and legal actions on any permit or approval. If no notice of the pendency of other permits or approvals is given by the applicant to City of Leavenworth prior to the date of the last action by City of Leavenworth to grant permits and approvals necessary to authorize the development to proceed, including administrative and legal actions of City of Leavenworth, and actions under other responsible local government development regulations, the date of the last action by City of Leavenworth shall be the effective date.

E. Revisions. Revisions to permits under Section 7.14 may be authorized after original permit authorization has expired, provided that this procedure shall not be used to extend the original permit time requirements or to authorize substantial development after the time limits of the original permit.

F. Notification to Ecology. City of Leavenworth shall notify Ecology in writing of any change to the effective date of a permit, as authorized by this section, with an explanation of the basis for approval of the change. Any change to the time limits of a permit other than those authorized by RCW 90.58.143 as amended shall require a new permit application.

7.11 Initiation of Development (WAC 173-27-190)

A. Amortization to begin construction. Each permit for a Substantial Development, Shoreline Conditional Use or Shoreline Variance, issued by the City of Leavenworth shall contain a provision that construction pursuant to the permit shall not begin and is not authorized until twenty-one (21) days from the date of receipt with Ecology as defined in RCW 90.58.140(6) and WAC 173-27-130, or

until all review proceedings initiated within twenty-one (21) from the date of receipt of the decision, except as provided in RCW 90.58.140 (5)(a) and (b). The date of receipt for a Substantial Development Permit means that date the applicant receives written notice from Ecology that it has received the decision. With regard to a permit for a Shoreline Variance or a Shoreline Conditional Use, date of receipt means the date the City of Leavenworth or applicant receives the written decision of Ecology. (Section 36, SB 2935-2)

B. Forms. Permits for Substantial Development, Shoreline Conditional use, or Shoreline Variance may be in any form prescribed and used by City of Leavenworth including a combined permit application form. Such forms will be supplied by City of Leavenworth.

C. Data sheet. A permit data sheet shall be submitted to Ecology with each shoreline permit. The permit data sheet form shall be consistent with WAC 173-27-990.

D. Construction Prior to Expiration of Appeal Deadline. Construction undertaken pursuant to a permit is at the applicant's own risk until the expiration of the appeals deadline

7.12 Review Process

The application shall be reviewed by the City in accordance with Leavenworth Municipal Code Chapter 21.07.

7.13 Appeals

7.13.1 Appeals of Shoreline Administrator Determinations and Decisions

A. Administrative review decisions by the Administrator, based on a provision of this SMP, may be the subject of an appeal to the Hearing Examiner by any aggrieved person. Such appeals shall be an open record hearing before the Hearing Examiner.

B. Appeals of exemptions are allowed only for exemptions where a letter is required pursuant to Section 7.6.4, Letters of Exemption, of this SMP, or appealed through a LUPA appeal.

C. Local Decision Appeal. Appeals must be submitted within of the required appeal period, as adopted, of the decision or written interpretation together with the applicable appeal fee. Appeals submitted by the applicant or aggrieved person shall contain:

1. The decision or interpretation being appealed, including the file number reference and the specific objections in the decision document;
2. The name and address of the appellant and his/her interest(s) in the application or proposed development;
3. The specific reasons why the appellant believes the decision or interpretation to be erroneous, including identification of each finding of fact, each conclusion, and each condition or action ordered which the appellant alleges is erroneous. The appellant shall have the burden of proving the decision or interpretation is erroneous;
4. The specific relief sought by the appellant; and
5. The appeal fee established by City of Leavenworth.

D. Per WAC 173-27-120 the City of Leavenworth shall comply with special procedures for limited utility extensions and bulkheads. If there is an appeal of the decision to grant or deny the permit to the City of Leavenworth Council, the appeal shall be finally determined by the legislative authority within thirty days.

In addition, for administrative appeals, see Leavenworth Municipal Code Chapter 21.11

7.13.2 Appeals to Shorelines Hearings Board

Appeals to the Shoreline Hearings Board of a final decision on a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, Shoreline Variance, or a decision on an appeal of an administrative action, may be filed by the applicant or any aggrieved party pursuant to RCW 90.58.180 within 21 days (21) days of the date of filing of the decision as defined in RCW 90.58.140(6)-as provided for in RCW 90.58.140(6). (RCW 90.58.180)

7.14 Amendments to Permits (WAC 173-27-100)

7.14.1 Revision – When Required

A permit revision is required whenever the applicant proposes substantive changes to the design, terms or conditions of a project from that which is approved in the permit. Changes are substantive if they materially alter the project in a manner that relates to its conformance to the terms and conditions of the permit, this SMP, and/or the policies and provisions of chapter 90.58 RCW. Changes which are not substantive in effect do not require approval of a revision.

When an applicant seeks to revise a permit, the City of Leavenworth shall request from the applicant detailed plans and text describing the proposed changes. Proposed changes must be within the scope and intent of the original permit, otherwise a new permit may be required, pursuant to Section 7.14.2.

7.14.2 Determination of Scope and Intent

If the City of Leavenworth determines that the proposed changes are within the scope and intent of the original permit, and are consistent with this SMP and the Act, the City of Leavenworth may approve a revision.

"Within the scope and intent of the original permit" means all of the following:

A. No additional over water construction is involved except that pier, dock, or float construction may be increased by five hundred (500) square feet or ten percent (10%) from the provisions of the original permit, whichever is less;

B. Ground area coverage and height may be increased a maximum of ten percent (10%) from the provisions of the original permit;

C. The revised permit does not authorize development to exceed height, lot coverage, setback, or any other requirements of this SMP except as authorized under a Shoreline Variance granted as the original permit or a part thereof;

D. Additional or revised landscaping is consistent with any conditions attached to the original permit and with this SMP;

E. The use authorized pursuant to the original permit is not changed; and

F. No adverse environmental impact will be caused by the project revision.

7.14.3 Filing of Revision

A. The revision approval, including the revised site plans and text consistent with the provisions of Section 7.4 and 7.14 as necessary to clearly indicate the authorized changes, and the final ruling on consistency with this section shall be filed with Ecology. In addition, City of Leavenworth shall notify parties of record of their action.

B. If the revision to the original permit involves a Shoreline Conditional Use Permit or Shoreline Variance, the City of Leavenworth shall submit the revision to Ecology for approval, approval with conditions, or denial, and shall indicate that the revision is being submitted under the requirements of this subsection. Ecology shall render and transmit to City of Leavenworth and the applicant its final decision within fifteen (15) days of the date of Ecology's receipt of the submittal from the City of Leavenworth. City of Leavenworth shall notify parties of record of Ecology's final decision.

7.14.4 Effective Date of Revised Permit

The revised permit is effective immediately upon final decision by the City of Leavenworth or, when appropriate under Subsection 7.14.3, upon final action by Ecology. Construction undertaken pursuant to a permit is at the applicant's own risk until the expiration of the appeals deadline.

7.14.5 Appeal of Revised Permit

A. Filing. Appeals of a revised permit shall be in accordance with RCW 90.58.180 -

B. Basis of appeals. Appeals shall be based only upon contentions of noncompliance with the provisions of Subsection 7.14.1. Appeals shall be based on the revised portion of the permit.

C. Risk. Construction undertaken pursuant to that portion of a revised permit not authorized under the original permit is at the applicant's own risk until the expiration of the appeals deadline.

D. Scope of decision. If an appeal is successful in proving that a revision is not within the scope and intent of the original permit, the decision shall have no bearing on the original permit.

7.15 Enforcement

A. City of Leavenworth shall apply 173-27 WAC Part II, Shoreline Management Act Enforcement, to enforce the provisions of this SMP.

B. Specific violation requirements in this SMP, include, but are not limited to, Section 4.5.2.G, Unauthorized vegetation removal.

7.16 Amendments to Shoreline Master Program

7.16.1 General

A. This Shoreline Master Program carries out the policies of the Shoreline Management Act for Chelan County and the City of Leavenworth. It shall be reviewed and amended as appropriate in accordance with the review periods required in the Act and in order to:

1. To assure that the master program complies with applicable law and guidelines in effect at the time of the review; and

2. To assure consistency of the master program with the City of Leavenworth's comprehensive plan and development regulations adopted under chapter 36.70A RCW, if applicable, and other local requirements.

B. This SMP and all amendments thereto shall become effective 14 days after final approval by Ecology (RCW 90.58.090(7)).

C. The SMP may be amended annually as needed pursuant to the Growth Management Act, RCW 36.70A.130(2)(a)(iii).

7.16.2 Amendment Process and Criteria

A. Initiation. Future amendments to this Shoreline Management Plan may be initiated either by any person, resident, property owner, business owner, governmental or non-governmental agency, Shoreline Administrator, Planning Commission, or City Council or Board of County Commissioners as appropriate.

B. Application. Applications for shoreline master program amendments shall specify the changes requested and any and all reasons therefore. Applications shall be made on forms specified by City of Leavenworth. Such applications shall contain information specified in City of Leavenworth's procedures for Comprehensive Plan and development regulation amendments pursuant to RCW 36.70A, the Growth Management Act, and information necessary to meet minimum public review procedures in Subsection C.

C. Public Review Process – Minimum Requirements. The City of Leavenworth shall accomplish the amendments in accordance with the procedures of the Shoreline Management Act, Growth Management Act, and implementing rules including, but not limited to, RCW 90.58.080, WAC 173-26-100, RCW 36.70A.106 and 130, and Part Six, Chapter 365-196 WAC.

D. Roles and Responsibilities. Proposals for amendment of the Shoreline Management Plan shall be heard by the Planning Commission, per the provisions of Section 7.1.4. After conducting a hearing and evaluating testimony regarding the application, including a recommendation from the Shoreline Administrator per Section 7.1.1, the Planning Commission shall submit its recommendation to the City Council or Board of County Commissioners, who shall approve or deny the proposed amendment consistent with Section 7.1.5.

E. Finding. Prior to approval, City of Leavenworth shall make a finding that the amendment would accomplish #1 or #2, and must accomplish #3:

1. The proposed amendment would make this Program more consistent with the Act and/or any applicable Department of Ecology Guidelines;

2. The proposed amendment would make this Program more equitable in its application to persons or property due to changed conditions in an area;

3. This Program and any future amendment hereto shall ensure no net loss of shoreline ecological functions and processes on a programmatic basis in accordance with the baseline functions present as of the effective date of this SMP.

F. County and City Coordination. The County applies Leavenworth's shoreline master programs in the UGAs. Where a City makes an amendment to its SMP, it shall provide the Ecology-approved amendment to the County in accordance with terms of any interlocal agreements or the County's Comprehensive Plan

Amendment procedures to ensure the County makes the revisions consistent with the individual city's SMP.

G. After approval or disapproval of a Program amendment by the Department of Ecology as provided in RCW 90.58.090, City of Leavenworth shall publish a notice that the Program amendment has been approved or disapproved by Ecology pursuant to the notice publication requirements of RCW 36.70A.290.

8 DEFINITIONS

The terms used throughout this Shoreline Master Program shall be defined and interpreted as indicated below. When consistent with the context, words used in the present tense shall include the future; the singular shall include the plural, and the plural the singular. Definitions established by WAC 173 have been incorporated herein and should these definitions in the WAC be amended, the most current WAC definition shall apply. Except where specifically defined in this chapter, the RCW or the WAC, all words used in this Shoreline Master Program shall carry their customary meanings.

A

ACCESSORY. Any use or development incidental to and subordinate to a primary use of a shoreline use or development. See also APPURTENANCE, RESIDENTIAL. (example SMPs)

ACT. The Washington State Shoreline Management Act, chapter 90.58 RCW. (WAC 173-26-020(1)

ADEQUATE. Sufficient to satisfy an adopted requirement. If City of Leavenworth does not have an adopted requirement, adequate means to meet a need or demand generated by the proposed shoreline development or use as determined by the authority responsible to determine compliance with the Shoreline Master Program per Chapter 7.

ADMINISTRATOR OR SHORELINE ADMINISTRATOR. Administrator or Shoreline Administrator means the City Administrator or his/her designated representative, who is vested with the duty of administering Shoreline Master Program regulations within the City of Leavenworth's area of authority.

ADVERSE IMPACT. An impact that can be measured or is tangible and has a reasonable likelihood of causing moderate or greater harm to ecological functions or processes or other elements of the shoreline environment. See also SIGNIFICANT ECOLOGICAL IMPACT

AGENCY CONSULTATION. Agency consultation means consultation with the Washington Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service for the purpose of making a preliminary determination regarding impacts of a development proposal on fish and wildlife habitat conservation area functions and values. "Agency consultation" does not mean "Endangered Species Section 7 Consultation."

AGRICULTURAL ACTIVITIES. Agricultural uses and practices including, but not limited to: producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities; and maintaining agricultural lands under production or cultivation. (WAC 173-26-020(3)(a)) See also EXISTING AND ONGOING AGRICULTURAL ACTIVITIES.

AGRICULTURAL-COMMERCIAL. The following activities are considered agricultural-commercial activities:

A. "Agricultural tourism" refers to the act of visiting a working farm or any agricultural, horticultural or agribusiness operation for the purpose of enjoyment, education or active involvement in the activities of the farm or operation.

B. "Nursery" means land or structures, such as greenhouses, used to raise plants, flowers and shrubs for sale.

C. "Roadside stand" means a temporary use which is primarily engaged in the sale of fresh agricultural products, locally grown on- or off-site, but may include, incidental to fresh produce sale, the sale of limited prepackaged food products and non-food items. This use is to be seasonal in duration, open for the duration of the harvest season. For existing roadside stands see AGRICULTURAL ACTIVITIES and AGRICULTURAL EQUIPMENT and AGRICULTURAL FACILITIES.

D. "Value added operation" means any activity or process that allows farmers to retain ownership and that alters the original agricultural product or commodity for the purpose of gaining a marketing advantage. Value added operations may include bagging, packaging, bundling, pre-cutting, food and beverage service, etc.

E. "Winery" means a facility where fruit or other products are processed (i.e., crushed, blended, aged, and/or bottled) and may include as incidental and/or accessory to the principal use a tasting room, food and beverage service, places of public/private assembly, and/or retail sales area.

AGRICULTURAL EQUIPMENT AND AGRICULTURAL FACILITIES. Include, but are not limited to:

A. The following used in agricultural operations: Equipment; machinery; constructed shelters, buildings, and ponds; fences; water diversion, withdrawal, conveyance, and use equipment and facilities including, but not limited to, pumps, pipes, tapes, canals, ditches, and drains;

B. Corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands;

C. Farm residences and associated equipment, lands, and facilities; and

D. Roadside stands and on-farm markets for marketing fruit or vegetables. (WAC 173-26-020(3)(c))

AGRICULTURAL LAND. Areas on which agricultural activities are conducted as of the date of adoption of this SMP pursuant to the State Shoreline Guidelines as evidenced by aerial photography or other documentation. After the effective date of this SMP, land converted to agricultural use is subject to compliance with the requirements herein. (WAC 173-26-020(3)(d))

AGRICULTURAL PRODUCTS. Includes, but is not limited to, horticultural, viticultural, floricultural, vegetable, fruit, berry, grain, hops, hay, straw, turf, sod, seed, and apiary products; feed or forage for livestock; Christmas trees; hybrid cottonwood and similar hardwood trees grown as crops and harvested within twenty (20) years of planting; and livestock including both the animals themselves and animal products including, but not limited to, meat, poultry and poultry products, and dairy products. (WAC 173-26-020(3)(b))

ALTERATION. Any human induced change in an existing condition of a shoreline, critical area and/or its buffer. Alterations include, but are not limited to grading, filling, channelizing, dredging, clearing (vegetation), draining, construction, compaction, excavation, paving, discharging pollutants except stormwater, application of gravel, modifying for surface water management purposes, or any other activity that changes the existing landforsm, vegetation, hydrology, wildlife or wildlife habitat of the area.

AMENDMENT. A revision, update, addition, deletion, and/or reenactment to an existing shoreline master program or to a permit as appropriate. (WAC 173-26-020(4))

ANADROMOUS FISH. Fish species that spend most of their lifecycle in saltwater, but return to freshwater to reproduce.

APPLICABLE. The shoreline goal, objective, policy, or standard is relevant or appropriate, or the shoreline development meets the threshold upon which a requirement is based as determined by the authority responsible to determine compliance with the Shoreline Master Program per Chapter 7.

APPLICANT. The applicant is the person, party, firm, corporation or other entity that proposes any use that could affect a shoreline.

APPROVAL, SHORELINE MASTER PROGRAM. An official action by a local government legislative body agreeing to submit a proposed shoreline master program or amendments to the department for review and official action pursuant to this chapter; or an official action by the department to make a local government shoreline master program effective, thereby incorporating the approved shoreline master program or amendment into the state master program. (WAC 173-26-020(5))

APPROVAL, PERMIT. Approval of a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, revision, or Shoreline Variance Permit or any combination thereof.

APPURTENANCE, RESIDENTIAL. Improvement necessarily connected to the use and enjoyment of a single-family residence when located landward of the OHWM, the perimeter of a wetland and outside their corresponding required buffers. Appurtenances may include, but are not limited to, a garage and/or shop; driveway; utilities; water craft storage (upland); swimming pools; hot tubs; sport courts; shoreline stabilization (consistent with WAC 173-27-030(c)); retaining walls when necessary to protect the residence and associated structures from erosion; fences; yards; saunas; cabanas; antennas; decks; walkways; and installation of a septic tank and drainfield and grading which does not exceed two hundred fifty cubic yards and which does not involve placement of fill in any wetland or waterward of the OHWM. (based on WAC 173-27-040)

AQUATIC. Pertaining to those areas waterward of the OHWM.

AQUACULTURE. Aquaculture is defined as the propagation and rearing of aquatic organisms in controlled or selected aquatic environments for any commercial, recreational, or public purpose. The broad term “aquaculture” refers to the breeding, rearing, and harvesting of plants and animals in all types of water environments, including ponds, rivers, and lakes. Aquaculture can take place in the natural environment or in a manmade environment. Using aquacultural techniques and technologies, researchers and the aquaculture industry are “growing,” “producing,” “culturing,” “ranching”, and “farming” all types of freshwater species. Aquaculture can be classified as either commercial aquaculture or non-commercial aquaculture.

A. Commercial Aquaculture: Commercial aquaculture is defined as the rearing of aquatic organisms, including the incidental preparation of these products for human use, with the goal of maximizing profit.

B. Non-Commercial Aquaculture: Non-commercial aquaculture is defined as fish and wildlife activities that are not primarily for profit and are supported by a recognized federal, tribal, or state resource manager.

1. Low Intensity Non-Commercial Aquaculture: Activities which support non-commercial aquaculture, including well and water supply development, surveys, ground disturbance of less than 10 cubic yards, no permanent structures, and minimal land clearing.

2. Medium Intensity Non-Commercial Aquaculture: Activities which support non-commercial aquaculture, including well and water supply development, surveys, development of acclimation ponds or other acclimation vessels, and removable/portable structures.

3. High Intensity Non-Commercial Aquaculture: Activities which support non-commercial aquaculture including well and water supply development, surveys, development of acclimation ponds, and permanent structures.

AQUACULTURE, MAJOR. Aquaculture activities greater than one acre in size or more than two years in duration.

AQUACULTURE, MINOR. Aquaculture activities less than one acre in size or less than two years in duration

AQUIFER. A water-bearing stratum or permeable rock, sand, or gravel.

AQUIFER RECHARGE. The movement or percolation (usually downward) of surface water through an unsaturated zone of soil or rock into a groundwater body.

AQUIFER RECHARGE AREA. An area with recharging effect on quifers used for potable water.

ARCHAEOLOGICAL OBJECT. An object that comprises the physical evidence of an indigenous and subsequent culture including material remains of past human life including monuments, symbols, tools, facilities, graves, skeletal remains and technological by-products. (State DAHP recommendations)

ARCHAEOLOGICAL RESOURCES/SITE. A geographic locality in Washington, including, but not limited to, submerged and submersible lands and the bed of the sea within the state's authority, that contains archaeological objects. (State DAHP recommendations)

ARCHAEOLOGICAL. Having to do with the scientific study of material remains of past human life and activities. (State DAHP recommendations)

ARCHAEOLOGIST, PROFESSIONAL. A person who meets qualification standards promulgated by DAHP and the National Park Service and published in 36 CFR Part 61 and which define minimum education and experience required to perform identification, evaluation, registration and treatment activities for archaeological sites. In some cases, additional areas or levels of expertise may be needed, depending on the complexity of the task and the nature of the properties involved. (Based on http://www.dahp.wa.gov/pages/EnvironmentalReview/Consultants.htm)

ASSOCIATED WETLANDS. Wetlands that are in proximity to tidal waters, lakes, rivers or streams that are subject to the Act and either influence or are influenced by such waters. (WAC 173-22-030(1)) Factors used to determine proximity and influence include, but are not limited to: location contiguous to a shoreline waterbody, formation by tidally influenced geo-hydraulic processes, presence of a surface connection including through a culvert or tide gate, location in part or whole within the floodplain of a shoreline, periodic inundation, and/or hydraulic continuity.

AUTHORIZED USE. Any use allowed in shoreline jurisdiction either by appropriate shoreline permit or exemption.

AVERAGE GRADE LEVEL. The average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure. In the case of structures to be built over water, average grade level shall be the elevation of the ordinary high water mark. Calculation of the average grade level shall be made by averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure." (WAC 173-27-030(3))

B

BARB. Used primarily in streams, barbs are low relief projections from a bank, angled upstream, to redirect flow away from the bank towards the center of the channel. As opposed to groins or jetties, barbs are not barrier types of structures; they function by re-directing flows that pass over the top of the structure.

BEACH. The zone of unconsolidated material that is moved by waves and wind currents, including areas both above and below the OHWM.

BEACH ENHANCEMENT/RESTORATION. Process of restoring a beach to a state more closely resembling a natural beach, using beach feeding, vegetation, drift sills and other nonintrusive means as applicable. See also ENHANCEMENT.

BERM. A linear mound or series of mounds of sand and/or gravel generally paralleling the water at or landward of the OHWM. Also, a linear mound used to screen an adjacent activity, such as a parking lot, from transmitting excess noise and glare.

BEST MANAGEMENT PRACTICES. Conservation practices or systems of practices and management measures, often promulgated by state and federal agencies or City of Leavenworth, that:

A. Control soil loss and reduce water quality degradation caused by nutrients, animal waste, toxins, and sediment;

B. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical, and biological characteristics of waters, wetlands, and other fish and wildlife habitats;

C. Control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw material.

BIOENGINEERING. The use of biological elements, such as the planting of vegetation, often in conjunction with engineered systems, to provide a structural shoreline stabilization measure with minimal negative impact to the shoreline ecology.

BIOFILTRATION SYSTEM. A stormwater or other drainage treatment system that utilizes as a primary feature the ability of plant life to screen out and metabolize sediment and pollutants. Typically, biofiltration systems are designed to include grassy swales, retention ponds and other vegetative features.

BOATHOUSE. Any roofed and enclosed structure built over water for storage of watercraft or float planes. See also COVERED MOORAGE.

BOATING FACILITIES. Developments and uses that support access to shoreline waters for purposes of boating, including serving more than four single-family residences or multi-family units, public piers, and community or public boat launch facilities.

BOAT LAUNCH FACILITY. Any structure or apparatus used for transferring watercraft between uplands and the water. Boat launches are typically launch ramps, but may also include other mechanisms such as a hoist or crane often used at dry storage locations. See also LAUNCH RAMP.

BOAT LAUNCH FACILITY, COMMERCIAL. Boat launch facility for profit.

BOAT LAUNCH FACILITY, PUBLIC. Boat launch facility operated and/or owned by the public.

BOAT LAUNCH FACILITY, COMMUNITY. Boat launch facility privately operated and/or owned which may or may not be open to the public.

BOG. A wet, spongy, poorly drained area which is usually rich in very specialized plants, contains a high percentage of organic remnants and residues, and frequently is associated with a spring, seepage area, or other subsurface water source. A bog sometimes represents the final stage of the natural process of eutrophication by which lakes and other bodies of water are very slowly transformed into land areas.

BREAKWATER. An aquatic structure that is generally built parallel to shore, but may be built perpendicular to the shoreline, that may or may not be connected to land, and may be floating or stationary. The primary purpose is to protect harbors, moorages and navigation activity from wave and wind action by creating stillwater areas along shore. A secondary purpose is to protect shorelines from wave caused erosion. See also JETTIES.

BUFFER or SHORELINE BUFFER. The area adjacent to a shoreline or critical area that separates and protects the area from adverse impacts associated with adjacent land uses. It is designed and designated to remain vegetated in an undisturbed and natural condition to protect an adjacent aquatic or wetland site from upland impacts, to provide habitat for wildlife, to afford limited public or private access, and to accommodate certain other specified uses that benefit from a shoreline location. Buffers are distinct from setbacks. The dimensions of the shoreline buffer are established in the specific local government Vegetation Conservation and Shoreline Buffers sections of this SMP.

BUILDING. Any combination of materials constructed, placed or erected permanently on the ground or attached to something having a permanent location on the ground, for the purpose of shelter, support or enclosure of persons, animals or property, or when supporting any use, occupancy or function. Excluded from this definition are structures waterward of the OHWM, all forms of vehicles even though immobilized, residential fences, retaining walls less than three feet in height, rockeries and similar improvements of a minor nature. Docks and bulkheads are not buildings under this definition. For structures waterward of the OHWM, see OVER-WATER STRUCTURES.

BULKHEAD. A solid wall erected generally parallel to and at or near the OHWM for the purpose of protecting adjacent uplands from waves or current action. A bulkhead is an example of hard structural shoreline stabilization.

BUOY, MOORING. An anchored float for the purpose of mooring vessels.

BUOY, NAVIGATION. An anchored float for the purpose of identifying navigational hazards or directing watercraft traffic.

C

CHANNEL MIGRATION ZONE (CMZ). The area along a river or stream within which the channel(s) can reasonably be expected to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river or stream and its surroundings. (WAC 173-26-020(6)) It encompasses that area of current and historic lateral stream channel movement that is subject to erosion, bank destabilization, rapid stream incision, and/or channel shifting, as well as adjacent areas that are susceptible to channel erosion.

CHANNELIZATION. The straightening, relocation, deepening or lining of stream channels, including construction of continuous revetments or levees for the purpose of preventing gradual, natural meander progression.

CITY/CITIES. Local governments with shorelines in Chelan County. Cities include, but are not limited to, the Cities of Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee and those that may incorporate in accordance with applicable State and County laws.

CLEARING. The destruction or removal of vegetation ground cover, shrubs and trees including, but not limited to, root material removal and/or topsoil removal.

COMMERCIAL DEVELOPMENT. Those developments whose primary use is for retail, service or other commercial business activities. Included in this definition are developments including but not limited to hotels, motels, bed and breakfast establishments, or other commercial accommodations, shops, restaurants, banks, professional offices, grocery stores, laundromats, recreational vehicle parks, and indoor or outdoor commercial recreation facilities.

COMMERCIAL USES. Commercial uses are those activities engaged in commerce and trade and involving the exchange of money, including but not limited to, retail, services, wholesale, or business trade activities. Examples include, but are not limited to, hotels, motels, or other commercial accommodations, grocery stores, restaurants, shops, commercial recreation facilities, and offices.

COMMUNITY ACCESS. The ability of all property owners or members of a residential development to reach and use the waters of the State, the water/land interface, and associated shoreline area. It includes physical access that is either lateral (areas paralleling the shore) or perpendicular (an easement or community corridor to the shore), and/or visual access facilitated by scenic roads and overlooks, viewing platforms, and other community sites or facilities. Community access is not intended for the general public. (example SMPs)

COMMUNITY DOCK. A private water-dependent facility designed for moorage of pleasure craft as its primary use that serves a specified residential development of more than four single-family residences or multi-family units. Other water-enjoyment uses, such as fishing or viewing, may occur on community docks. Community docks are different from marinas.

CONDITIONAL USE, SHORELINE. A use, development, or substantial development which is classified as a Conditional Use or is not classified within this SMP. Those activities identified as conditional uses or not classified in this SMP must be treated according to the review criteria established in WAC 173-27-160. (WAC 173-27-030)

CONSERVATION. The prudent management of rivers, streams, wetlands, wildlife and other environmental resources in order to preserve and protect them. This includes the careful use of natural resources to prevent depletion or harm to the environment.

CONSERVATION EASEMENT. A legal agreement that the property owner enters into to restrict uses of the land for purposes of natural resources conservation. The easement is recorded on a property deed, runs with the land, and is legally binding on all present and future owners of the property.

CONTAMINANT. Any chemical, physical, biological, or radiological substance that does not occur naturally in ground water, air, or soil or that occurs at concentrations greater than those in the natural levels. (WAC 173-200)

COUNTY. Chelan County, Washington.

COVERED MOORAGE. Boat moorage, with or without walls, that has a roof to protect the vessel. See also BOATHOUSE.

CRITICAL AQUIFER RECHARGE AREA. Areas designated by WAC 365-190-080(2) that are determined to have a critical recharging effect on aquifers (i.e., maintain the quality and quantity of water) used for potable water as defined by WAC 365-190-030(2).

CRITICAL AREAS. The following areas as designated in critical area standards as established in Appendix B:

A. Critical aquifer recharge areas

B. Wetlands

C. Geologically hazardous areas

D. Frequently flooded areas

E. Fish and wildlife habitat conservation areas

CRITICAL HABITAT. Habitat areas with which endangered, threatened, sensitive or monitored plant, fish, or wildlife species have a primary association (e.g., feeding, breeding, rearing of young, migrating). Such areas are identified in reference to lists, categories, and definitions promulgated by the Washington Department of Fish and Wildlife as identified in WAC 232-12-011 or 232-12-014; in the Priority Habitat and Species (PHS) program of the Department of Fish and Wildlife; or by rules and regulations adopted by the U.S. Fish and Wildlife Service, National Marine Fisheries Service, or other agency with authority for such designations.

D

DAHP. The State of Washington Department of Archaeology and Historic Preservation.

DE MINIMUS IMPACT. A small or miniscule impact that is demonstrated to be nonharmful to the environment.

DEPARTMENT OF ECOLOGY or ECOLOGY. The Washington State Department of Ecology. (WAC 173-27-030)

DEVELOPMENT. A use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, minerals or vegetation; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface

of the waters of the state subject to Chapter 90.58 RCW at any stage of water level. (RCW 90.58.030(3)(a).) Development does not include the following activities:

A. Interior building improvements that do not change the use or occupancy;

B. Exterior structure maintenance activities, including painting and roofing as long as it does not expand the existing footprint of the structure;

C. Routine landscape maintenance of established, ornamental landscaping, such as lawn mowing, pruning and weeding; and

D. Maintenance of the following existing facilities that does not expand the affected area: septic tanks (routine cleaning); wells; and individual utility service connections.

DEVELOPMENT REGULATIONS. The controls placed on development or land uses by local government, including, but not limited to, zoning ordinances, critical areas ordinances, all portions of a shoreline master program other than goals and policies approved or adopted under Chapter 90.58 RCW, planned unit development ordinances, subdivision ordinances, and binding site plan ordinances together with any amendments thereto. (WAC 173-26-020(8))

DIKE. An artificial embankment or revetment normally set back from the bank or channel in the floodplain for the purpose of keeping floodwaters from inundating adjacent land.

DOCK. All platform structures or anchored devices in, suspended over, or floating on waterbodies to provide moorage for pleasure craft (including watercraft and float planes) or landing for water-dependent recreation including, but not limited to, piers, floats, swim floats, float plane moorages, and water ski jumps. Excluded are launch ramps. Docks often consist of a nearshore pier with a ramp to an offshore float. See also PIER.

DOCUMENT OF RECORD. The most current shoreline master program officially approved or adopted by rule by the Department of Ecology for a given local government, including any changes resulting from appeals filed pursuant to RCW 90.58.190. (WAC 173-26-020(9))

DREDGING. Excavation or displacement of the bottom or shoreline of a waterbody (waterward of the OHWM) for purposes of flood control, navigation, utility installation (excluding on-site utility features serving a primary use, which are “accessory utilities” and shall be considered a part of the primary use), the construction or modification of essential public facilities and regional transportation facilities, and/or restoration (of which the primary restoration element is sediment/soil removal rather than being incidental to the primary restoration purpose). Dredging, as regulated in this SMP under Section 5.8, is not intended to cover other excavations waterward of the ordinary high water mark that are incidental to construction of an otherwise authorized use or modification (e.g., , bulkhead replacements, large woody debris installations, boat launch ramp installation, pile placement).

E

ECOLOGICAL FUNCTIONS (or SHORELINE FUNCTIONS). The work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline’s natural ecosystem. (WAC 173-26-020(11))

ECOLOGY. See DEPARTMENT OF ECOLOGY.

ECOSYSTEM-WIDE PROCESSES. The suite of naturally occurring physical and geologic processes of erosion, transport, and deposition and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions. (WAC 173-26-020(12))

EMBANKMENT. A wall or bank of earth or stone built to prevent a river flooding an area.

EMERGENCY/EMERGENCY CONSTRUCTION. An unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with the master program. Emergency construction is construed narrowly as that which is necessary to protect property and facilities from the elements. Emergency construction does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the administrator to be the appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed or any permit which would have been required, absent an emergency, pursuant to Chapter 90.58 RCW, these regulations, or this SMP, shall be obtained. All emergency construction shall be consistent with the policies of Chapter 90.58 RCW and this SMP. As a general matter, flooding or seasonal events that can be anticipated and may occur but that are not imminent are not an emergency. (RCW 90.58.030(3eiii))

ENHANCEMENT. Alteration of an existing resource to improve or increase its characteristics, functions, or processes without degrading other existing ecological functions. Enhancements are to be distinguished from resource creation or restoration projects. See also BEACH ENHANCEMENT/RESTORATION.

ENVIRONMENTAL IMPACT STATEMENT (EIS). An environmental impact statement is a document that must be prepared in accordance with the State Environmental Policy Act or National Environmental Policy Act when the lead agency determines a proposal is likely to have significant adverse environmental impacts. The EIS provides an impartial discussion of significant environmental impacts, reasonable alternatives, and mitigation measures that would avoid or minimize adverse impacts. A draft EIS is issued with a comment period to allow other agencies, tribes, and the public to comment on the environmental analysis and conclusions. The lead agency uses these comments to finalize the environmental analysis and issue a final EIS.

EROSION. The wearing away of land by the action of natural forces.

EROSION HAZARD AREAS. Areas that are likely to become unstable, such as bluffs, steep slopes, and areas with unconsolidated soils.

ESSENTIAL PUBLIC FACILITIES: Essential public facilities include those facilities that are typically difficult to site, such as airports, state education facilities, and state or regional transportation facilities as defined in RCW 47.06.140, regional transit authority facilities, as defined in RCW 81.112.020, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 30 71.09.020.

EXCAVATION. The disturbance or displacement of unconsolidated earth material such as silt, sand, gravel, soil, rock or other material. In addition to upland excavation, this definition covers excavations waterward of the ordinary high water mark that are incidental to construction of an otherwise authorized use or modification (e.g., bulkhead

replacements, large woody debris installations, boat launch ramp installation, pile placement). See also DREDGING.

EXEMPTION. Certain specific developments as listed in WAC 173-27-040 are exempt from the definition of substantial developments are therefore exempt from the Shoreline Substantial Development Permit process of the SMA. An activity that is exempt from the substantial development provisions of the SMA must still be carried out in compliance with policies and standards of the Act and this SMP. Conditional use and/or variance permits may also still be required even though the activity does not need a Shoreline Substantial Development Permit. (RCW 90.58.030(3e); WAC 173-27-040.)

EXISTING AND ONGOING AGRICULTURAL ACTIVITIES. Those activities conducted on lands defined in RCW 36.70A.030 and those activities involved in the production of crops and livestock, including, but not limited to, operation and maintenance of existing farm and stock ponds or drainage ditches, irrigation systems, changes between agricultural activities, and maintenance or repair of existing serviceable structures and facilities. Activities that result in the filling of an area or bring an area into agricultural use are not part of an ongoing activity. An operation ceases to be ongoing when the area on which it was conducted has been converted to a non-agricultural use, or has lain idle for more than five (5) years unless that idle land is registered in a federal or state soils conservation program. Forest practices are not included in this definition. (term used in WAC 173-26-221(3); defined based on example SMPs and Growth Management Act) See also ACRICULTURAL ACTIVITIES.

EXISTING AND ONGOING FORESTRY ACTIVITIES. Those activities conducted on lands defined in RCW 84.34.020(3) and occurring under regulation of the Forest Practices Act, on lands capable of supporting a merchantable stand of timber and not being actively used for a use which is incompatible with timber growing.

F

FAIR MARKET VALUE. The open market bid price for conducting the work, using the equipment and facilities, and purchase of the goods, services, and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation, and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed, or found labor, equipment, or materials. (WAC 173-27-030)

FEASIBLE. For the purpose of this master program, that an action, such as a development project, mitigation, or preservation requirement, meets all of the following conditions:

A. The action can be accomplished with technologies and methods that have been used in the past, or studies or tests have demonstrated that such approaches are currently available and likely to achieve the intended results.

B. The action provides a reasonable likelihood of achieving its intended purpose. Reasonable means acceptable and according to common sense or normal practice.

C. The action does not physically preclude achieving the project's primary intended use. (WAC 173-26-020(13))

In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant.

In determining an action's infeasibility, City of Leavenworth may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames. (WAC 173-26-020(13)) See INFEASIBLE

FEED LOT. A confined area or structure for feeding, breeding or holding livestock for eventual sale or slaughter and in which animal waste accumulates faster than it can naturally dissipate without creating a potential for a health hazard, particularly with regard to surface and groundwater; but not including barns, pens or other structures used in a dairy operation or structures on farms holding livestock primarily during winter periods.

FILL. The addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land. (WAC 173-26-020(14))

FILLING. The act of placing (by an manner or mechanism) fill material from, to, or on any soil surface, sediment surface or other fill material.

FINGERS or DOCK FINGERS. Narrow extensions of piers perpendicular to the pier or float that provide additional watercraft moorage.

FISH AND WILDLIFE HABITAT CONSERVATION AREAS. Areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as designated by WAC 365-190-080(5). These areas include:

1. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;
2. Habitats of local importance, including, but not limited to, areas designated as priority habitat by the State Department of Fish and Wildlife;
3. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish and wildlife habitat;
4. Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, and all other surface water and watercourses within the authority of the state of Washington;
5. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; state natural area preserves and natural resources conservation areas; and
6. Land essential for preserving connections between habitat blocks and open spaces.

FLOATING HOMES. Any floating structure that is designed, or has been substantially and structurally remodeled or redesigned, to serve primarily as a residence. "Floating homes" include house boats, house barges, or any floating structures that serve primarily as a residence and do not qualify as a vessel. A floating structure that is used as a residence and is capable of navigation, but is not designed primarily for navigation, nor normally is capable of self propulsion and use as a means of transportation is a floating home, not a vessel. (WAC 332-30-106)

FLOATS. A detached, anchored platform that is free to rise and fall with water levels, used for boat mooring, swimming (including a SWIM FLOAT) or similar recreational activities that is not anchored to the shoreline or accessed directly from the shoreline.

FLOAT, SWIM. A floating platform designed and intended expressly for facilitating safe swimming. Swim floats are anchored in deeper waters, are not connected to uplands, and are not motorized. Water ski/wake board jumps are also considered swim floats.

FLOOD CONTROL WORKS. Methods or facilities designed to reduce flooding of adjacent lands, to control or divert stream flow, to retard bank erosion, or to create a reservoir.

A. Nonstructural measures include, but are not limited to, shoreline buffers, land use controls, wetland restoration, dike removal, use relocation, biotechnical measures, storm water management programs, land or easement acquisition, voluntary protection and enhancement projects, or incentive programs.

B. Structural measures include, but are not limited to, dikes, levees, revetments, floodwalls, channel realignment, or embankments.

FLOODPLAIN. Synonymous with one hundred-year floodplain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the Act. (WAC 173-26-020(15))

FLOODWAY. The area, as identified in a master program, that either: (i) Has been established in federal emergency management agency flood insurance rate maps or floodway maps; or (ii) consists of those portions of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal condition, by changes in surface soil conditions or changes in types or quality of vegetative groundcover condition. Regardless of the method used to identify the floodway, the floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state. (RCW 90.58.030(2)(b))

FOREST PRACTICES. Any activity conducted on or directly pertaining to forest land and relating to growing, harvesting, or processing timber, including but not limited to: road and trail construction; harvesting, final and intermediate; precommercial thinning and fire protection; reforestation; fertilization; prevention and suppression of diseases and insects; salvage of trees; and brush control. Forest practices do not include preparatory work such as tree marking, surveying and road flagging, and removal or harvesting of incidental vegetation from forest lands such as berries, ferns, greenery, mistletoe, herbs, mushrooms, and other products which cannot normally be expected to result in damage to forest soils, timber, or public resources.

FREQUENTLY FLOODED AREA. Means an area subject to flooding, as defined by the Flood Insurance Rate Maps (FIRM), once every one hundred years, also known as the floodplain.

G

GEOLOGICALLY HAZARDOUS AREA. Areas that may not be suited to development consistent with public health, safety or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological events as designated by

WAC 365-190-080(4). Types of geologically hazardous areas include erosion, landslide, seismic, volcanic hazards, and mine.

GEOTECHNICAL ANALYSIS/ASSESSMENT. A scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified engineers or geologists who are knowledgeable about the regional and local shoreline geology and processes. (WAC 173-26-020(19))

GEOTECHNICAL ENGINEER. A person with a Washington state license in civil engineering who has at least four years of professional employment as a geotechnical engineer with experience in landslide, erosion and seismic hazards identification and mitigation.

GEOTECHNICAL REPORT. See GEOTECHNICAL ANALYSIS.

GRADE. See AVERAGE GRADE LEVEL.

GRADING. The movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land. (WAC 173-26-020(17))

GRASSY SWALE. A vegetated drainage channel that is designed to remove various pollutants from storm water runoff through biofiltration.

GRAY WATER**.** Sewage from bathtubs, showers, bathroom sinks, washing machines, dishwashers, and kitchen sinks. It includes sewage from any source in a residence or structure that has not come into contact with toilet wastes.

GROINS. A barrier type of structure extending from the backshore or stream bank into a waterbody for the purpose of the protection of a shoreline and adjacent uplands by influencing the movement of water or deposition of materials. In lake environments, groins are typically used to trap sediment for the purpose of preserving a depositional feature, such as a beach. In a stream environment, groins may serve a variety of functions, including bank protection, pool formation, and increased roughness, and may include rock structures, debris jams, or pilings that collect wood debris. See also BARB and WEIR.

GROUNDWATER. All water that exists beneath the land surface or beneath the bed of any stream, lake or reservoir, or other body of surface water within the boundaries of the state, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves (Chapter 90.44 RCW).

GROWTH MANAGEMENT ACT. RCW 36.70A and 36.70B, as amended.

GUIDELINES. Those standards adopted by the Department of Ecology into the Washington Administrative Code (WAC) to implement the policy of Chapter 90.58 RCW for regulation of use of the shorelines of the state prior to adoption of master programs. Such standards also provide criteria for local governments and the Department of Ecology in developing and amending master programs. (WAC 173-26-020(18))

H

HABITAT. The place, including physical and biotic conditions, where a plant or animal usually occurs or could occur and is fundamentally linked to the actual or potential distribution and abundance of species. A species may use a habitat or a structural component of the habitat for all or part of its lifecycle, and may adapt to use various habitats. Habitat is scale-dependent and refers to a large geographic area, a species' home range, a local setting, or a site-specific feature. Habitat may perform a specific function for a species or multiple species, and may include those elements necessary for one or more species to feed, migrate, breed, or travel.

HARD STRUCTURAL SHORELINE STABILIZATION. Shoreline erosion control practices using hardened structures that armor and stabilize the shoreline from further erosion. Hard structural shoreline stabilization typically uses concrete, boulders, dimensional lumber or other materials to construct linear, vertical or near-vertical faces. These include bulkheads, rip-rap, groins, and similar structures.

HEIGHT. The vertical dimension measured from average grade to the highest point of a structure; provided that, antennas, chimneys, and similar appurtenances shall not be used in calculating height, unless such appurtenance obstructs the view of a substantial number of adjacent residences. Temporary construction equipment is excluded in this calculation.

HIGH IMPACT DEVELOPMENT. Development that impacts the pre-development hydrologic regime of urban and developing watersheds.

HIGHLY ERODIBLE LAND. Those areas defined by the Sodbuster, Conservation Reserve, and Conservation Compliance parts of the Food Security Act of 1985 and the Food, Agriculture, Conservation, and Trade Act of 1990 as "highly erodible land." Lists of highly erodible and potential highly erodible map units are maintained in the NRCS field office technical guide.

HISTORIC PRESERVATION PROFESSIONAL. Individuals who meet standards promulgated by the DAHP as well as the National Park Service and published in 36 CFR Part 61. These standards address minimum education and experience required to perform identification, evaluation, registration and treatment activities for historic properties. In some cases, additional areas or levels of expertise may be needed, depending on the complexity of the task and the nature of the properties involved. (Based on http://www.dahp.wa.gov/pages/EnvironmentalReview/Consultants.htm)

HISTORIC SITE. Sites that are eligible or listed on the Washington Heritage Register, National Register of Historic Places or any locally developed historic registry formally adopted by City of Leavenworth. (State DAHP recommendations)

HYDRIC SOIL. Soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

HYDROGEOLOGIC EVALUATION. A systematic study of geologic and gronwater resources, focusing on near-surface geologic, groundwater, and pollution sensitivity, for the purpose of determining any potential risk to human health, groundwater quality, and the environment.

HYDROLOGICAL. Referring to the science related to the waters of the earth including surface and ground water movement, evaporation and precipitation. Hydrological functions in shoreline include, water movement, storage, flow variability, channel movement and reconfiguration, recruitment and transport of sediment and large wood, and nutrient and pollutant transport, removal and deposition.

HYDROPHYTIC VEGETATION. Plants that grow in water or in saturated soils that area periodically deficient in oxygen as a result of high water content.

I

IMPACT. See SIGNIFICANT ECOLOGICAL IMPACT.

IMPERVIOUS SURFACE. A hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. For purposes of determining whether thresholds for application of core elements are exceeded, open, uncovered retention or detention facilities shall not be considered as impervious surfaces. Open, uncovered retention or detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

IN-WATER STRUCTURES, MAJOR. A permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner installed within the water of a value greater than 5,000.

IN-WATER STRUCTURES, MINOR. A permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner installed within the water of a value less than 5,000

INDUSTRIAL DEVELOPMENT. Facilities for processing, manufacturing, and storage of finished or semi-finished goods, including but not limited to oil, metal or mineral product refining, power generating facilities, including hydropower, ship building and major repair, storage and repair of large trucks and other large vehicles or heavy equipment, related storage of fuels, commercial storage and repair of fishing gear, warehousing construction contractors' offices and material/equipment storage yards, wholesale trade or storage, and log storage on land or water, together with necessary accessory uses such as parking, loading, and waste storage and treatment. Excluded from this definition are mining including onsite processing of raw materials, and off site utility, solid waste, road or railway development, and methane digesters that are accessory to an agricultural use.

INDUSTRIAL PARK. A tract of land that has been planned, developed and operated as an integrated facility for a number of individual industrial uses with special attention to circulation, parking, utility needs and compatibility.

INDUSTRIAL USES. The production, processing, manufacturing, or fabrication of goods or materials, including warehousing and storage of materials or production.

INFEASIBLE. To determine that an action, such as a development project, mitigation, or preservation requirement, is infeasible, the following conditions are found:

A. The action cannot be accomplished with technologies and methods that have been used in the past, or studies or tests have demonstrated that such approaches are currently not available or unlikely to achieve the intended results.

B. The action does not have a reasonable likelihood of achieving its intended purpose. Reasonable means acceptable and according to common sense or normal practice.

C. The action precludes achieving the project's primary intended use.

D. The action's relative public costs and public benefits, considered in the short- and long-term time frames, show the costs far outweigh the benefits.

In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, City of Leavenworth may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames. (WAC 173-26-020(13)) See FEASIBLE.

INFILTRATION. The passage or movement of water into the soil surface.

INSTITUTIONAL. Those public and/or private facilities including, but not limited to, police and fire stations, libraries, activity centers, schools, educational centers, water-oriented research facilities, and similar uses.

IN-WATER STRUCTURE. Structure placed by humans within a stream, river or lake waterward of the OHWM that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-water structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, recreation (e.g., docks, boatlifts), or other purpose. Note that the listed recreation-related in-water structures have a very limited capacity to affect water flows and are exclusively regulated under SMP Sections 5.5 (Boating Facilities).

INVASIVE SPECIES. A species that is 1) non-native (or alien) to Chelan County and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes).

J

JETTIES. A barrier type of structure generally built singly or in pairs perpendicular to the shoreline at harbor entrances or river mouths to prevent sediment from depositing in the harbor or channel. They also protect channels and inlets from crosscurrents and storm waves. See also BREAKWATERS.

JOINT-USE DOCKS. Those constructed and utilized by two, three or four property owners, whether on adjacent lots as single-family residences or as multi-family units, or by a homeowner’s association..

L

LAKE. A body of standing water in a depression of land or expanded part of a river, including reservoirs, of twenty acres or greater in total area. A lake is bounded by the OHWM or, where a stream enters a lake, the extension of the elevation of the lake's OHWM within the stream. Where the OHWM cannot be found, it shall be the line of mean high water.

LANDSLIDE. A general term covering a wide variety of mass movement landforms and processes involving the down slope transport, under gravitational influence of soil and rock material en masse; included are debris flows, debris avalanches, earthflows, mudflows, slumps, mudslides, rock slides, and rock falls.

LANDSLIDE HAZARD AREAS. Areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible to landslide because of any combination of bedrock, soil, slop (gradient), slope aspect, structure, hydrology, or other factors.

LARGE WOODY DEBRIS. Logs, limbs, or root wads 4 inches or larger in diameter, delivered to waterbodies from adjacent riparian or upslope areas or from upstream areas. Large woody debris also includes logs, limbs, or root wads 4 inches or larger that are placed in a waterbody for the purpose of providing habitat and/or mitigation. (based partially on a definition in a WDFW document)

LAUNCH RAMP. An inclined slab, set of pads, rails, planks, or graded slope which extends waterward of the OHWM, and is used for transferring watercraft between uplands and the water with trailers or occasionally by hand. See also BOAT LAUNCH FACILITY.

LEGALLY ESTABLISHED. A use or structure in compliance with the laws and rules in effect at the time of creation of the use or structure.

LETTERS OF EXEMPTION. A letter prepared by the City of Leavenworth addressed to the applicant whenever a development is determined by the City of Leavenworth to be exempt from the substantial development permit process according to the exemption provisions of this program. Also see EXEMPTION.

LEVEE. A natural or artificial embankment on the bank of a stream or river for the purpose of keeping floodwaters from inundating adjacent land. Some levees have revetments on their sides.

LIMITED UTILITY EXTENSION. For the purposes of Section 7.3.D, the extension of a utility service that:

A. Is categorically exempt under chapter 43.21C RCW for one or more of the following: Natural gas, electricity, telephone, water, or sewer;

B. Will serve an existing use in compliance with WAC 173-27; and

C. Will not extend more than two thousand five hundred linear feet within the shorelines of the state.

LIVEABOARD. A floating vessel that serves as a residence, and is self-powered by sail or motor.

LMC. Leavenworth Municipal Code.

LOCAL GOVERNMENT. Any county, incorporated city or town which contains within its boundaries shorelines of the state subject to chapter 90.58 RCW. (WAC 173-26-020(19)) For the purposes of this SMP, this means Chelan County or the Cities of Cashmere, Chelan, Entiat, Leavenworth, or Wenatchee and those that may incorporate in accordance with applicable State and County laws. Chelan County is the responsible local government within unincorporated territory, including urban growth areas, and the Cities are the responsible local government within their City limits.

LOW IMPACT DEVELOPMENT (LID). A land planning and engineering design approach with a goal of maintaining and enhancing the pre-development hydrologic regime or urban and developing watersheds. LID includes the management of stormwater runoff to emphasize conservation and the use of on-site natural features to protect water quality, typically by using engineered small-scale hydrologic controls to replicate the pre-

development hydrologic regime of watersheds, Also known as on-site stormwater management.

M

MAINTENANCE, NORMAL. Those usual acts to prevent a decline, lapse, or cessation from a legally established condition. See REPAIR, NORMAL.

MARINA. A public or private water-dependent wet moorage facility for pleasure craft and/or commercial craft where goods, moorage or services related to boating may be sold commercially or provided for a fee, e.g. yacht club, etc. Dry storage and launching facilities, either launch ramp, crane or hoist, may also be provided. Marinas may be open to the general public or restricted on the basis of property ownership or membership. Community docks that do not provide nonwater-oriented uses or water-oriented commercial services, other than to the specific residential community served by the community dock, are not considered marinas.

MARSH. A low flat wetland area on which the vegetation consists mainly of herbaceous plants such as cattails, bulrushes, tules, sedges, skunk cabbage or other hydrophytic plants. Shallow water usually stands on a marsh at least during part of the year.

MAY. Refers to actions that are acceptable, provided they conform to the provisions of this master program and the Act. (WAC 173-26-020(21))

MINERAL EXTRACTION. The removal of topsoil, gravel, rock, clay, sand or other earth material, including accessory activities such as washing, sorting, screening, crushing and stockpiling. Not included is the leveling, grading, filling, or removal of materials during the course of normal site preparation for an approved use (e.g., residential subdivision, commercial development, etc.) subject to the provisions of this SMP.

MITIGATION (or MITIGATION SEQUENCING). The process of avoiding, reducing, or compensating for the environmental impact(s) of a proposal. The following sequence of steps is listed in prioritized order:

A. Avoiding the impact altogether by not taking a certain action or parts of an action;

B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;

C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;

D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

E. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

F. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.

MIXED USE. A combination of uses within the same building or site as a part of an integrated development project with functional interrelationships and coherent physical design.

MIXED USE COMMERCIAL. Developments that include water-dependent commercial uses combined with water-related, water-enjoyment uses and/or nonwater-oriented commercial uses. Mixed-use developments can be a tool for water-dependent activities, civic revitalization, and public access to the shoreline. (Example SMPs, Port Townsend)

MIXED USE RESIDENTIAL. Mixed use developments that include water-dependent and water-oriented commercial uses together with single-family or multi-family uses while promoting public access for significant numbers of the public and/or providing an ecological restoration resulting in a public benefit. This mix of uses is intended to reduce transportation trips, use land efficiently, and provide for waterfront commerce and housing options.

MIXING ZONE ANALYSIS. Refers to the determination of a limited area in a waterbody where water quality standards may be exceeded as long as acutely toxic conditions are prevented. Typically a mixing zone is an area where discharged water enters a waterbody and mixes with a stream or waterbody. The accurate determination of the mixing zone is essential for environmental impact and risk assessment.

MODIFICATION. A change or alteration in existing materials, including structures, plans and uses.

MODIFICATION, SHORELINE. Those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, dock, weir, dredged basin, fill, bulkhead, or other shoreline structures. They can include other actions, such as clearing, grading, or application of chemicals. (WAC 173-26-020(31))

MOORAGE FACILITY. Any device or structure used to secure a boat or a vessel, including docks, piers, floats, piles, watercraft lifts or buoys.

MOORAGE PILE. A permanent vertical column generally located in open waters, often in close proximity to a dock or pier, to which the vessel is tied to prevent it from excessive movement generated by wind, or wind- or boat-driven waves.

MULTI-FAMILY DWELLING (OR RESIDENCE). A building containing two or more dwelling units, including, but not limited to, duplexes, apartments and condominiums.

MUST. A mandate; the action is required. (WAC 173-26-020(22)) See SHALL.

N

NATIVE VEGETATION. Plant species which are indigenous to the area or location in question.

NATURAL AREA PRESERVE. An area designated as a natural area preserve and managed by the Washington State Department of Natural Resources to protect important ecological resources.

NATURAL RESOURCE CONSERVATION AREA. An area designated as a natural resource conservation area and managed by the Washington State Department of Natural Resources to protect one or more outstanding natural resources.

NAVIGABLE WATERS. Navigable waters of the United States are those waters that are presently used, or have been used in the past, or may be susceptible for use to transport

interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity.

NECESSARY: A word describing an element that is essential, indispensable or needed to achieve a certain result or effect. (www.Dictionary.com)

NO NET LOSS. A public policy goal and requirement to maintain the aggregate total of the County's shoreline ecological functions at its current level of environmental resource productivity. For purposes of reviewing and approving this SMP, "current" is equivalent to the date of the Final Shoreline Inventory and Analysis Report. As a development and/or mitigation standard, no net loss requires that the impacts of a particular shoreline development and/or use, whether permitted or exempt, be identified and prevented or mitigated, such that it has no resulting adverse impacts on shoreline ecological functions or processes relative to the legal condition just prior to the proposed development and/or use.

NONCONFORMING USE OR DEVELOPMENT. A shoreline use or development which was lawfully constructed or established prior to the effective date of the Act (June 1, 1971; RCW 90.58.920) or this SMP , or amendments thereto, but which does not conform to present regulations or standards of the SMP.

NONPOINT POLLUTION. Pollution that enters any waters of the state from any dispersed land-based or water-based activities, including, but not limited to, atmospheric deposition, surface water runoff from agricultural lands, urban areas, or forest lands, subsurface or underground sources, or discharges from boats or marine vessels not otherwise regulated under the National Pollutant Discharge Elimination System program.

NONWATER-ORIENTED USES. Those uses that are not water-dependent, water-related, or water-enjoyment. (WAC 173-26-020(23))

NORMAL MAINTENANCE. See MAINTENANCE, NORMAL and REPAIR, NORMAL"

NORMAL PROTECTIVE BULKHEAD. Those structural and nonstructural developments installed at or near, and parallel to, the OHWM for the sole purpose of protecting an existing single-family residence and appurtenant structures from loss or damage by erosion. (WAC 173-27-040(2)(c))

NORMAL REPAIR. See REPAIR, NORMAL and MAINTENANCE, NORMAL

NOXIOUS WEEDS. A special sub-class of invasive plant species listed as Class A or B by the Chelan County Noxious Weed Control Board.

O

OFF-SITE REPLACEMENT/MITIGATION. To replace wetlands or other shoreline environmental resources away from the site on which a resource has been impacted by a regulated activity.

ORDINARY HIGH WATER MARK (OHWM). That mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the Department of Ecology: provided, that in any area where the ordinary high water mark

cannot be found, the ordinary high water mark adjoining fresh water shall be the line of mean high water. See RCW 90.58.030(2)(c).

OVERWATER STRUCTURES. Any structure located above the water surface waterward of the OHWM. Common examples include, but are not limited to, residential docks, marinas, and pedestrian or vehicular bridges over waterways.

P

PARKING. A place where vehicles are temporarily stored while an activity is being conducted. Local parking is located onsite intended to serve and support a primary use(s) of a property. Regional parking is a parking area intended to support a district with multiple uses.

PARTY OF RECORD. All persons, agencies, or organizations who have submitted written or verbal comments in response to a notice of application, made oral comments in a formal public hearing conducted on the application, or notified local government of their desire to receive a copy of the final decision on a permit and who have provided an address for delivery of such notice by mail or email.

PASSIVE RECREATION. Recreational development generally associated with a low level of human activity and limited construction related impacts, which may include nature trails and similar uses.

PERIODIC. Occurring at regular intervals.

PERMANENT EROSION CONTROL. The continuous on-site and off-site control measures that are needed to reasonably control conveyance or deposition of earth, turbidity or pollutants after development, construction, or restoration.

PERSON. An individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, or agency of the state or local governmental unit however designated. (RCW 90.58.030(1d)

PIER. Fixed platform above the water and supported by piles, usually perpendicular to the shoreline. See also DOCK.

PRIMARY USE. Uses or activities on a shoreline site that is identified as serving the main purpose of the site in terms of its land occupancy or use intensity, and any other uses within the site are supportive or accessory to it.

PRIORITY HABITAT. A habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes: Comparatively high fish or wildlife density; comparatively high fish or wildlife species diversity; fish spawning habitat; important wildlife habitat; important fish or wildlife seasonal range; important fish or wildlife movement corridor; rearing and foraging habitat; refuge; limited availability; high vulnerability to habitat alteration; unique or dependent species; or shellfish bed. A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife. A priority habitat may also be described by a successional stage. Alternatively, a priority habitat may consist of a specific habitat element (such as talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or non-priority fish and wildlife (WAC 173-26-020(24)).

PRIORITY SPECIES. Species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria listed below: (WAC 173-26-020(25))

A. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the Department of Fish and Wildlife (POL-M- 6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.

B. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.

C. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.

D. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered (WAC).

PROVISIONS. Policies, regulations, standards, guideline criteria or designations. (WAC 173-26-020(26))

PUBLIC ACCESS. The public's ability to reach and use the State's public waters, the water/land interface, and associated shoreline area. It includes physical access that is either lateral (areas paralleling the shore) or perpendicular (an easement or public corridor to the shore), and visual access facilitated by means such as scenic roads and overlooks, viewing platform, and other public sites or facilities. (WAC 173-26-221(4) and example SMPs, Whatcom County) See also COMMUNITY ACCESS.

PUBLIC FACILITIES. Facilities that include streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools (RCW 36.70A.030).

PUBLIC INTEREST. The interest shared by the citizens of the state or community at large in the affairs of government, or some interest by which their rights or liabilities are affected such as an effect on public property or on health, safety, or general welfare resulting from a use or development. (WAC 173-27-030)

Q

QUALIFIED PROFESSIONAL. A person with expertise and training appropriate for the relevant subject. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, soil science, engineering, environmental studies, fisheries, geology, hydrology, geomorphology or related field, and at least five years of related work experience. Specific qualified professionals must also meet the following criteria, or any other criteria included in Appendix B, Critical Areas Regulations:

A. A qualified professional providing a geotechnical analysis as required under Section 5.18 of this Master Program must be a licensed engineer in the State of Washington, with specific training in geology, hydrology and/or geomorphology.

B. A qualified professional providing a demonstration of need as required under Section 5.18 of this Master Program must have a M.S. or equivalent degree in geology, hydrology, or geomorphology.

C. A qualified professional for wetlands means a biologist who has a degree in biology, ecology, botany, or a closely related field, or has been certified as a Professional Wetland Scientist, and a minimum of five (5) years of professional experience in wetland identification and assessment in Eastern Washington.

D. A qualified professional for habitat conservation areas means a biologist who has a degree in wildlife biology, ecology, fisheries, or closely related field and a minimum of five (5) years professional experience related to the subject species/habitat type.

E. A qualified professional for geologically hazardous areas must be an engineer or engineering geologist licensed in the state of Washington. An engineer must be licensed as a civil engineer pursuant to Chapter 18.43 RCW, to qualify. An engineering geologist must be a practicing geologist licensed as a professional geologist pursuant to Chapter 18.22, RCW.

F. A qualified professional for critical aquifer recharge areas means a Washington State licensed hydro-geologist, geologist, or engineer.

G. A qualified professional for vegetation management must be a registered landscape architect, certified arborist, biologist, or professional forester with a corresponding degree or certification.

R

RAMP. Walkway that connects a pier or land to a float, often used in areas where water levels change due to seasonal variations. LAUNCH RAMP is defined above.

RCW. Revised Code of Washington.

REASONABLE. Reasonable means acceptable and according to common sense or normal practice.

RECREATION. An experience or activity in which an individual engages for personal enjoyment and satisfaction. Most shore-based outdoor recreation such as: fishing, hunting, beach combing, and rock climbing; various forms of boating, swimming, hiking, bicycling, horseback riding, camping, picnicking, watching or recording activities such as photography, painting, bird watching or viewing of water or shorelines, nature study and related activities.

RECREATIONAL USES. Uses which offer activities, pastimes, and experiences that allow for the refreshment of mind and body. Examples include, but are not limited to, parks, camps, camping clubs, launch ramps, golf courses, viewpoints, viewpoint platforms, trails, public access facilities, public parks and athletic fields, hunting blinds, and other low-intensity use outdoor recreation areas. Recreational Uses that do not require a shoreline location, nor are related to the water, nor provide significant public access, are considered nonwater-oriented. For example, a recreation use solely offering indoor activities would be considered nonwater-oriented. (based on example SMPs, Whatcom County, Douglas County)

REPAIR, NORMAL. To restore a development or structure to a state comparable to its original, legally established condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to

the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment. See also MAINTENANCE, NORMAL.

RESIDENTIAL USES. Buildings, structures or portions thereof that are designed and used as a place for human habitation. Included are single, duplex or multi-family dwellings, apartment/condominium buildings, manufactured homes, modular homes, and other structures that serve to house people. This definition includes accessory uses common to normal residential use, including but not limited to, residential appurtenances, accessory dwelling units, home occupations, family day care homes, and adult care homes.

RESTORE (RESTORATION or ECOLOGICAL RESTORATION). Reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including but not limited to re-vegetation, removal of intrusive shoreline structures, and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions. (WAC 173-26-020(27))

REVETMENT. Facing of rock, concrete, etc., built to protect a steep slope, cliff, embankment, or shore structure against erosion by waves or currents.

RIPARIAN HABITAT AREA. The area adjacent to an aquatic system with flowing water (e.g., rivers, perennial or intermittent streams, seeps, springs) that contains elements of both aquatic and terrestrial ecosystems which may influence each other. Riparian habitat areas are designated as priority habitat by the Washington Department of Fish and Wildlife.

RIPARIAN VEGETATION. Vegetation that tolerates and/or requires moist conditions and periodic free flowing water thus creating a transitional zone between aquatic and terrestrial habitats which provides cover, shade and food sources for aquatic and terrestrial insects for fish species. Riparian vegetation and their root systems stabilizes stream banks, attenuates high water flows, provides wildlife habitat and travel corridors, and provides a source of limbs and other woody debris to terrestrial and aquatic ecosystems, which, in turn, stabilize stream beds.

RIPRAP. A layer, facing, or protective mound of dense, hard, angular rock used to prevent erosion, scour, or sloughing of a structure or embankment for revetments, armoring or hardening of shorelines, or other flood/erosion control works.

ROAD. Road shall mean and include contiguous streets, alleys, sidewalks, curbs and gutters, planting strips, roads, highways, thoroughfares, parkways, bridges, viaducts, public grounds and public improvements within City of Leavenworth's territory. Lands for public right of ways are reserved for use and maintenance of the road system. Bridges are roads which cross over water. Sidewalks or paths independent of the rest of typical roadway cross-sections shall be considered trails.

ROCK FALL. A rock or mass of rocks dislodged from a cliff or other steep slope, which moves down a slope under the force of gravity, generally by falling, rolling, sliding, toppling, or bouncing.

ROCK FALL ACCELERATION ZONE. A location at the base of a rock-fall surface area where the incline is steep enough to accelerate falling debris.

ROCK FALL HAZARD AREA. A location at the base of a slope that is susceptible to rock fall, including the acceleration zone and the runout zone.

ROCK FALL RUNOUT ZONE. An area of gentler slopes beyond the base of a rock fall acceleration zone, where boulders roll or bounce.

ROCK FALL SOURCE AREA. A rock source (such as a cliff, bedrock outcrop or boulder) above a slope steep enough to allow rapid downslope movement of dislodged rocks.

RUNOFF. Water that is not absorbed into the soil but rather flows along the ground surface following the topography.

S

SANITARY SEWER. A system designed to accept sewage to be deposited into and carried off by a system of lateral sewers, drains, and pipes to a common point, or points, for transfer to treatment or disposal. (based on WAC 458-20-251)

SEDIMENT. The fine grained material deposited by water or wind.

SEISMIC HAZARD AREA. An area subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement or subsidence, soil liquefaction, surface faulting, or tsunamis.

SEPA (STATE ENVIRONMENTAL POLICY ACT). SEPA requires state agencies, local governments and other lead agencies to consider environmental factors when making most types of permit decisions, especially for development proposals of a significant scale. As part of the SEPA process, environmental impact statements (EISs) may be required to be prepared and public comments solicited. (RCW 43.21c and WAC 197-11 guide this process)

SETBACK. The distance between property line and the foundation wall or load-bearing member of the primary structure. Meaning is distinct from BUFFER.

SETBACK, SIDE. The distance between side lot line and the foundation wall of the primary structure.

SEWAGE: Any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places. (WAC 246-272A-0010)

SHALL. A mandate; the action must be done. (WAC 173-26-020(28)) See also MUST.

SHALLOW FLOODING. Flooding with an average depth of less than three feet in areas where a clearly defined channel does not exist.

SHORELANDS or SHORELAND AREAS. Those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the Department of Ecology. (RCW 90.58.030(2)(f))

SHORELINE AREAS. All "shorelines of the state" and "shorelands" as defined in RCW 90.58.030. (WAC 173-26-020(29))

SHORELINE BUFFER. See BUFFER OR SHORELINE BUFFER.

SHORELINE ENVIRONMENT DESIGNATIONS. The classifications of shorelines established by local shoreline master programs in order to provide a uniform basis for applying policies and use regulations within distinctively different shoreline areas.

SHORELINE FUNCTIONS. See ecological functions.

SHORELINE JURISDICTION. The term describing all of the geographic areas covered by the SMA, related rules and this SMP. Also, such areas within a specified local government's authority under the SMA. See SHORELINES, SHORELINES OF THE STATE, SHORELINES OF STATE-WIDE SIGNIFICANCE and WETLANDS. See also Section 3.1 of this SMP.

SHORELINE MANAGEMENT ACT. Washington's Shoreline Management Act was passed by the State Legislature in 1971 and adopted by voters in 1972. The overarching goal of the Act is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." There are three basic policy areas to the Act: shoreline use, environmental protection and public access. The Act emphasizes accommodation of appropriate uses that require a shoreline location, protection of shoreline environmental resources and protection of the public's right to access and use the shorelines (RCW 90.58.020). Under the Shoreline Management Act (SMA), each city and county with "shorelines of the state" must prepare and adopt a Shoreline Master Program (SMP) that is based on state laws and rules but is tailored to the specific geographic, economic and environmental needs of the community.

SHORELINE MASTER PROGRAM, MASTER PROGRAM, or SMP. A comprehensive use plan for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies articulated in RCW 90.58.020. As provided in RCW 36.70A.480, the goals and policies of a shoreline master program for a county or city approved under chapter 90.58 RCW shall be considered an element of the county or city's comprehensive plan. All other portions of the shoreline master program for a county or city adopted under chapter 90.58 RCW, including use regulations, shall be considered a part of the county or city's development regulations. (WAC 173-26-020(30))

SHORELINE PERMIT. A Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, revision, or Shoreline Variance Permit or any combination thereof.

SHORELINE PROPERTY. An individual property wholly or partially within shoreline jurisdiction.

SHORELINE STABILIZATION. Structural or non-structural modifications to the existing shoreline intended to reduce or prevent erosion of uplands or beaches. They are generally located parallel to the shoreline at or near the OHWM.

SHORELINES HEARINGS BOARD (SHB). A six member quasi-judicial body, created by the SMA, which hears appeals by any aggrieved party on the issuance of a shoreline permit, enforcement penalty and appeals by local government on Department of Ecology approval of master programs, rules, regulations, guidelines or designations under the SMA.

SHORELINES OF STATEWIDE SIGNIFICANCE. A select category of shorelines of the state, defined in RCW 90.58.030(2)(e), where special policies apply. This includes lakes over 1,000 acres in area and all associated shorelands and rivers that have either a

mean annual flow of 200 cubic feet per second or more, or; the portion downstream from the first 300 square miles of drainage areas.

SHORELINES OF THE STATE. The total of all "shorelines" and "shorelines of state-wide significance" within the state.

SHORELINES. All of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of state-wide significance; (ii) shorelines on areas of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream areas; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes.

SHOULD. The particular action is required unless there is a demonstrated, compelling reason, based on policy of the Act and this SMP, against taking the action. (WAC 173-26-020(32))

SIGN. A board or other display containing words and/or symbols used to identify or advertise a place of business or to convey information. Excluded from this definition are signs required by law and the flags of national and state governments.

SIGNIFICANT ECOLOGICAL IMPACT. An effect or consequence of an action if any of the following apply:

A. The action measurably or noticeably reduces or harms an ecological function or ecosystem-wide process.

B. Scientific evidence or objective analysis indicates the action could cause reduction or harm to those ecological functions or ecosystem-wide processes under foreseeable conditions.

C. Scientific evidence indicates the action could contribute to a measurable or noticeable reduction or harm to ecological functions or ecosystem-wide processes as part of cumulative impacts, due to similar actions that are occurring or are likely to occur.

SIGNIFICANT TREE. A significant tree shall be defined as any tree over eight inches in diameter as measured four feet above grade.

SIGNIFICANT VEGETATION REMOVAL. The removal or alteration of trees, shrubs, and/or groundcover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal. (WAC 173-26-020(33))

SINGLE-FAMILY RESIDENCE (SFR). A single dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenance.

SLOPE. An inclined ground surface, the inclination of which is expressed as a ratio (percentage) of vertical distance to horizontal slope distance by the following formula:

(Vertical distance/horizontal distance) x 100 = % slopeSMA. The Shoreline Management Act of 1971, Chapter 90.58 RCW, as amended.

SMP. See SHORELINE MASTER PROGRAM.

SOFT STRUCTURAL SHORELINE STABILIZATION: Shoreline erosion control and restoration practices that contribute to restoration, protection or enhancement of shoreline ecological functions. Soft structural shoreline stabilization typically includes a mix of gravels, cobbles, boulders, logs and native vegetation placed to provide shore stability in a non-linear, generally sloping arrangement. Linear, vertical faces are an indicator of HARD STRUCTURAL SHORELINE STABILIZATION (see above definition).

STATE MASTER PROGRAM. The cumulative total of all shoreline master programs and amendments thereto approved or adopted by rule by Ecology. (WAC 173-26-020(34))

STORM WATER. That portion of precipitation that does not normally percolate into the ground or evaporate but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or constructed infiltration facility.

STORMWATER FACILITY: A constructed component of a stormwater drainage system designed or constructed to perform a particular function or multiple functions. Stormwater facilities include, but are not limited to: pipes, swales, ditches, culverts, street gutters, detention ponds, retention ponds, constructed wetlands, infiltration devices, catch basins, oil/water separators, and biofiltration swales. (Eastern Washington Stormwater Management Manual)

STREAM. Any portion of a channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state, including areas in which fish may spawn, reside, or pass, and tributary waters with defined bed or banks, which influence the quality of fish habitat downstream. This includes watercourses which flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, storm water run-off devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans. (WAC 220-110-020(105)) A shoreline stream is a naturally occurring body of periodic or continuously flowing water where: a) the mean annual flow is greater than twenty cubic feet per second and b) the water is contained within a channel. A channel is an open conduit either naturally or artificially created. This definition does not include artificially created irrigation, return flow, or stockwatering channels (WAC 173-22-030(15))

STRUCTURE. A permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above or below the surface of the ground or water, except for vessels.

SUBDIVISION. The division or redivision of land, including short subdivision, for the purpose of sale, lease or conveyance. (based on definition of subdivision and short subdivision in RCW 58.17.020)

SUBSTANTIAL DEVELOPMENT, SHORELINE. Any development which meets the criteria of RCW 90.58.030(3)(e). See also DEVELOPMENT and EXEMPTION.

SUBSTANTIALLY DEGRADE. See SIGNIFICANT ECOLOGICAL IMPACT

SURFACE WATER. All water that exists on the land surface, including streams, lakes or reservoirs, or other bodies of water within the boundaries of the state. (based on Chapter 90.44 RCW)

SWAMP. A depressed area flooded most of the year to a depth greater than that of a marsh and characterized by areas of open water amid soft, wetland masses vegetated with trees and shrubs. Extensive grass vegetation is not characteristic.

T

TEMPORARY EROSION CONTROL. The on-site or off-site control measures that are needed to reasonably control conveyance or deposition of earth, turbidity, or pollutants during development, construction or restoration or until permanent erosion control has been established.

TERRESTRIAL. Of or relating to land as distinct from air or water.

TRAIL. Trails are clearly identified paved, semi-paved or unpaved but defined (e.g. gravel) pathways for pedestrians in a natural or urban setting used for recreational or circulation purpose. A trail by itself is not considered a road.

TRANSPORTATION FACILITIES. Roads and railways, including their related bridges and culverts, transportation structures, public transit and bus facilities, pedestrian transportation including foot bridges over rivers/streams and trails, fills, embankments, causeways, truck terminals and rail switchyards, sidings, spurs, air fields and other associated minor facilities. Not included are, highway rest areas, ship terminals, nor logging roads. Local transportation refers to facilities provide direct access to abutting land and to higher order roads. Regional transportation refers to facilities serving more than one city or community or major destinations.

U

UNAVOIDABLE. Adverse impacts that remain after all appropriate mitigation sequencing measures have been implemented.

UPLAND. Generally described as the dry land area above and landward of the OHWM.

UTILITIES. Lines and facilities related to the provision, distribution, collection, transmission or disposal of water, stormwater, sanitary sewage, oil, gas, power, and telephone cable, and includes facilities for the generation of electricity.

A. “Large facilities” serve more than one community (e.g. more than one neighborhood, town, city or other defined place) or major attractions. Examples include, but are not limited to, 230 kv power transmission lines, natural gas transmission lines, and regional water storage tanks and reservoirs, regional water transmission lines or regional sewer collectors and interceptors. Large facilities may also include facilities serving an entire community, such as subregional switching stations (one hundred fifteen (115) kv and smaller), and municipal sewer, water, and storm water facilities.

B. “Small facilities” serve adjacent properties and include, but are not limited to, power lines not specified under “large facilities,” water, sanitary sewer, and storm water facilities, fiber optic cable, pump stations and hydrants, switching boxes, and other structures normally found in a street right-of-way. On-site utility features serving primary use such as a water, sewer, or gas line to a residence are accessory utilities and shall be considered part of the primary use.

V

VARIANCE, SHORELINE. A means to grant relief from the specific bulk, dimensional, or performance standards set forth in this master program where there are extraordinary circumstances relating to the physical character or configuration of property such that the

strict implementation of the master program will impose unnecessary hardships on the applicant or thwart the policies set forth in this SMP and RCW 90.58.020; variance is not a means to vary a use of a shoreline. Variance permits must be specifically approved, approved with conditions, or denied by the Administrator and the Department of Ecology.

VESSEL. A floating structure that is designed primarily for navigation, is normally capable of self propulsion and use as a means of transportation, and meets all applicable laws and regulations pertaining to navigation and safety equipment on vessels, including, but not limited to, registration as a vessel by an appropriate government agency. (WAC 332-30-106)

VIEW ANALYSIS. An analysis to evaluate the ability of the general public to view the water and the shoreline from adjacent locations such as public places or from substantial numbers of residences. (WAC 173-26-221(4) and RCW 90.58.320)

VISUAL ACCESS. The ability of the general public to view the water and the shoreline from adjacent locations. (WAC 173-26-221(4))

VIEW CORRIDOR. The line of sight (identified as to height, width, and distance) of an observer looking toward shoreline from upland locations, public spaces, such as parks, trails, or streets that have particular significance in preserving the unique character of the shoreline.

W

WAC. Washington Administrative Code.

WASTE STORAGE AND TREATMENT. Facilities for collecting and treating, as an accessory use only, garbage, solid waste or sewage generated by the development and its users. This definition does not include municipal sewage treatment facilities.

WATERBODY. A body of still or flowing water, fresh or marine, bounded by the OHWM.

WATERCRAFT LIFT. An in-water structure used for the dry berthing of vessels above the water level and lowering of vessels into the water. A watercraft lift is generally a manufactured unit without a canopy cover and may be placed in the water adjacent to a pier or float, and may be floating or ground-based. Watercraft lifts include, but are not limited to, lifts for motorized boats, kayaks, canoes, jet skis, and float planes. A watercraft lift is different from a hoist or crane used for the launching of vessels.

WATER-DEPENDENT USE. A use or portion of a use which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of its operations. (WAC 173-26-020(36)) Examples of water-dependent uses may include but are not limited to ship cargo terminal loading areas, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, boating facilities, aquaculture, float plane facilities, sewer outfalls, hydroelectric generating plants and water diversion facilities, such as agricultural pumphouses. (examples based on Shoreline Inventory and Analysis Report)

WATER-ENJOYMENT USE. A recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the

general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment. WAC 173-26-020(37) Primary water-enjoyment uses may include, but are not limited to, parks, viewing and walking piers and other improvements facilitating public access to the shorelines of the State, including public view or fishing platforms; and general water-enjoyment uses may include, but are not limited to restaurants, museums, aquariums, scientific/ecological reserves, resorts/hotels (as part of mixed use development or with significant public access or restoration components), and mixed-use commercial/office. (examples based on Shoreline Inventory and Analysis Report)

WATERFRONT. A parcel of property with upland characteristics which includes within its boundary a physical interface with the existing shoreline of a body of water. (WAC 332-30-106)

WATER-ORIENTED USE. A use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses. (WAC 173-26-020(38))

WATER QUALITY. The physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this SMP, the term "water quantity" refers only to development and uses regulated under this chapter and affecting water quantity, such as impervious surfaces and storm water handling practices. Water quantity, for purposes of this master program, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340. (WAC 173-26-020(39))

WATER-RELATED USE. A use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:

A. The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or

B. The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient. WAC 173-26-020(40))

Examples of water-related uses may include warehousing of goods transported by water, seafood processing plants, gravel storage when transported by barge, oil refineries where transport is by tanker, log storage, and agriculturally related water transportation systems. (examples based on Shoreline Inventory and Analysis Report)

WATERSHED. A geographic region within which water drains into a particular river, stream or body of water.

WATERSHED RESTORATION PLAN. A plan, developed or sponsored by the Department of Fish and Wildlife, the Department of Ecology, the Department of Natural Resources, the Department of Transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county, or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources, character, and ecology of a stream, stream segment, drainage area, or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act. (WAC 173-27-040)

WATERSHED RESTORATION PROJECT. A public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one or more of the following activities:

A. A project that involves less than 10 miles of stream or lake reach, in which less than 25 cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings; or

B. A project for the restoration of an eroded or unstable stream bank or lake shore that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of wave energy; or

C. A project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizens of the state, provided that any structure (e.g., project equipment shed), other than a bridge or culvert or in-water habitat enhancement structure associated with the project, is less than 200 square feet in floor area and is located above the ordinary high water mark of the stream or lake.

WEIR. A structure generally built across a stream channel for the purpose of diverting water or trapping sediment or other moving objects transported by water.

WETLAND OR WETLANDS. Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support—and that under normal circumstances do support—a prevalence of vegetation typically adapted for life in marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands. (RCW 90.58.030(2)(h))

WETLAND ALTERATION. An activity which includes clearing, grading, draining, filling or other designated wetland system disturbance which results in decrease or loss of function or value.

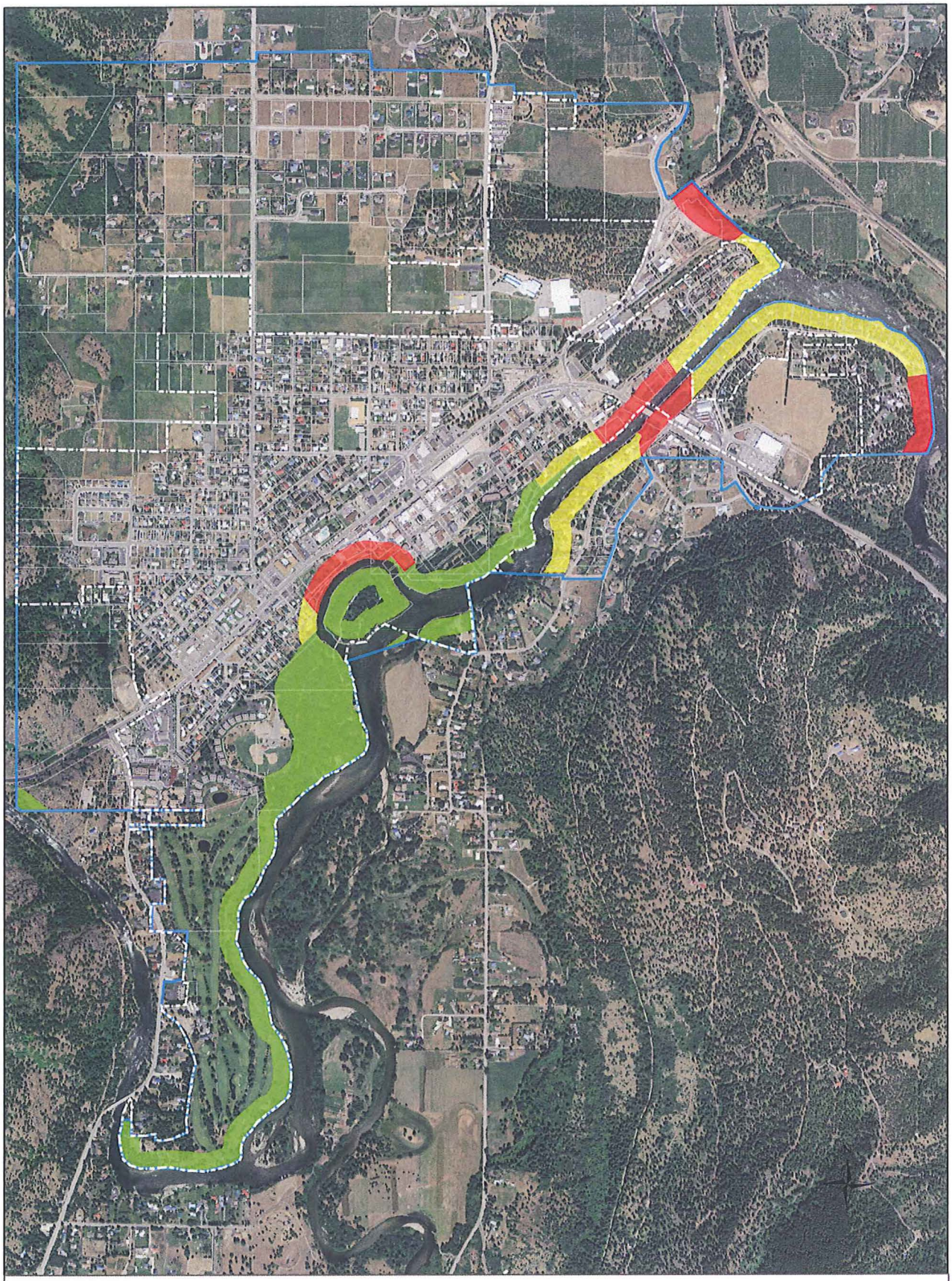
Z

ZONING. The system of land use and development regulations and related provisions of Chelan County, the City of Cashmere, the City of Chelan, the City of Entiat, the City of Leavenworth, the City of Wenatchee, and any other future Cities that may incorporate.

Universal Note

In addition, the definitions and concepts set forth in RCW 90.58.030, Washington Administrative Code as amended, and implementing rules shall also apply as used herein.

Appendix A
Shoreline Jurisdiction Boundaries and Environment Designation Maps



City of Leavenworth
Draft Shoreline Master Program
Environment Designations

1:12,000

SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

0 0.0750.15 0.3 0.45 0.6
Miles

Legend

- City Limits
- Leavenworth Parcels
- Urban Growth Area

SMP Environment Designations

- Urban Park
- Shoreline Residential
- High Intensity

Appendix B
Critical Areas Regulations

Chapter 16.08
CRITICAL AREAS1

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Article IV. Fish and Wildlife Habitat Conservation Areas

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Article VI. Geologically Hazardous Areas

16.08.610 Purpose and intent.
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16.08.630 Classification.
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Article VII. Wetlands

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16.08.740 Classification- Wetland rating system.
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Article I. Generally

16.08.110 Purpose.

The purpose of this chapter is to identify and protect critical areas as required by the Growth Management Act of 1990, and to protect people from hazards posed by critical areas, by supplementing the development requirements contained in the various chapters of the city code and providing for protection measures for critical areas. This resolution is adopted under the authority of Chapter 36.70A RCW, RCW Title 35A and the Leavenworth Municipal Code as now or hereafter amended.

In some areas, it may be important to use the critical areas regulations along with other regulations, such as stormwater management and flood damage prevention regulations, in order to adequately address risks to life, property, and the environment. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.120 Chapter applicability.

A. This chapter classifies and designates critical areas and establishes protection measures for those critical areas. All development or other alterations within, adjacent to, or likely to affect, one or more critical areas, whether public or private, shall be subject to review by the city's administrator or designee for compliance with this chapter.

B. All proposed uses and development occurring within shoreline jurisdiction that potentially affect a critical area must conform to the intent and requirements of the laws and rules cited in Section 1.2, this SMP, and this Appendix whether or not a permit or other form of authorization is required. See Chapter 3 for the definitions of shoreline jurisdiction and Chapter 8 for definitions of uses,

activities, and development. Development and uses include but are not limited to:

1. Removing, excavating, dredging, dumping, discharging, distributing or filling materials of any kind in a critical area;
2. Draining, flooding or altering the water level or water table in a critical area except as necessary to exercise an existing water right permit;
3. New surface water management, drainage or erosion control development;
4. Driving pilings or placing obstructions in water systems that are in an identified critical area;
5. New construction including but not limited to roads and utilities;
6. Removal or alteration of existing vegetation through chemicals, clearing, grading, harvesting, shading or planting vegetation that would alter the character of a critical area or designated buffer;
7. Uses that result in significant changes in water temperature, physical or chemical characteristics of water sources, including quantity and pollutants, that are in a critical area; and
8. Those Class IV conversions under the Forest Practices Act, for which the city may condition an application.

C. Where two or more types of critical areas overlap, the regulation most protective of critical area functions and values shall apply.

16.08.130 Exceptions.

The following uses shall be exempt from the provisions of Appendix B of this SMP, but shall meet all other applicable regulations of this SMP:

A. Normal operation and maintenance of irrigation facilities, limited to removal of sediment and vegetation in existing ditches;
B. Existing and ongoing agricultural activities, not to include removal of trees, diverting or impounding water, excavation, ditching, draining, culverting, filling, grading, and similar activities that introduce new adverse impacts to wetlands or other aquatic resources;
C. Removal and replacement of trees within an existing orchard when replacement occurs within the same season of the same year of removal;
D. Forest practices applications, submitted for lands that are not identified for conversion, administered under regulation of the Forest Practices Act, that the city cannot condition an application;
E. Low-impact educational activities, scientific research, outdoor recreational activities, including but not limited to interpretive field trips, bird watching and hiking, provided these activities do not temporarily or permanently impact a critical area;
F. Site investigative work and studies necessary for preparing land use applications, including but not limited to land surveying, soils tests, water quality studies, wildlife studies and similar tests and investigations; provided, that any disturbance of critical areas shall be the minimum necessary to carry out the work or studies;
G. Emergency uses and development necessary to prevent an immediate threat to public health, safety or property, provided the administrator is given written notice within 30 days that such use was performed, and appropriate permitting and

mitigation actions follow;

H. Minor activities (such as those subject to LMC 21.09.030, Limited administrative review of applications) not mentioned above and determined by the administrator to pose minimal potential risk to the public health, safety and general welfare. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.140 Administrator appointed.

The city administrator, or his/her designee, is appointed to administer and implement this chapter. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.150 Abrogation and greater restrictions.

Unless otherwise stated, this chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another resolution, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. [Ord. 1395 § 1 (Exh. A) 2011.]

16.08.160 Vegetation removal.

A. Critical areas review is required prior to removal of any vegetation, including nonnative vegetation, from a critical area or its buffer, whether or not development is proposed or a development permit is being sought. This provision applies to noxious weeds and invasive plant species, with the exception of hand removal or spot-spraying. If the administrator determines, based on a preliminary evaluation, that a critical area study is required, such removal of vegetation shall be incorporated in a mitigation plan designed to prevent erosion and facilitate establishment of a stable community of native plants. In all cases, including spot-spraying of noxious weeds and invasive plant species, any herbicide use must conform to all applicable laws, including labeling laws.

B. Unauthorized Vegetation Removal. Vegetation removal conducted without the appropriate review and approvals shall be mitigated in conformance with an approved mitigation plan meeting the standards of this chapter. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.170 Conflict resolution.

In case of disagreement regarding the findings or recommendations of any critical area study, geotechnical assessment, geotechnical report, or other analysis prepared to ensure the use of the best available science in the implementation of the city's critical areas regulations, the city may require an evaluation by an independent qualified professional regarding the analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate. The cost of such evaluation will be shared equally by the city and the applicant. [Ord. 1395 § 1 (Exh. A), 2011.]

Article II. Technical Study and Reporting

16.08.210 Reference maps and materials.

The city shall maintain reference maps and materials (or, in the case of web-based resources, shall maintain access to the materials) that provide information on the general locations of critical areas and their functions and values, to the extent those are known, and shall make the materials available for reference in the city offices. Since boundaries are generalized, the application of this chapter and the actual type, extent, and boundaries of

critical areas shall be determined and governed by the designation and classification sections for each type of critical area. In the event of any conflict between the maps (on the one hand) and the provisions of this chapter or the site- specific conditions (on the other hand), the provisions and/or site-specific conditions shall prevail. Site-specific reports prepared by qualified professionals shall supersede generalized mapping resources. Reference materials shall include, but shall not be limited to, the following (or, where applicable, any subsequent or amended version):

A. The Web Soil Survey (available online at http://websoilsurvey.nrcs.usda.gov).
B. Wellhead protection zone map, prepared by the Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, Source Water Assessment Program (available for viewing online at http://www.doh.wa.gov/ehp/dw/swaphome.htm);
C. Flood Insurance Study: City of Leavenworth, Washington, Chelan County and the accompanying Flood Hazard Boundary Maps and Flood Insurance Rate Maps.
D. Flood Insurance Study: Chelan County, Washington: Unincorporated areas and the accompanying Flood Hazard Boundary Maps and Flood Insurance Rate Maps.
E. Leavenworth Water Problems Study: Final Report, including all figures, tables, and appendices. February 1999. .
F. Landscape Analysis and Identification of Opportunities to Restore Water Flow Processes prepared by the Department of Ecology based on the Leavenworth Water Problem Study of 1999.
G. Lists of highly erodible and potential highly erodible soil map units. (Such lists are maintained in the NRCS field office technical guide.)
H. City of Leavenworth land use map and records for identification of areas in which aquifer contamination potential is high.
I. Fish and wildlife habitat maps, based on the Washington Department of Fish and Wildlife's current Priority Habitat and Species data.
J. Management Recommendations for Priority Habitats and Species (available online at http://wdfw.wa.gov/publications/00032/wdfw00032.pdf).
K. Management Recommendations for Washington's Priority Habitats: Riparian (available online at http://wdfw.wa.gov/publications/00029/wdfw00029.pdf).
L. Maps published by the U.S. Geologic Survey or the Washington State Department of Natural Resources showing areas designated as quaternary slumps, earthflows, mud flows, lahars, or landslides.
M. The Seismic Design Category Map for Residential Construction in Washington, Sheet 2.
N. Any geotechnical assessments, geotechnical reports, hydrogeologic evaluations, channel migration zone studies, or other special or detailed studies (including approved critical areas studies), including those that identify critical areas and those that identify areas not subject to the city's critical areas regulations.
O. City of Leavenworth flood damage prevention regulations.
P. Wetlands map, based on the National Wetlands Inventory (NWI) maps.
Q. Washington State Wetlands Identification and Delineation Manual (Washington Department of Ecology Publication No. 96-94, or as amended).
R. Washington State Wetlands Rating System for Eastern Washington (Department of Ecology Publication No. 4-06-15, or as amended).
S. Wetlands in Washington State, Volumes 1 and 2 (Department of Ecology Publications No. 05-06-006 and No. 05-06-008, or as amended).
T. Wetlands and CAO Updates: Guidance for Small Cities: Eastern Washington Version (available online at http://www.ecy.wa.gov/pubs/1006001.pdf).
U. City of Leavenworth Comprehensive Plan.

V. City of Leavenworth Shoreline Master Program.
W. Current applicable building codes.
X. Monitoring data. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.220 Critical areas review process.

A. Preapplication Conference. All applicants are encouraged to meet with city staff prior to submitting an application subject to this chapter. The purpose of the meeting shall be to discuss the city's critical areas requirements, processes and procedures; to review any conceptual site plans prepared by the applicant; to discuss appropriate investigative techniques and methodology; to identify potential impacts and mitigation measures and to schedule a site visit. Such conference shall be for the convenience of the applicant and any recommendations shall not be binding on the applicant or the city.

B. Preliminary Evaluation.

1. Submittal of a critical areas review checklist shall be required prior to any development or other alteration in or within 300 feet of a known or potential wetland; 500 feet of a known or potential active golden eagle, great blue heron or communal eagle roost site; or 250 feet of any other known or suspected critical area, whether or not a permit is required for the alteration. The application for any development proposal for which a permit is required shall include submittal of a critical areas review checklist by the applicant and completion of the checklist by city staff. Each critical areas review checklist shall indicate whether any known or suspected critical area(s) is located on the site. The critical areas review checklist form shall be provided by the city. The first page shall be completed by the applicant and shall provide the administrator with the information necessary for the preliminary evaluation of the proposed alteration.
2. On receipt of a critical areas review checklist, the administrator shall conduct a preliminary evaluation, which shall include visiting the site and reviewing the following information.
    a) Any pertinent information provided by the applicant;
    b) Relevant reference materials; and
    c) Any other pertinent information including but not limited to the information on the critical areas review checklist and (when required) a SEPA checklist.

    Based on the preliminary evaluation, the administrator shall determine whether or not sufficient information is available to evaluate the proposal.

3. If the administrator determines that the information presented is not sufficient to adequately evaluate the impact on critical areas of a proposed alteration, he or she shall notify the applicant that a critical area study is required. In the event that multiple critical areas occur on a given site, each critical area shall be addressed independently and all critical areas shall be addressed collectively for the purpose of determining development standards and appropriate mitigating measures.
4. In the case of landslide or erosion hazard areas, should the applicant question the presence of such areas on the site, the applicant may submit a geotechnical assessment prepared by a qualified professional for geological hazards. If the geotechnical assessment demonstrates, to the satisfaction

of the administrator, that the proposed site is not located in any landslide and erosion hazard area, then the requirements of this chapter shall not apply. The geotechnical assessment shall include at a minimum the following:

a) A discussion of the surface and subsurface geologic conditions of the site
b) A site plan of the area delineating all areas of the site subject to landslide and erosion hazards based on mapping and criteria referenced in LMC 16.08.620. A map meeting the criteria set forth for a geotechnical report shall be included.

C. Critical Area Study. If the administrator determines that the site of a proposed development includes, is likely to include, or is adjacent to one or more critical areas, a critical area study may be required. When required, the expense of preparing the critical area study shall be borne by the applicant. The content, format and extent of the critical area study shall be approved by the administrator.

1. The requirement for a critical area study may be waived by the administrator if there is substantial evidence that:
   a) There will be no alteration of the critical area(s) and/or the required buffer(s); and
   b) The proposal will not impact the critical area(s) in a manner contrary to the purpose, intent and requirements of this chapter and the city's comprehensive plan; and
   c) The minimum standards of this chapter will be met.
2. Every critical area study shall be completed by a qualified professional who is knowledgeable about the specific critical area(s) in question, and approved by the administrator.
3. At a minimum, a required critical area study shall contain the following information:
   a) Applicant's name and contact information; permits being sought; and description of the proposal;
   b) A copy of the site plan for the alteration proposal, drawn to scale and showing:
      i. Identified critical areas, buffers, and the proposed alteration with dimensions;
      ii. Limits of any areas to be cleared; and
      iii. A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;
   c) The names and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
   d) Identification and characterization of all critical areas within, or within 250 feet of, the project area or within any proposed buffer;
   e) An assessment of the probable cumulative impacts to critical areas resulting from the proposed development of the site;
   f) An analysis of site development alternatives;
   g) A description of reasonable efforts made to apply mitigation sequencing, as defined in these regulations, to avoid, minimize, and otherwise mitigate impacts to critical areas;
   h) A mitigation plan as set forth in these regulations;

i) A discussion of the performance standards proposed to ensure that ecological functions of critical areas are protected and health and safety hazards associated with critical areas are precluded;
j) Financial guarantees proposed to ensure compliance with mitigation plan and performance standards; and
k) Any additional information required for specific critical areas as listed in subsequent sections of these regulations.

4. The administrator may request any other information reasonably deemed necessary to understand impacts to critical areas.
5. Development Standards.
   a) Upon review of the critical area study, the administrator may require compliance with all or part of the development standards listed in this chapter. At a minimum, the administrator shall require that development mitigate any impacts that degrade the functions and values of critical areas in accordance with the mitigation provisions of this chapter.
   b) The administrator shall waive all or part of the development standards required by this chapter if he or she determines that the potential impact of the proposal (including impact on critical areas and impact on the public health, safety, and welfare) and the protection measures proposed have been previously reviewed pursuant to this chapter under separate application and that an adequate degree of protection has been provided.

D. Mitigation Requirements.
1. The applicant shall avoid all impacts that degrade the functions and values of critical areas. If alteration is unavoidable, all adverse impacts to critical areas and buffers resulting from the proposal shall be mitigated in accordance with an approved critical areas study and SEPA documents, with the exception that de minimus impacts may be allowed. The location of any mitigation site shall be consistent with best available science and may be on-site or off-site.
2. Mitigation Sequencing. Applicants shall use the least intrusive type of mitigation feasible, and shall demonstrate that less intrusive types of mitigation have been evaluated. The types of mitigation, from least to most intrusive, are:
   a) Avoiding the impact altogether by not taking a certain action or parts ofan action;
   b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps (such as project redesign, relocation, or timing) to avoid or reduce impacts;
   c) In the case of frequently flooded areas and geologically hazardous areas, minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered methods or other methods designed by a qualified design professional;
   d) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to historic conditions or the conditions existing at the time the project was initiated;
   e) Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
   f) In the case of critical aquifer recharge areas, frequently flooded areas, fish and wildlife habitat conservation areas, and wetlands,

compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

g) Monitoring the impact using a planned evaluation process and taking appropriate corrective measures.

3. Mitigation Plan. When mitigation is required, the applicant shall submit for approval a mitigation plan as part of the critical area study. Approval of a mitigation plan shall be processed according to the provisions of LMC Title .f.i, Development Code Administration, governing a full administrative review. The mitigation plan shall include a written report identifying:

a) Mitigation objectives, including:

i. A description of the anticipated impacts to critical areas and their buffers, the type or types of mitigation proposed, and the purposes of the measures proposed, including site selection criteria; identification of compensation objectives; identification of critical area functions and values; and dates for beginning and completion of any on-site mitigation activities;

ii. The impacts of any proposed alteration of a critical area or buffer, including proposed mitigation activities, on the development site, other properties and the environment;

iii. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in critical areas mitigation; and

iv. An analysis of the likelihood of success of the proposed mitigation.

b) Measurable criteria for evaluating whether or not the objectives of the mitigation plan have been successfully attained and whether or not the requirements of these regulations have been met.

c) Descriptions and specifications for any on-the-ground mitigation activities, including, but not limited to:

i. Proposed construction sequence, timing, and duration;

ii. Grading and excavation details;

iii. Erosion and sediment control measures;

iv. A planting plan specifying plant species, quantities, locations, size, and spacing; and

v. Measures to protect and maintain plants until established.

d) Where on-the-ground mitigation activities are proposed, construction and post-construction monitoring programs.

i. The purpose of the construction monitoring program is to monitor adherence to the mitigation specifications and any other requirements of these regulations.

ii. The purpose of the post-construction monitoring program is to determine whether mitigation objectives are being achieved and, if not, prescribe corrective measures. The program shall include a schedule for monitoring the project over a period adequate to establish that mitigation objectives have been met, generally at least five years from completion of the mitigation project, and shall describe the methods to be used in monitoring.

e) A list of potential corrective measures to be taken if monitoring or evaluation indicates project objectives are not being achieved.

4. Monitoring and Reporting. The mitigation project shall be monitored as specified in the mitigation plan. A monitoring report shall be submitted by the project proponent to the administrator according to the schedule specified in the mitigation plan, to document monitoring outcomes and any contingency actions. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.230 Surety/bonding.

If a development proposal is subject to mitigation, maintenance, or monitoring plans, the city may require an assurance device or surety, in a form acceptable to the city attorney. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.240 Reporting.

Any new residential subdivision or short plat that is determined to be in a critical area shall have a note placed on the face of the plat and on the title report stating that the site is located in a critical area, what hazard or critical area element is present, and any conditions relating to use or development of the land. Said note may include the provisions listed below:

A. Documentation from the applicant stating their understanding and acceptance of any risk of injury or damage associated with the development of the site and agreeing to notify future purchasers of the site, portions of the site, or structures located on the site of the presence of the hazard or critical area and the potential risk of injury or damage;
B. A legally enforceable agreement, which shall be recorded as a covenant and noted on the face of the deed or plat, acknowledging the site is located in a geologic or flood hazard area and the risks associated with development of the site, and including a waiver and release of any and all claims of the owners, their directors, employees, successors or assigns against the city for any loss, damage or injury, whether direct or indirect, arising out of the issuance of development permits for the proposal. [Ord. 1395 § 1 (Exh. A), 2011.]

Article III. Critical Aquifer Recharge Areas

16.08.310 Purpose and intent.

This article is meant to prevent pollution and maintain water supply, in order to protect Leavenworth's drinking water and preserve anadromous fisheries. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.320 Designation.

Critical aquifer recharge areas (CARAs) are those areas with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(3). The city designates all areas with a critical recharging effect on aquifers used for potable water, regardless of any formal identification, as CARAs. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.330 Classification.

The city classifies the following as CARAs susceptible to degradation or depletion:

A. The "older alluvium - coarser" area identified in the Landscape Analysis and Identification

of Opportunities to Restore Water Flow Processes prepared by the Department of Ecology based on the Leavenworth Water Problem Study of 1999.

B. Ten-year-time-of-travel wellhead protection areas associated with wells used for potable water and any other areas designated for wellhead protection pursuant to the Federal Safe Drinking Water Act.

C. Any sole-source aquifers that may be designated by the U.S. Environmental Protection Agency pursuant to the Federal Safe Water Drinking Act.

D. Susceptible groundwater management areas, should any groundwater management area be identified for the city or its UGA pursuant to a groundwater management program (RCW 90.44.400 and 90.54.140 and WAC 173-100-030). Susceptible groundwater management areas are areas that have been designated as moderately or highly vulnerable or susceptible in an adopted groundwater management program developed pursuant to Chapter 173-100 WAC. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.340 Critical areas process for critical aquifer recharge areas.

A. In determining whether critical area review will be required for a proposed alteration, in completing a critical areas checklist, and in the city's review for the purpose of determining whether a critical area study will be required, the administrator shall consider both the susceptibility of the site, based on the classification in LMC 16.08.330, and the potential for the proposed alteration to contribute to degradation or depletion of groundwater or harm to anadromous fisheries.

B. At a minimum, the 10-year time of travel and assigned time-of-travel wellhead protection areas shown on maps prepared by the Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, Source Water Assessment Program (SWAP) shall be considered in determining whether critical area review will be required for a proposed alteration, in completing a critical areas checklist, and in the city's review for the purpose of determining whether a critical area study will be required in the vicinity of a given well.

C. In addition to the general critical area study requirements of Article VII, the required critical area study for CARAs susceptible to degradation or depletion must contain a level one hydrogeologic evaluation meeting the criteria of subsection (D) of this section. In addition, a level two hydrogeologic evaluation meeting the criteria of subsection (E) of this section shall be required for any of the following proposed activities:

1. Activities that result in five percent or more impervious site area.
2. Activities that divert, alter, or reduce the flow of surface or groundwaters, or otherwise reduce the recharging of the aquifer (please note that, per LMC 16.08.370, significant reduction in recharge to aquifers currently or potentially used as a potable water source and to aquifers that are a source of significant baseflow to regulated streams is prohibited).
3. The use, processing, handling, storage, treatment, or disposal of hazardous substances, other than household chemicals used according to the directions specified on the packaging for domestic applications.
4. The use of injection wells, including on-site septic systems, except those domestic septic systems that release less than 14,500 gallons of effluent per day and that are limited to a maximum density of one system per acre.
5. Aboveground application of sewage or sludge.
6. New agricultural activities.
7. Commercial and industrial uses.
8. Land division, including subdivisions, short subdivisions, planned developments,

binding site plans and related developments.

9. Storage tanks.
10. Any other activity that the administrator determines is likely to have an adverse impact on groundwater quality or quantity, the recharge of the aquifer, or anadromous fish species.

D. A level one hydrogeologic evaluation shall include the following site- and proposal related information at a minimum:
   1. Available information regarding geologic and hydrogeologic characteristics of the site including the surface location of all critical aquifer recharge areas located on site or immediately adjacent to the site, and permeability of the unsaturated zone.
   2. Ground water depth, flow direction, and gradient based on available information.
   3. Currently available data on wells and springs within 1,300 feet of the projectarea.
   4. Location of other critical areas, including surface waters, within 1,300 feet of the project area.
   5. Available historic water quality data for the area to be affected by the proposed activity.
   6. Proposed Best Management Practices. The Stormwater Management Manual for Eastern Washington shall be the preferred guidance for BMPs.

E. A level two hydrogeologic evaluation shall include the following site- and proposal- related information at a minimum, in addition to the requirements for a level one hydrogeologic evaluation:
   1. Historic water quality data for the area to be affected by the proposed activity compiled for at least the previous five-year period, or available data if data for the previous five-year period are not available.
   2. Ground water monitoring plan provisions.
   3. Discussion of the effects of the proposed project on the groundwater quality and quantity, including:
      a. Predictive evaluation of groundwater withdrawal effects on nearby wells and surface water features; and
      b. Predictive evaluation of contaminant transport based on potential releases to groundwater.
   4. Discussion of the effects of the proposed project on anadromous fish species, including where groundwater affects streams and other surface water habitats, and what the effects are.
   5. A spill plan that identifies equipment and/or structures that could fail, resulting in an impact. Spill plans shall include provisions for regular inspection, repair, and replacement of structures and equipment that could fail.

F. Existing and ongoing agricultural activities in or within 200 feet of a CARA susceptible to degradation or depletion shall be encouraged to incorporate best management practices and seek technical assistance from the Chelan County Conservation District, WSU Cooperative Extension Agent, and local NRCS field agents. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.350 Performance standards – General requirements.

A. The city prohibits the discharge of contaminants to CARAs, with the exception of incidental, de minimus discharges.

B. All alterations in CARAs susceptible to degradation or depletion shall be evaluated for potential to contaminate groundwater resources.
   1. If the administrator determines that a high potential for contamination exists, he or she may require a critical area study. If a critical area study or hydrogeologic

evaluation identifies significant potential impacts to CARAs, the project applicant will be required to fully document those impacts and provide a discussion of alternatives by which the impacts could be avoided or prevented. The applicant shall provide a detailed mitigation plan for any unavoidable potential impacts. The city may require that the mitigation plan include process control and remediation as appropriate. Best management practices shall be employed to avoid introducing pollutants into the aquifer, depleting the aquifer, or harming anadromous fish species.

2. Whether or not a critical area study is required, best management practices and other mitigation may be required.
3. he Stormwater Management Manual for Eastern Washington shall be the preferred guidance for BMPs.

C. Alteration may be permitted in a CARA only if the applicant can show that the proposed alteration will not adversely affect the recharging of the aquifer.
D. Any proposed alteration must comply with the water source protection requirements and recommendations of the U.S. Environmental Protection Agency, the Washington State Department of Health, and the Chelan-Douglas Health District.
E. Any proposed use or activity must be designed and constructed in accordance with the city's stormwater management regulations, when adopted.
F. Based on critical area study findings, any operation may be required to adopt any or all of the following best management practices to ensure their operations minimize potential risks to water resources.
    1. The owner/operator shall take precautions to prevent accidental releases of hazardous materials. Hazardous materials shall be separated and prevented from entering stormwater drainage systems, septic systems, and drywells.
    2. Hazardous materials shall be managed so that they do not threaten human health or the environment, or enter CARAs.
    3. All hazardous materials that have been released shall be contained and abated immediately, and the hazardous materials recycled or disposed of properly. The city shall be notified of any release of hazardous materials that clearly impact water resources, as soon as possible but no later than 24 hours after the release. The Stormwater Management Manual for Eastern Washington shall be the preferred guidance for operational BMPs for spills of oils and hazardous substances.
    4. Oil/water separators shall be inspected, cleaned and maintained as stipulated in the Stormwater Management Manual for Eastern Washington. The city may allow an operation to modify the regularity of cleanouts if the operation can demonstrate to the city's satisfaction that the separator operates effectively at less frequent cleaning intervals.
    5. All pesticides, herbicides, fungicides and fertilizers shall be applied and managed according to the applicable BMPs for landscaping and lawn/vegetation management in the Stormwater Management Manual for Eastern Washington.
    6. Stormwater drainage systems and treatment facilities, including, but not limited to, catch basins, wetponds and vaults, biofilters, settling basins, and infiltration systems, shall be cleaned and maintained according to the applicable operational BMPs for the maintenance of stormwater, drainage and treatment systems in the Stormwater Management Manual for Eastern Washington.
    7. Any water well that is unusable, abandoned, or whose use has been permanently discontinued, or that is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard, shall be decommissioned according

to the provisions of WAC 173-160-381.

8. At the closure of an operation, all hazardous materials shall be removed from the closing portion of the operation and disposed of in accordance with local, state and federal laws. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.360 Performance standards – Specific uses.

A. New operations which engage in the following commercial activities shall implement the applicable source control BMPs from the Stormwater Management Manual for Eastern Washington: commercial animal handling, commercial composting, printing operations, fueling stations, log sorting, railroad yards, recyclers, scrap yards, and wood treatment facilities. Existing operations shall be encouraged to abide by the same standards.

B. New operations performing the following activities shall implement the applicable source control BMPs from the Stormwater Management Manual for Eastern Washington: construction/repair/maintenance of boats/ships, airfield/street deicing, dust control, landscaping and lawn/vegetation management (including golf courses), loading/unloading of trucks and railcars, repair/maintenance/parking of vehicles/equipment, erosion control at industrial sites, maintenance of utility corridors, maintenance of roadside ditches/culverts, outdoor manufacturing, mobile fueling of vehicles/equipment, painting/coating of vehicles/buildings/equipment, storing dangerous wastes, managing raw materials. Existing operations shall be encouraged to abide by the same standards.

C. New operations that engage in commercial activities such as pressure washing, carpet cleaning, and equipment and vehicle washing shall use applicable BMPs for washing and steam cleaning; the Stormwater Management Manual for Eastern Washington shall be the preferred guidance for such BMPs. Mobile washing operations shall ensure that all of their employees are knowledgeable about proper discharge practices. Wash water from such operations shall be captured and directed to an approved discharge location. Nonapproved wash water shall not be discharged into the city's stormwater drainage system. Existing operations shall be encouraged to abide by the same standards.

D. Sewage Disposal.
   1. All new residential, commercial or industrial alterations located in or within 250 feet of a CARA susceptible to degradation or depletion and within 200 feet of a public sewer system shall be connected to the sewer system.
   2. In or within 250 feet of a CARA susceptible to degradation or depletion, new on-site sewage systems on lots smaller than one acre without a treatment system that results in effluent nitrate-nitrogen concentrations below 10 milligrams per liter shall be prohibited.

E. Use of Reclaimed Water for Surface Percolation or Direct Recharge. Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the state Departments of Ecology and Health.
   1. Use of reclaimed water for surface percolation must meet the groundwater recharge criteria given in RCW 90.46.080(1) and 90.46.010(10). The state Department of Ecology may establish additional discharge limits in accordance with RCW 90.46.080(2).
   2. Direct injection must be in accordance with 40 CFR Parts 144 and 146, the standards developed by authority of RCW 90.46.042, and Chapter 173-218 WAC.

F. Sand and gravel mining are prohibited in or within 250 feet of a CARA susceptible to degradation or depletion.

G. State and Federal Regulations. The uses listed below shall be conditioned as necessary to

protect CARAs in accordance with the applicable state and federal regulations.

Table 16.08.360.1 State and Federal Regulations to Protect CARAs

Activity	Statute-Regulation-Guidance
Above Ground Storage Tanks	WAC 173-303-640
Animal Feedlots	Chapter 173-216 WAC, Chapter 173-220WAC
Automobile Washers	Chapter 173-216 WAC, Best Management Practices for Vehicle and Equipment Discharges (WDOE WQ-R-95-56)
Chemical Treatment, Storage and Disposal Facilities	WAC 173-303-182
Hazardous Waste Generator (Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.)	Chapter 173-303 WAC
Junk Yards and Salvage Yards	Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)
Oil and Gas Drilling	WAC 332-12-450, Chapter 173-218 WAC
On-Site Sewage Systems (Large Scale)	Chapter 173-240 WAC
On-Site Sewage Systems(< 14,500 gal/day)	Chapter 246-272 WAC, Local Health Ordinances
Pesticide Storage and Use	Chapter 15.54 RCW, Chapter 17.21 RCW
Sawmills	Chapter 173-303 WAC, Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (WDOE 95-53)
Solid Waste Handling and Recycling Facilities	Chapter 173-304 WAC
Surface Mining	WAC 332-18-015
Underground Storage Tanks	Chapter 173-360 WAC
Waste Water Application to Land Surface	Chapter 173-216 WAC, Chapter 173-200 WAC, WDOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture

[Ord. 1395 § 1 (Exh. A), 2011.]

16.08.370 Uses prohibited from critical aquifer recharge areas.

The following activities and uses are prohibited in CARAs:

A. Disposal of hazardous or dangerous waste or special waste.
B. Metals and hard rock mining.
C. Storage, processing, or disposal of radioactive substances.
D. Other Prohibited Uses or Activities.
   1. Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source;
   2. Activities that would significantly reduce the recharge to aquifers that are a source of significant baseflow to a regulated stream (including shorelines of the state); and
   3. Activities that are not connected to an available sanitary sewer system are prohibited from critical aquifer recharge areas associated with sole source aquifers. [Ord. 1395 § 1 (Exh. A), 2011.]

Article IV. Fish and Wildlife Habitat Conservation Areas

16.08.410 Purpose.

It is the purpose of this article to reasonably ensure the protection of fish and wildlife and their habitats, with special consideration for anadromous fish species. The desired goal is to preserve, enhance, protect and promote fish and wildlife habitat within the city and its UGA, including habitat required by those species listed on the federal and state endangered species lists, priority habitats identified by the Washington Department of Fish and Wildlife (WDFW), and habitat required by priority species identified by WDFW. It is also the intent of this section to ensure that development and fish and wildlife are provided the opportunity to coexist. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.420 Policy statements.

A. The city recognizes that the Federal Endangered Species Act (ESA) applies to all lands within the city.
B. The city recognizes the current WDFW priority habitat species (PHS) data, which identify locations and extent of priority species and habitats.
C. The city of Leavenworth recognizes the habitat importance of naturally occurring wetlands.
D. The city of Leavenworth recognizes all bodies of water in city of Leavenworth as waters of the state.
E. It is the policy of the city of Leavenworth to support the natural and human assisted propagation of fish in lakes and streams in Chelan County by encouraging development that would enhance or mitigate impacts to fish habitat.
F. The city of Leavenworth recognizes and supports the Adopt-A-Stream program.
G. The city of Leavenworth recognizes the importance of natural area preserves and natural resource conservation areas. Furthermore, it is the policy of the city of Leavenworth to promote the establishment of manmade preserves and conservation areas and to prohibit development within a preserve or a conservation area.
H. The city of Leavenworth recognizes the publication Management Recommendations for Washington's Priority Habitats and Species (or as amended) as a useful guide to conservation and management of wildlife resources. It is the policy of the city of Leavenworth to consider the management recommendations found within the aforementioned publication as a guide in reviewing development applications. Other sources of best available science may also be considered. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.430 Classification and designation.

Fish and wildlife habitat conservation areas include:

A. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association: classified as fish and wildlife habitat conservation areas of state or federal importance.
B. State priority habitats and areas associated with state priority species, including riparian habitat areas (RHAs): classified as fish and wildlife habitat conservation areas of state or federal importance.
C. Areas associated with anadromous fish species: classified as fish and wildlife habitat conservation areas of state or federal importance.
D. Waters of the state, including naturally occurring ponds under 20 acres: classified as fish and wildlife habitat conservation areas of local importance.
E. State natural area preserves and natural resource conservation areas: classified as fish and wildlife habitat conservation areas of local importance.
F. Areas formally designated by the city as areas of rare plant species, high quality ecosystems, or land useful or essential for preserving connections between habitat blocks and open spaces: classified as fish and wildlife habitat conservation areas of local importance.

All such areas within the city and its UGA, regardless of any formal identification, are hereby designated as critical fish and wildlife habitat conservation areas. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.440 Critical area review process for fish and wildlife habitat conservation areas.

A. Identification and Preliminary Evaluation.
   1. At a minimum, the PHS data, Management Recommendations for Washington's Priority Habitats and Species (or as amended), and any critical areas study that identifies fish and wildlife habitat conservation areas in the vicinity of a development site shall be used to determine whether critical area review will be required for a proposed alteration, in completing a critical areas checklist, and in the city's review for the purpose of determining whether a critical area study will be required.
   2. Because species populations and habitat systems are dynamic, agency consultation shall be required when a proposed alteration is within, adjacent to, or likely to affect a known or suspected fish and wildlife habitat conservation area of state or federal importance. The administrator shall contact the WDFW and the U.S. Fish and Wildlife Service and request assistance in determining the value of the site as fish and wildlife habitat of state or federal importance.
   3. Riparian habitat areas vary in width depending on the ecological function they perform. This section defines the area that must be evaluated for the purpose of determining the need for a critical area study, and in which alterations may be limited to protect priority habitat. Riparian habitat area (RHA) widths shall be consistent with the management recommendations issued by the state Department of Fish and Wildlife or other best available science. For the purpose of determining the need for a critical area study:
      a) RHAs are considered to extend landward from the ordinary high water mark (OHWM), measured on the horizontal plane, as shown in Table 16.08.440.1 below or as indicated in management recommendations for

Washington's priority habitats: Riparian, or as amended by WDFW.

b) If the 100-year floodplain exceeds the widths shown, the RHA should extend to the outer edge of the 100-year floodplain.
c) If there is a channel migration zone (CMZ), the OHWM is considered to start at the edge of the CMZ.
d) Larger RHA widths may be required where priority species occur or wherever supported by an approved critical area study.
e) Add 100 feet to the RHAs outer edge on the windward side of riparian areas with high blowdown potential.
f) Extend RHA widths at least to the outer edge of unstable slopes along Type 4 and 5 waters in soils of high mass wasting potential.

Table 16.08.440.1 Riparian Habitat Evaluation Area Widths

Watertype[1]		Riparian Habitat Area Extent
Permanent	**Interim**	
S	1	250ft.
F	2	250ft.
F	3	200ft.
Np, low mass-wasting potential	4	150ft.
Np, high mass-wasting potential	4	225ft.
Ns, low mass-wasting potential	5	150ft.
Ns, high mass-wasting potential	5	225ft.

1 Water types are based on WAC 222-16-030, Water typing system, and 222-16-031, Interim water typing system.

4. In reviewing proposed alterations, the city shall consider the fish and wildlife habitat conservation area classification in establishing buffer widths, mitigation requirements, and permit conditions. Any decision regarding establishment of buffers, buffer widths, access restrictions, vegetation conservation and restoration requirements, mitigation requirements, or permit conditions outside of shoreline areas subject to the Shoreline Management Act shall be processed according to the provisions of LMC Title 21 governing a full administrative review. Chumstick Creek and the Wenatchee River are Shorelines subject to the Shoreline Management Act, and buffers have been assigned in the city's Shoreline Master Program.

B. Critical Area Study. In addition to the general requirements for critical area studies, the required critical area study for any FWHCA shall include the following:
1. An evaluation of the presence or absence of regulated species. The following shall be required in developing the evaluation:
a) Consultation with the Washington State Department of Fish and Wildlife;
b) Review of PHS data for the development site and the area within 250 feet of the site; and
c) Review of PHS data on active golden eagle, great blue heron and communal eagle roost sites for the development site and the area within 500 feet of the

site.

2. A description of the nature and extent of the association of regulated species with the habitat conservation area and any critical ecological processes (such as feeding, breeding, incubation, resting, nesting and dispersal) occurring within the study area.
3. A description of regulated species habitat requirements, seasonal rangedynamics and movement corridor requirements, and relative tolerance of human activities and the cumulative effects of the previous development or future development in the region.
4. An analysis of habitat quality, based on relative species diversity and species richness, in the study area.
5. An evaluation of the proposed alteration for its influence on the above wildlife factors and on the measures that are recommended to mitigate the potential degradation of animal and plant populations, reproduction rates, and overall habitat quality over the long term.
6. Designation, mitigation, and management recommendations, including the width of any riparian habitat area, the width of any buffer required to protect habitat and species outside of critical areas, and any requirements for restoration of a FWHCA or its buffer, and also including any requirements for the provision of open space for wildlife habitat within a development. Any relevant WDFW priority habitat and species management recommendations shall be consulted in developing the mitigation and management recommendations and identifying habitat and species protection measures.

C. The information provided by a critical area study will augment the database for the Leavenworth area maintained by the city. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.450 Performance standards.

In addition to the general provisions of this chapter and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to the specified FWHCAs.

A. The following standards shall apply in all FWHCAs and their buffers within shoreline jurisdiction
   1. All projects shall comply with the applicable federal, state and local regulations regarding protection of species and habitats identified upon a site.
   2. Any approved alteration or development in a FWHCA shall minimize impacts to existing topography, drainage patterns, and native vegetation, including the composition and structure of the native plant community. Where disturbance is unavoidable, the applicant shall mitigate the disturbance in accordance with the mitigation plan in an approved critical area study. New plantings shall be maintained in good growing condition and kept free of invasive weeds until well established. Temporary erosion and sedimentation controls may be used during and following construction until permanent control is achieved.
   3. The administrator shall require the establishment of a buffer when, based on a critical area study, such a buffer is needed to protect the functions and values of a FWHCA. Buffer widths and use and management requirements shall reflect the classification and sensitivity of the habitat and the intensity of activity proposed, and shall be consistent with the management recommendations issued by the WDFW or other best available science (such as the findings of a critical area study

or a mitigation plan). The city may require that buffers remain undisturbed or, where native vegetation has already been disturbed, that the vegetation be restored. Other limitations to disturbance, including access restrictions such as fencing and signage, may also be required where needed to ensure protection of habitat functions and values. Restrictions may be seasonal.

4. Selective pruning of trees for safety is allowed in fish and wildlife habitat conservation area buffers. Where trees pose a significant safety hazard, they may be removed from such buffers. All other tree removal in such buffers shall be minimized through site design, and mitigated when the loss of a tree or trees results in loss of ecological function.
5. Selective pruning of trees for view protection may be allowed in fish and wildlife habitat conservation area buffers, subject to mitigation and enhancement based on an approved critical area study.
6. Subdivision shall be subject to the following:
   a) All division of land shall be accomplished by planned development when a threatened or endangered species is verified to be present.
   b) All division of land shall be accomplished by planned development when 25 percent or more of the site falls within one or more designated fish and wildlife conservation areas.
   c) Divisions of land may require the provision of open space for wildlife habitat as a part of the management plan.
7. Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval shall be marked in the field and approved by the city prior to undertaking the project.
8. Areas subject to use and management restrictions shall be shown on the face of the plat, planned development or binding site plan, and/or as a portion of the building permit recorded with the administrator.
9. Projects shall be encouraged to participate in habitat preservation programs, such as the WDFW's Backyard Wildlife Sanctuary Program.

B. The following additional standards shall apply in fish and wildlife habitat conservation areas of state or federal importance and their buffers:
   1. Any uses and activities allowed within priority habitat and species areas shall be limited to those that will not adversely affect or degrade the habitat or threaten critical ecological processes identified in the critical area study.
   2. No development approval shall be granted unless mitigation of adverse effects will be provided that will ensure continuation of baseline conditions in all priority habitats and baseline populations of all priority species.

C. Site-specific modifications to recommended RHAs may be allowed if supported by an approved critical area study. Important characteristics should be retained or restored in all riparian areas in order to provide suitable habitat for fish and wildlife.

D. Provided, that adequate regional populations are maintained, development may be allowed in fish and wildlife habitat conservation areas of local importance when only species and habitats of local importance will suffer population declines or interruption of migration routes or reproduction habits; provided, that endemic species are preserved. [Ord. 1395 § 1 (Exh. A), 2011.]

Article V. Frequently Flooded Areas

16.08.510 Purpose and intent.

The city's intention is to minimize hazard to new development and also to prevent development and other alterations from increasing risk to other properties. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.520 Frequently flooded areas – Designation and classification.

Lands within the city of Leavenworth and its urban growth area (UGA), regardless of any formal identification, are designated and classified as follows:

A. All areas of special flood hazard indicated in the flood insurance study: City of Leavenworth, Washington, Chelan County and the accompanying flood insurance rate maps, as revised or amended: areas of special flood hazard.
B. Any areas of special flood hazard indicated in The Flood Insurance Study: Chelan County, Washington: Unincorporated Areas and the accompanying flood insurance rate maps, as revised or amended, that are within the city or its UGA: areas of special flood hazard.
C. All additional flood hazard areas identified by any special or detailed study: areas of special flood hazard.
D. Riparian areas not shown as areas of special flood hazard indicated in the flood insurance study for the city of Leavenworth, Washington and the accompanying flood insurance rate maps, as revised or amended: potential frequently flooded areas.
E. Areas identified by the Web Soil Survey as "very limited" or "somewhat limited" for building site development due to flooding or depth to saturated zone: potential frequently flooded areas.
F. Areas in which maps, soil type, hydrology, or past modifications indicate a potential for shallow flooding, including the Ski Hill Basin water problem study area and any other areas currently or historically prone to surface water and high groundwater, particularly during the spring wet season: potential frequently flooded areas. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.530 Protection measures.

A. Development in areas of special flood hazard within the city and its UGA must comply with the provisions of the city's Flood Damage Prevention Standards, Chapter 14.24 LMC, as amended.
B. In addition to the general critical area review provisions in Article VII, development in potential frequently flooded areas within the city and its UGA shall be subject to the following:
    1. Identification and Preliminary Evaluation. At a minimum, the Leavenworth Water Problems Study: Final Report, the Landscape Analysis and Identification of Opportunities to Restore Water Flow Processes, and the Web Soil Survey shall be used to determine whether critical area review will be required for a proposed alteration, in completing a critical areas checklist, and in the city's review for the purpose of determining whether a critical areas study will be required.
    2. Critical Area Study.
        a) In addition to the general requirements for critical area studies, the required critical area study for any known or potential frequently flooded area shall include the following:
            i. An assessment of the probable cumulative impacts of frequently flooded areas both to the proposed development and to existing or

future development off the site; and

ii. A description of reasonable efforts made to apply mitigation sequencing, as defined in these regulations, to avoid, minimize, and otherwise mitigate impacts to development.

b) The administrator may request any other information reasonably deemed necessary to understand impacts to development.

c) The information provided by a critical area study will augment the database for the Leavenworth area maintained by the city.

3. Mitigation. At a minimum, the administrator shall require that development mitigate any risks to the proposed development or to existing or future development off the site that would be posed by frequently flooded areas. [Ord. 1395 § 1 (Exh. A), 2011.]

Article VI. Geologically Hazardous Areas

16.08.610 Purpose and intent.

The city finds that certain portions of the city are characterized by geologic hazards that may pose a risk to public and private property, human life and safety and the natural systems that make up the environment of the city if incompatible development is sited in areas of significant hazard. Such lands are affected by natural processes that make them susceptible to landslides, erosion, seismic activity, or rock fall. Incompatible development in areas characterized by geologic hazards may not only place itself at risk, but also may increase the hazard to surrounding development and use.

The intent of this article is to reduce the threat posed by geologic hazards. Some geologic hazards can be reduced or mitigated by engineering, design or modified construction so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.620 Designation.

The city of Leavenworth designates geologically hazardous areas in the city and its UGA as follows:

A. Erosion. The city designates all erosion hazard areas, regardless of any formal identification, as geologically hazardous areas. At a minimum, the following shall be considered suspected erosion hazard areas for the purpose of determining the need for a preliminary evaluation:

1. Areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as highly erodible or potential highly erodible land and areas identified by the Web Soil Survey as having soils with erosion hazard ratings of "moderate," "severe," or "very severe" due to slope/erodibility.
2. Areas impacted by shore land and/or stream bank erosion and those areas within a channel migration zone. (Please note that, per LMC 16.08.130, critical areas within shoreline jurisdiction are regulated by the city's Shoreline Master Program when update is adopted.)
3. Areas in which maps, soil type, hydrology, or presence of historic failures, past modifications, or records indicate a high potential for erosion.

B. Landslide. The city designates all landslide hazard areas, regardless of any formal

identification, as geologically hazardous areas. At a minimum, the following shall be considered suspected landslide hazard areas for the purpose of determining the need for a preliminary evaluation:

1. Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as having a significant limitation for building site development, including but not limited to areas identified by the Web Soil Survey as having soils "very limited" or "somewhat limited" for building site development due to slope (including those described as "too steep") or having a "severe" limitation for building site development.
2. Areas of historic failures, such as areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published as the United States Geological Survey or the Washington State Department of Natural Resources.
3. Any area exhibiting all three of the following characteristics:
   a) Slopes steeper than 15 percent;
   b) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying relatively impermeable sediment or bedrock; and
   c) Springs or groundwater seepage.
4. Areas that have shown movement during the Holocene epoch (from 10,000 years ago until today) or that are underlain or covered by mass wastage debris of that epoch.
5. Slopes that are parallel or subparallel to lines of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials.
6. Slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking.
7. Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action, including stream channel migration zones. (Please note that, per LMC 16.08.130, critical areas within shoreline jurisdiction are regulated by the city's Shoreline Master Program.)
8. Areas that show evidence of, or are at risk from, snow avalanches.
9. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding.
10. Any area with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.

C. Seismic. The city designates all seismic hazard areas, regardless of any formal identification, as geologically hazardous areas. At a minimum, the following shall be considered suspected seismic hazard areas for the purpose of determining the need for a preliminary evaluation:

1. Those areas in Seismic Design Category DO on the Seismic Design Category Map for Residential Construction in Washington, Sheet 2.
2. Areas underlain by cohesionless soils of low density.
3. Areas in which there is a record of earthquake damage in the past.

D. Rock Fall. A rock-fall hazard area consists of three components, illustrated below: (1) a rock-fall source area, in general defined by bedrock geologic units that exhibit relatively consistent patterns of rock-fall susceptibility throughout the study area; (2) an acceleration zone, where rock-fall debris detached from the source gains momentum as it travels down-slope; and (3) a rock-fall runout zone, which includes gentler slopes where boulders have rolled or bounced beyond the base of the acceleration zone.

Table 4.1
Vulnerability Matrix

Contaminant Loading →

Susceptibility ↓

	1-3	4-6	7-9	General Description (susceptibility)
3 to 6				Typically low permeability, depth to groundwater is fairly deep and fairly significant slopes.
7 to 10				Higher permeability and shallower depth to groundwater, less slope potential.
11 to 14				Extremely permeable soils, shallow depth to groundwater and fairly flat terrain.

	Low vulnerability
	Medium vulnerability
	High vulnerability

The city designates all rock-fall hazard areas, regardless of any formal identification, as geologically hazardous areas. At a minimum, the following shall be considered suspected rock-fall hazard areas for the purpose of determining the need for a preliminary evaluation:

1. Areas within a 22-degree shadow angle extending from the base of a rocksource; and
2. Areas in which the city has a record of rock falls or in which there is visual evidence of past rock falls. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.630 Classification.

The city of Leavenworth classifies geologically hazardous areas within the city and its urban growth area as follows:

A. Known or suspected risk: Documentation or projection of the hazard by a qualified professional exists, or the area is designated as a suspected critical area.
B. No known risk: Documentation or projection of the lack of hazard by a qualified professional exists.
C. Risk unknown: Data are not available to determine the presence or absence of a geologic hazard. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.640 Critical area review process for geologically hazardous areas.

A. Preliminary Evaluation. In determining whether a preliminary evaluation is required for development in a given area, the administrator shall consider the geologic hazard classification. Any approved geotechnical assessment, geotechnical report, hydrogeologic evaluation, channel migration zone study, or other special or detailed study may be used to identify areas of known or suspected risk, unknown risk, or no known risk. The city may choose to use available data to map the approximate location and extent of geologically hazardous areas.

B. Site Assessment and Report Requirements. Geological assessments and geotechnical reports shall be prepared in compliance with the following provisions. A geotechnical report contains all of the provisions of a geological assessment and shall be considered to meet the requirements of a geological assessment.

1. A geological assessment shall include the following:
   a) Evaluate the actual presence of geologically hazardous areas within or in the vicinity of the site and the need for a geotechnical report. Specifically mention the circumstances or conditions which require the report to be prepared (steep slopes, erodible soils, suspected landslide or avalanche hazard, adverse hydrologic or flood risk, etc.).
   b) Evaluate Safety Issues Related to Proposed Activities. Address issues that could involve personal injury, worksite safety, or property damage.
   c) Address existing geologic, topographic, and hydrologic conditions on the site, including an evaluation of the ability of the site to accommodate the proposed activity. Describe the proposed development, including property size and location, nature and extent of the planned development (i.e., house, garage, shop, swimming pool, etc.), and its specific location on the property. Include evidence of prior grading, excavation, cut banks, fill areas, or mining activity, and their potential impact on the project. Note and evaluate any features that could adversely affect development such as drainage gullies, erosion channeling, alluvial fans, evidence for debris flow or avalanche, surface creep and slope failure, observed or suspected spring activity and flood risk potential.
   d) A discussion of the surface and subsurface geological and engineering properties of the soils, sediments, and/or rocks on the subject property and adjacent properties and their effect on the stability of the slope. Where known from field inspection or reference maps and literature, include bedrock identification and age, structural attitude with respect to slope inclination, fracturing, faults and shear zones, hydrothermal alteration, weathering characteristics, presence of landslide diamictite and its age and consolidation, etc. Use cross-sections if necessary for better representation of subsurface character.
   e) A description of the soils in accordance with the Unified Soil Classification System. Give general soil characteristics that could affect site development (i.e., frost action and shrink/swell potential, permeability, plasticity and wet/dry behavior, erodibility, etc.). Especially note the presence or suspected presence of clay-rich horizons and their position/location in the soil profile, and any indication that a building site could be subjected to differential soil compression or settling.
   f) Evidence and history of avalanches, faults, significant geologic contacts, landslides, or downslope soil movement on the subject property and adjacent

properties not detailed in subsection (B)(1)(c) of this section.

g) A summary of the site assessment and its conclusions, mentioning the presence or absence of geohazards and site suitability. Include any recommendations for mitigation of potential hazards that can be dealt with without requiring a complete geotechnical report (control measures such as footing or intercept drainage systems, retaining walls, erosion control, vegetative management and restoration, and the probable need for engineering consultation and design).

h) A topographic map showing the proposed development site location and approximate parcel shape location, boundaries, and all buildable space on the property.

i) Cite all references and information used in the assessment preparation, such as United States Geologic Survey (USGS) and Department of Natural Resources Geologic Maps and Bulletins, soil studies, surveys and previous reports.

2. A geotechnical report shall include all of the information required for a geologic site assessment as well as the following:

a) A contour map of the proposed site, at a scale of one inch equals 20 feet or as deemed appropriate by the administrator. Slopes shall be clearly delineated for the ranges between 15 and 29 percent, and 30 percent or greater, including figures for a real coverage of each slope category on the site. When site-specific conditions indicate the necessity, the administrator may require the topographic data to be field surveyed.

b) The location of springs, seeps, or other surface expressions of groundwater. The location of surface water or evidence of seasonal surface water runoff or groundwater.

c) The extent and type of vegetative cover prior to development activity or site disturbance.

d) A description of site history, including any prior grading, soil instability, or slope failure. Identify all existing fill areas.

e) A determination regarding the appropriate hazard category or categories according to the classification of the geologically hazardous area consistent with LMC 16.08.630.

i. An explanation of soil characteristics and geologic, topographic, and hydrologic conditions of the site that might be expected to create a significant risk due to any geologic hazard and show the location of such hazardous areas. Specifically, include:

a. Slope stability studies and opinion of slope stability;

b. Erosion vulnerability of site;

c. Suitability of on-site soil for fill;

d. A summary of all subsurface exploration data, including subsurface soil profile, exploration logs, laboratory or in situ test results, and groundwater information and an interpretation and analysis of the subsurface data; and

e. Building limitations.

f) A site development plan, drawn to scale, which shows the boundary lines and dimensions of the subject property, the location, size and type of any existing or proposed structures, impervious surfaces, wells, drainfields, drainfield reserve areas, roads, easements, and utilities proposed or located

on site.

g) A hazard analysis evaluating the proposed alteration's influence on the safety and stability of structures and any other risks of property damage, death, or injury resulting from development of the hazard area. Factors such as landscape irrigation, stormwater generation and the effect of street conveyance and utility placement should be included in the review of potential landslide and erosion hazard areas.

h) A description of appropriate mitigation measures, including specific design, development, and construction measures that will be taken to eliminate or minimize identified risks and to comply with the performance standards in LMC 16.08.650 (Performance Standards) of this chapter. Specify any recommended setbacks and/or buffers. Include specific engineering recommendations for design and any geotechnical special provisions. Specifically, include:

    i. Proposed angles of cut and fill slopes and site grading requirements;
    ii. Structural foundation requirements and estimated foundation settlements;
    iii. Soil compaction criteria;
    iv. Proposed surface and subsurface drainage; and
    v. Lateral earth pressures.

i) A vegetation management and restoration plan or other means formaintaining long-term stability of slopes.

j) The proposed method of drainage and locations of all existing and proposed surface and subsurface drainage facilities and patterns, and the locations and methods for erosion control.

k) An erosion control plan that minimizes erosion (including both water and wind erosion) from all disturbed areas during construction and until permanent erosion control is achieved. Until the city adopts stormwater management regulations, the Stormwater Management Manual for Eastern Washington shall be the preferred guidance for erosion control measures.

l) A monitoring program, to be marked on the face of the building permit.

m) Information demonstrating compliance with all applicable codes and ordinances for the proposed development permit.

C. Critical Area Study.

1. A required critical area study for geologically hazardous areas shall include a geotechnical report adequate to assess any risks of property damage, death, or injury resulting from development of the hazard area and establish mitigation measures.
2. If an applicant can demonstrate, through submittal of a geotechnical assessment, that no landslide or erosion hazards exist on site, the requirement for a geotechnical report may be waived by the administrator.
3. Erosion and Landslide Hazard Areas. In addition to the basic report requirements, a critical area study for an erosion or landslide hazard area shall also meet the following requirements:

    a) A site plan showing:

        i. The height of slope, slope gradient, and cross-section of the project area;
        ii. The location of springs, seeps, or other surface expressions of

groundwater on or within 200 feet of the project area or that have potential to be affected by the proposal; and

iii. The location and description of surface water runoff features;

b) A hazards analysis that includes:

i. A description of the extent and type of vegetative cover;

ii. A description of subsurface conditions based on data from site specific explorations;

iii. Descriptions of surface and groundwater conditions, public and private sewage disposal systems, fills and excavations, and all structural improvements;

iv. An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;

v. An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a 100-year storm event;

vi. Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down slope properties;

vii. A study of slope stability including an analysis of proposed cuts, fills, and other site grading;

viii. Recommendations for building siting limitations; and

ix. An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion;

c) A geotechnical report prepared by a licensed engineer that presents engineering recommendations for the following:

i. Parameters for design of site improvements including appropriate foundations and retaining structures. These should include allowable load and resistance capacities for bearing and lateral loads, installation considerations, and estimates of settlement performance;

ii. Recommendations for drainage and subdrainage improvements;

iii. Earthwork recommendations including clearing and site preparation criteria, fill placement and compaction criteria, temporary and permanent slope inclinations and protection, and temporary excavation support, if necessary; and

iv. Mitigation of adverse site conditions including slope stabilization measures and seismically unstable soils, if appropriate;

d) For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan prepared in accordance with the city's stormwater management regulations, when adopted;

e) A drainage plan providing for the collection, transport, treatment, discharge, and/or recycling of water, prepared in accordance with the city's stormwater management regulations, when adopted. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area;

f) Hazard and environmental mitigation plans that include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability; and

g) If the administrator determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the city.

4. Seismic Hazard Areas. In addition to the general critical area study requirements specified in Article VII of this chapter, a critical area study for a seismic hazard area shall also meet the following requirements:
   a) The site map shall show all known and mapped faults that are within 200 feet of the project area or that have potential to significantly affect or to be affected by the proposal.
   b) The hazards analysis shall include a complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement).
   c) A geotechnical engineering report shall evaluate the physical properties of the subsurface soils, especially the thickness of unconsolidated deposits and their liquefaction potential. If it is determined that the site is subject to liquefaction, mitigation measures appropriate to the scale of the development shall be recommended and implemented.
5. Rock-Fall Hazard Areas. In addition to the basic report requirements, a critical area study for a rock-fall hazard area shall also meet the following requirements:
   a) Any required critical area study for a rock-fall hazard area shall be prepared by a geotechnical consultant familiar with rock-fall hazards;
   b) The study shall include a geologic vicinity map, at an appropriate scale (typically 1:24,000) and with references, showing the general surface geology (landslides, alluvial fans, etc.), bedrock geology where exposed, bedding attitudes, faults, other geologic structural features, and location of any rock-fall hazards;
   c) The hazards analysis shall include an evaluation of available remote sensing data, which may include aerial photographs, oblique aerial photographs, and DEMs derived from detailed topography and/or LIDAR, for the potential presence of geologic hazards;
   d) The study shall include final design plans and specifications for engineered mitigation signed and stamped by a qualified geotechnical engineer. If the geologic report is submitted with a land use application that is reviewed prior to the construction or building plans (e.g., preliminary plat or conditional use permit), the engineering level design and calculations of the improvement do not need to be submitted until after a land use approval is obtained and construction approval is requested. However, the proposed methods must still be identified;
   e) The study shall include a statement regarding the suitability of the site for the proposed development from a rock-fall hazard perspective.
6. Where a geotechnical report has been prepared and approved by the city within the last five years for a specific site, and where the proposed activity and surrounding site conditions are unchanged (or, in the case of an individual lot within a subdivision, where the only changes in surrounding site conditions are development and mitigation as specified in the report), said report may be used

and a new report may not be required. The applicant shall submit a geotechnical assessment detailing any changed environmental conditions associated with the site. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.650 Performance standards.

A. Any development or other alteration that would pose a foreseeable risk to the public, public or private resources and facilities, or the natural environment is prohibited.

B. The following standards apply to all development within geologically hazardous areas:
   1. Development shall not increase instability or create a hazard to the site oradjacent properties, or result in a significant increase in sedimentation or erosion. Construction methods shall minimize risks to structures and shall not increase the risk to the site, or to adjacent properties and their structures, from the geologic hazard.
   2. Site planning shall minimize disruption of existing topography and natural vegetation, and where feasible shall incorporate opportunities for phased clearing.
   3. Disturbed areas shall be replanted within one year of project completion, in accordance with an approved revegetation plan.
   4. Impervious surface coverage shall be minimized.
   5. Excavation and grading shall be limited to the minimum necessary to accomplish engineering design. The clearing and grading schedule shall consider limitations based upon seasonal weather conditions.
   6. Any limitations to site disturbance, such as clearing restrictions, imposed as a condition of development approval should be marked in the field and approved by the city prior to undertaking the project.
   7. All authorized clearing for roads, utilities, etc., should be limited to the minimum necessary to accomplish engineering design. Alterations should meet the following requirements:
      a) Clearing, grading or filling of sloped sites containing erosion or landslide hazard areas should be limited by weather conditions and an approved erosion control plan;
      b) All clearing shall be marked in the field for inspection and approval prior to alteration of the site;
      c) The face of cut and fill on slopes shall be prepared and maintained to control against erosion.

C. The following additional standards apply to erosion hazard areas:
   1. In order to prevent or mitigate potential hazards to life, property or the natural environment, development in or adjacent to erosion hazard areas shall be discouraged. No public or private development will be permitted in erosion hazard areas where mitigation approved by the city and adequate to protect members of the public and public and private resources and facilities from injury, loss of life, property damage or financial losses due to erosion, landslide, seismic events or steep slope failure is not feasible.
   2. Alterations.
      a) Alterations of an erosion hazard area may occur only for activities for which a hazards analysis is submitted and certifies that:
         i. The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
         ii. The development will not decrease slope stability on

adjacentproperties; and

iii. The alterations will not adversely impact other critical areas.b. Excavation and grading shall be minimized in all erosion and steep slope areas and shall comply in full with the relevant provisions of building codes adopted by the city.

3. Development within an erosion or landslide hazard area or buffer shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative design provides greater long-term slope stability while meeting all other provisions of this chapter. The requirement for long-term slope stability shall exclude designs that require regular maintenance to maintain their level of function. The basic requirements are:
   a) The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic conditions shall be based on a minimum horizontal acceleration as established by the current version of the Uniform Building Code;
   b) Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;
   c) Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;
   d) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
   e) The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
   f) Retaining walls that allow the maintenance of existing natural slope area are preferred to graded artificial slopes; and
   g) Development shall be designed to minimize impervious lot coverage.
4. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited.
5. Clearing shall be allowed only during the dry season, which shall depend on actual weather conditions but is generally considered to run from May through September.
6. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior.
7. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:
   a) Discharge is conveyed via continuous storm pipe down slope to a point where there are no erosion hazard areas downstream from the discharge;
   b) Water is discharged at flow durations matching pre-development conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the pre-developed state; or
   c) Discharge is dispersed up-slope of the steep slope onto a low-gradient undisturbed buffer demonstrated to be adequate to infiltrate all surface and stormwater runoff, and where it can be demonstrated that such discharge will

not increase the saturation of the slope.

8. On-site sewage disposal systems, including drain fields, shall be prohibited within erosion hazard areas and related buffers.
9. Development may occur in steep slope areas only after the following standards have been met:
   a) Development must be located to minimize disturbance and removal of vegetation and also to protect the most sensitive areas (including areas of erosive soils, areas at risk of erosion by wind or water, and areas of dense vegetation) and retain open space. The use of continuous greenbelt areas shall be encouraged; and
   b) Structures must be clustered where possible to reduce disturbance and maintain natural topographic character. Common access driveways shall be considered as a means of reducing construction disturbances; and
   c) Where possible, structures must conform to the natural contour of the slope and foundations must be tiered to conform to existing topography of the site.
10. Unless a grading plan prepared by a licensed civil engineer is provided and approved by the administrator, disturbance of a development site shall generally not exceed the following for the slope categories indicated:

Table 16.08.650.1 Maximum Amount of Slope That May Be Disturbed

Slope Category	Factor
Slopes 30 – 40% (60% of the site or more)	.60
Slopes 40% + (also see landslide hazard area)	.30

The overall amount of disturbance allowed on development s1tes wh1ch have any combination of the above slope categories shall be determined by the following formula: [Square footage of the area within the slope category x slope factor] =Total amount of allowable disturbance for that slope classification.

The total amount of allowable disturbance for the site is the sum of all the allowable disturbance totals for each slope category.

D. The following additional standards apply to landslide hazard areas.
   1. Areas identified as landslide hazard areas or within 250 feet of landslide hazard areas shall be altered only when the administrator concludes, based on environmental information provided by a qualified professional, that:
      a) There will be no increase in surface water discharge or sedimentation to adjacent properties; and
      b) There will be no decrease in slope stability on adjacent properties; and
      c) Either:
         i. There is no evidence of recent landslides in the vicinity of the proposed development, and a quantitative analysis of slope stability indicates no significant risk to the proposed development, adjacent properties, or the health or safety of humans or the

environment; or

ii. The hazard can be mitigated, modified or the project can be designed so that the risk (including risks to the project and risks beyond the project site) is no greater than the risk posed by development on a site without a landslide hazard; or

iii. The proposal is so minor as not to pose a threat.

2. The following standards apply to all development in landslide hazard areas:
   a) Disturbance of trees and vegetation shall be minimized in and within 250 feet of landslide hazard areas in order to prevent erosion, stabilize slopes, and preserve the natural character of the area;
   b) Structures and improvements shall be located to preserve the most sensitive portion of the site and its natural landforms and vegetation.
3. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the administrator to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a critical area study prepared by a qualified professional.
4. Alterations.
   a) Alterations of a landslide hazard area or its buffer may occur only for activities for which a hazards analysis is submitted and certifies that:
      i. The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
      ii. The development will not decrease slope stability on adjacent properties; and
      iii. The alterations will not adversely impact other critical areas.
5. Subdivision.
   a) Land that is located wholly within a landslide hazard area or its buffer may not be subdivided.
   b) Land that is located partially within a landslide hazard area or its buffer may be divided; provided, that each resulting lot has sufficient buildable area outside of, and will not affect, the landslide hazard or its buffer.
   c) Access roads and utilities may be permitted within a landslide hazard area and associated buffers if the city determines that no other feasible alternative exists.
6. On-site sewage disposal systems, including drain fields, shall be prohibited within landslide hazard areas and related buffers.

E. Seismic Hazard Areas. All development activities in seismic hazard areas shall conform to the applicable building code.

F. Rock-Fall Hazard Areas. Development of structures intended for human occupancy or critical facilities in a rock-fall hazard area shall be discouraged unless the hazard is mitigated to an acceptable and reasonable risk level, based on information provided by a qualified professional who is a geotechnical consultant familiar with rock-fall hazards.

G. Development of any such structure in a rock-fall hazard area in which the hazard is not mitigated to an acceptable and reasonable risk level shall require a recorded waiver of liability. [Ord. 1395 § 1 (Exh. A), 2011.]

Article VII. Wetlands

16.08.710 Purpose and intent.

A. Wetlands and their buffer areas are valuable natural systems with significant natural constraints. In their natural state wetlands provide many ecological functions and values that ensure the general health, safety and welfare of the citizens of Leavenworth. Physical functions of wetlands include: water quality values (pollution filtration, sediment removal, oxygen production, nutrient recycling and chemical and nutrient absorption), aquatic productivity, microclimate regulation, and fish and wildlife habitat. Values of wetlands include: flood control, wave damage protection, erosion control, groundwater recharge, domestic/irrigation water supply, timber/natural resources, energy resources (peat), livestock grazing, fishing/hunting, recreation, aesthetics, education/scientific research and migratory waterfowl. This chapter is intended to prevent adverse environmental impacts to proposed development and to designated wetlands and associated buffers. These protection measures are designed to protect designated wetlands based on overall uniqueness and value of the wetland and intensity of proposed land use.

B. This chapter is designed to reflect the following priority issues as a part of the overall goal:
   1. Protect property rights;
   2. Encourage voluntary creation of wetland areas;
   3. Compensation for loss of value of lands designated as wetlands and to include their required buffers.

These specific goal components should be sought without infringement on the health and welfare of the citizens of Leavenworth. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.720 Designation.

All lands (including areas of open water) in the city and its UGA, that meet the definition of wetlands in RCW 36.70A.030(21) are designated wetlands and are subject to the provisions of this chapter.

16.08.730 Critical areas review.

A. Preliminary Evaluation.
   1. A preliminary evaluation shall evaluate known or potential wetlands on or within 300 feet of the site of a proposed alteration.
   2. At a minimum, the National Wetlands Inventory (NWI) maps, the Leavenworth Water Problems Study: Final Report, and any critical areas study that identifies wetlands in the vicinity of a development site shall be used in completing a critical areas checklist and in the city's review for the purpose of determining whether a critical areas study will be required.

B. Wetlands shall be identified and delineated by a qualified wetland professional in accordance with the currently approved federal wetland delineation manual and applicable regional supplements. All areas within the city meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Appendix.

C. In addition to the general requirements for critical area studies, the required critical area study for any wetland shall include the following:
   1. An overview of the methodology used to conduct the study;
   2. As part of the identification and characterization, a written assessment and

accompanying maps of the wetlands and buffers within 300 feet of the project area, including the following information at a minimum:

a) Wetland delineation and required buffers;
b) Existing wetland acreage;
c) Wetland category;
d) Vegetative, faunal, and hydrologic characteristics;
e) Soil and substrate conditions;
f) Topographic elevations, at two-foot contours; and
g) A discussion of the water sources supplying the wetland and documentation of hydrologic regime (locations of inlet and outlet features, water depths throughout the wetland, evidence of recharge or discharge, evidence of water depths throughout the year such as algal layers and sediment deposits);

3. When mitigation is required, a compensatory mitigation plan as described in LMC 16.08.790.

D. An applicant should be aware that Section 404 of the Federal Clean Water Act and other federal and state statutes may apply.
E. The information provided by the study will augment the database for the Leavenworth area maintained by the city. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.735 Documentation.

The specific location of a designated wetland and its buffer, including any compensatory mitigation areas, shall be shown on the face of the plat, planned development or binding site plan, and/or as a portion of the building permit recorded with the administrator. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.740 Classification- Wetland rating system.

Wetlands shall be classified using the Washington Department of Ecology wetland rating system, as set forth in the Washington State Wetland Rating System for Eastern Washington (Ecology Publication No. 04-06-015, or as revised and approved by Ecology), which contains the definitions and methods for determining whether the criteria below are met.

A. Category I wetlands are those that (1) represent a unique or rare wetland type; or (2) are more sensitive to disturbance than most wetlands; or (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (4) provide a high level of function. In eastern Washington, they include: (1) alkali wetlands; (2) Natural Heritage Program wetlands; (3) bogs; (4) mature and old-growth forested wetlands (over one-quarter acre) with slow-growing trees; (5) forests with stands of aspen; and (6) wetlands that perform many functions very well, with rating-system scores of 70 points or more. We cannot afford to risk any degradation of Category I wetlands because their functions and values are too difficult to replace.
B. Category II wetlands are: (1) forested wetlands in the floodplains of rivers; (2) mature and old-growth forested wetlands (over one-quarter acre) with fast-growing trees; (3) vernal pools; and (4) wetlands that perform functions well, with rating-system scores of 51 to 69 points. Category II wetlands are difficult, although not impossible, to replace, and provide high levels of some functions.
C. Category Ill wetlands are (1) vernal pools that are isolated and (2) wetlands with a
D. moderate level of functions, with rating-system scores of 30 to 50 points. Wetlands scoring

between 30 and 50 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

E. Category IV wetlands have the lowest level of functions, with rating-system scores of fewer than 30 points, and are often heavily disturbed. They are wetlands that we should be able to replace, and in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. Category IV wetlands may provide some important functions and also need to be protected. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.750 Wetland buffers.

Buffers shall be required, in order to protect the integrity, function, and value of a designated wetland area. The following standards shall apply to development activities within 300 feet of wetland areas.

A. Buffer Requirements. The standard buffer widths in Table 16.08.750.1 have been established in accordance with the best available science. They are based on the category of the wetland and the habitat score as determined by a qualified wetland professional using the Washington State Wetland Rating System for Eastern Washington.
   1. The use of the standard buffer widths requires the implementation of the measures in Table 16.08.750.2, where applicable, to minimize the impacts of the adjacent land uses.
   2. If an applicant chooses not to apply the mitigation measures in Table 16.08.750.2, then a 33 percent increase in the width of all buffers is required. For example, if a 75-foot buffer were required with the mitigation measures, the required buffer without the mitigation measures would be 100 feet wide (75 feet x 1.33 = 100).
   3. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the administrator may require that the buffer be modified in accordance with an approved critical area study, e.g., planted to create the appropriate plant community or widened to ensure that adequate functions of the buffer are provided.
   4. Additional buffer widths are to be added to the standard buffer widths when the rating-system score is greater than 20. For example, a Category I wetland scoring 32 points for habitat function would require a buffer of 150 feet (75 + 75).

Table 16.08.750.1 Wetland Buffer Requirements Eastern Washington[2]

Wetland Category	Standard Buffer Width	Additional buffer width if wetland scores 21 – 25 habitat points	Additional buffer width if wetland scores 26 – 29 habitat points	Additional buffer width if wetland scores 30 – 36 habitat points
Category I: Based on total score	75ft.	Add 15ft.	Add 45ft.	Add 75ft.
Category I: Forested	75ft.	Add 15ft.	Add 45ft.	Add 75ft.
Category I: Bogs	190ft.	NA	NA	NA
Category I: Alkali	150ft.	NA	NA	NA
Category I: Natural Heritage Wetlands	190ft.	NA	NA	NA
Category II: Based on total score	75ft.	Add 15ft.	Add 45ft.	Add 75ft.
Category II: Vernal pool	150ft.	NA	NA	NA
Category II: Forested	75ft.	Add 15ft.	Add 45ft.	Add 75ft.
Category III (all)	60ft.	Add 30ft.	Add 60ft.	NA
Category IV (all)	40ft.	NA	NA	NA

[2] Wetland scores referred to in the table are derived from wetland rating as described in LMC 16.08.740, Classification-Wetland rating system.

Table 16.08.750.2 Required measures to minimize impacts to wetlands

(Measures are required where applicable to a specific proposal)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland • If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain industry or mining, establish an additional 10 ft. heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 ft. of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use Low Density Development techniques (per PSAT publication on LID techniques)
Change in water regime	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing or plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract to protect with a conservation easement
Dust	• Use best management practices to control dust
Disruption of corridors or connections	• Maintain connections to off-site areas that are undisturbed • Restore corridors or connections to off-site habitats by replanting

B. Increased Wetland Buffer Area W1dth. Buffer Widths shall be Increased beyond those indicated above when a critical area study shows that a larger buffer is necessary to protect wetland functions and values. The size of the increase shall be supported by appropriate documentation showing that it is reasonably related to protection of specific functions and values of the wetland, such as:
   1. The wetland is used by a plant or animal species listed by the federal government or the state as endangered, threatened, candidate, sensitive, monitored or documented priority species or habitats, or essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or
   2. The adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or
   3. The adjacent land has minimal vegetative cover or slopes greater than 30 percent.

C. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:
   1. Different parts of the wetland have significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a Category I area adjacent to a lower-rated area.

2. The buffer is increased adjacent to the higher-functioning area of habitat or the more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas study from a qualified wetland professional.
3. The total area of the buffer after averaging is equal to the area required without averaging.
4. The buffer at its narrowest point is never less than either three-fourths of the required width or 75 feet for Categories I and II, 50 feet for Category Ill, and 25 feet for Category IV, whichever is greater.

D. Measurement of Wetland Buffers. All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.

E. Buffers on Mitigation Sites. All mitigation sites shall have buffers consistent with the buffer requirements of this chapter. Buffers shall be based on the expected or target category of the proposed wetland mitigation site.

F. Maintenance and Repair.
1. Except as otherwise specified or allowed in accordance with this chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive nonnative weeds is required for the duration of the monitoring period.
2. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way; provided, that the maintenance or repair does not increase the use of the facility or right-of-way, or increase its footprint by more than 10 percent.
3. Removal of hazardous trees according to vegetation management plan prepared by a qualified wetlands professional. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of hazard trees.

G. Impacts to Buffers. Compensation for impacts to buffers shall be consistent with the provisions of LMC 16.08.790.

H. Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer shall apply.

I. Allowed Buffer Uses. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this chapter, provided said uses are not prohibited by any other applicable law and are conducted so as to minimize impacts to the buffer and adjacent wetland:
1. Conservation and Restoration Activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.
2. Passive Recreation. Passive recreation facilities designed and in accordance with an approved critical area study, including:
   a) Walkways, trails, and minor trail-related facilities such as benches having no adverse impact on water quality.
      i. Those walkways and trails that are generally parallel to the perimeter of the wetland shall be located in the outer 25 percent of the wetland buffer area. Exceptions may be made for access points and to accommodate variations in topography and similar site factors, provided the impacts are mitigated in accordance with an

approved critical area study.

ii. All walkways and trails shall be located to avoid removal of significant trees and to minimize disruption and disturbance of natural vegetation and wildlife habitat. Where feasible, walkways and trails should be located in areas that have previously been disturbed, such as road grades and utility corridors. They should be limited to pervious surfaces no more than five feet in width for pedestrian, bicycle, and cross-country ski use only. Raised boardwalks using nontreated pilings may be acceptable.

b) Wildlife-viewing structures.

3. Educational and scientific research activities.
4. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops, and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or wetland alteration by changing existing topography, water conditions, or water sources.
5. Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary; provided, that a qualified wetlands professional has shown that the drilling will not interrupt the groundwater connection to the wetland or percolation of surface water down through the soil column.
6. Enhancement of a wetland buffer through the removal of nonnative invasive plant species. Removal of invasive plant species shall be restricted to hand removal. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.
7. Stormwater Management Facilities. Stormwater management facilities shall be limited to dispersion outfalls and bioswales or alternate facilities that do not create erosion or degrade function and values of critical areas. They may be allowed within the outer 25 percent of the buffer of Category Ill or IV wetlands only, subject to compliance with the Stormwater Management Manual for Eastern Washington, Washington Department of Ecology Publication Number 04-10-076 (or as amended) and with Washington State's Surface Water Quality Standards (Chapter 173-201A WAC, as amended).
8. Nonconforming Uses. Repair and maintenance of nonconforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity, and provided any impacts to wetlands or their buffers are mitigated.
9. Signs and Fencing of Wetlands and Buffers.
   a) Temporary Markers. The outer perimeter of the wetland buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary clearing limits fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the administrator prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

b) Permanent Signs. As a condition of any permit or authorization issued pursuant to this chapter, the administrator may require the applicant to install permanent signs along the boundary of a wetland or buffer.
    i. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post or another nontreated material of equal durability. Signs must be posted at an interval of one per lot or every 50 feet, whichever is less, and must be maintained by the property owner in perpetuity. The signs shall be worded as follows or with alternative language approved by the administrator: "Protected Wetland Area; Do Not Disturb; Contact the city of Leavenworth Community Development Department Regarding Uses, Restrictions, and Opportunities for Stewardship."
    ii. The provisions of subsection (1)(9) of this section may be modified as necessary to assure protection of sensitive features or wildlife.

c) Fencing.
    i. The applicant may be required to install a permanent fence around the wetland or buffer to mitigate impacts identified in an approved critical area study, such as disturbance by humans, pets, or grazing animals.
    ii. Where no fence is required, fencing may be allowed, provided it does not interfere with wetland hydrology, structure, or function, and provided it complies with this subsection.
    iii. Wetland and buffer fencing shall be designed to facilitate species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.760 Road/street construction.

Any private or public road or street construction (including expansion of an existing road) which is allowed within a designated wetland or buffer shall comply with the following minimum development standards:

A. No other practicable alternative exists.
B. Mitigation sequencing must be followed.
C. Where appropriate, the roadway section shall provide for other purposes, such as utilities or pedestrian facilities.
D. Stormwater runoff facilities associated with road and street construction shall be located outside of wetlands. Such facilities shall be limited to dispersion outfalls and bioswales or alternate facilities that do not create erosion or degrade function and values of critical areas. They may be permitted within the outer 25 percent of wetland buffers; such facilities must be consistent with LMC 16.08.750(1)(7). [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.770 Land division.

All proposed divisions of land which include designated wetlands shall comply with the following procedures and development standards:

A. Up to 50 percent of the total wetlands on a development site, other than lands that are usually inundated and submerged during the spring wet season, may be used in calculating minimum lot area for proposed lots, provided the development proposal

includes adequate provisions to protect wetland functions and values.

B. Wetland buffers may be included in the calculation of minimum area for proposed lots, provided the development proposal includes adequate provisions to protect wetland functions and values.
C. New lots shall contain at least one site, adequate in size to accommodate the proposed use, (including access) that is suitable for development and is not within the designated wetland or its buffer area.
D. In order to implement the goals and policies of this section, to accommodate innovation, creativity, design flexibility and the potential for density bonuses to achieve a level of environmental protection that would not be possible by typical lot-by-lot development, the use of planned development and/or cluster subdivision as described in the city code is strongly encouraged for any project on a site that includes a designated wetland. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.780 Erosion control.

Work performed in designated wetlands and their associated buffers that involves filling, grading or disturbance, shall comply with an approved mitigation plan prepared by a qualified wetlands professional. That plan shall identify the work to be performed, including any proposed filling or cutting, and shall be consistent with all provisions of this section. Protection measures required and identified in the mitigation plan may include temporary measures applied during construction, such as the use of filter fabrics in the construction area or temporary vegetative cover intended to stabilize the site immediately following construction. [Ord. 1395 § 1 (Exh. A), 2011.]

16.08.790 Compensatory mitigation.

A. Mitigation Sequencing. Before impacting any wetland or its buffer, an applicant shall demonstrate that the following actions have been taken. Actions are listed in the order of preference.
    1. Avoid the impact altogether by not taking a certain action or parts of an action.
    2. Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.
    3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
    4. Reduce or eliminate the impact over time by preservation and maintenance operations.
    5. Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.
    6. Monitor the required compensation and take remedial or corrective measures when necessary.
B. Requirements for Compensatory Mitigation.
    1. Compensatory mitigation for wetland alterations shall be used only for impacts that cannot be avoided or minimized and shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with Wetland Mitigation in Washington State- Part 2: Developing Mitigation Plans (Version 1), Ecology Publication No. 06-06-011b, Olympia, WA, March 2006 or as revised.
    2. The mitigation ratios in Table 16.08.790.1 of this article shall be used as a general guide in establishing mitigation ratios. Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or reestablishment. See Table 1a or 1b, Wetland Mitigation in Washington State - Part

1: Agency Policies and Guidance -Version 1, Ecology Publication No. 06-06-011a, Olympia, WA, March 2006 or as revised.

3. Buffer Mitigation Ratios. Impacts to buffers shall be mitigated at a 1:1 ratio. Compensatory buffer mitigation shall replace those buffer functions lost from development.

C. Compensating for Lost or Affected Functions. Compensatory mitigation shall address the functions affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions. The goal shall be for the compensatory mitigation to provide similar wetland functions as those lost, except when either:
   1. The lost wetland provides minimal functions and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington state watershed assessment plan or protocol; or
   2. Out-of-kind replacement of wetland type or functions will best meet watershed goals formally identified by the city, such as replacement of historically diminished wetland types.

D. Preference of Mitigation Actions. Methods to achieve compensation for wetland functions shall be approached in the following order of preference:
   1. Restoration (re-establishment and rehabilitation) of wetlands.
   2. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of nonnative species. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.
   3. Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in an overall loss of wetland acreage and is less effective at replacing the functions lost. Where enhancement is used as compensation, it must be part of a mitigation package that includes replacing the impacted area and meeting ratio requirements specified in this section.
   4. Preservation. Preservation of high-quality, at-risk wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of 1:1 acreage replacement is provided by re- establishment or creation. Preservation of high-quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:
      a) Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA-listed species.
      b) There is no net loss of habitat functions within the watershed or basin.
      c) Mitigation ratios for preservation as the sole means of mitigation shall be consistent with an approved critical area study prepared by a qualified wetlands professional, based on the significance of the preservation project and the type and quality of the wetland resources lost.
      d) The impact area is small (generally less than one-half acre) and/or impacts are occurring to a low-functioning system (Category Ill or IV wetland).

All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

E. Type and Location of Compensatory Mitigation. Selecting Wetland Mitigation Sites Using a

Watershed Approach (Department of Ecology Publication No. 10-06-007, November 2010) shall be the preferred guidance for establishing the location of compensatory mitigation. Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in kind and on site, or in kind and within the Wenatchee River Basin (WRIA 45).

1. Compensatory mitigation actions shall be conducted within the same subbasin of the Wenatchee River Basin and on the site of the alteration except when all of the following apply:
   a) An approved critical area study shows that there are no reasonable opportunities on-site (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts; and
   b) Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland.
2. Off-site locations shall be in the Wenatchee River Basin unless:
   a) Watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the city and strongly justify location of mitigation outside the basin; or
   b) Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:
      i. The bank is certified under Chapter 173-700 WAC;
      ii. The administrator determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and
      iii. The proposed use of credits is consistent with the terms and conditions of the bank's certification.
   c) Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.
   d) Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.
3. In-Lieu Fee. To aid in the implementation of off-site mitigation, the city may develop a program which prioritizes wetland areas for use as mitigation and allows payment of fees in lieu of providing mitigation on a development site. This program shall be developed and approved through a public process and be consistent with federal rules, state policy on in-lieu fee mitigation, and state water quality regulations. The program should address:
   a) The identification of sites within the city/county that are suitable for use as off-site mitigation. Site suitability shall take into account wetland functions, potential for wetland degradation, and potential for urban growth and service expansion; and
   b) The use of fees for mitigation on available sites that have been identified as suitable and prioritized.
4. The design for the compensatory mitigation project must be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation shall not result in the creation, restoration, or enhancement of an atypical wetland (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical

for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.

F. Timing of Compensatory Mitigation. If feasible, compensatory mitigation projects shall be completed prior to activities that will disturb wetlands. If that is not feasible, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the development or other alteration. Construction of mitigation projects shall be timed to minimize impacts to existing fisheries, wildlife, and flora.

1. The administrator may authorize one or more temporary delays in completing construction or installation of the compensatory mitigation when the applicant provides an appropriate written explanation from a qualified wetland professional as to the rationale for such delay; however, temporary delays exceeding a cumulative period of two years shall not be authorized. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, or general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan. The justification must be verified and approved by the city.
2. Advance Mitigation. Mitigation for projects with pre-identified impacts to wetlands may be constructed in advance of the impacts if the mitigation is implemented according to federal rules, state policy on advance mitigation, and state water quality regulations.

Table 16.08.790.1 Wetland Mitigation Ratios

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation	Enhancement	Preservation
Category I: Bog, Natural Heritage site	Not considered possible	6:1	Case-by-case	10:1
Category I: Mature forested	6:1	12:1	24:1	24:1
Category I: Based on functions	4:1	8:1	16:1	20:1
Category II	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

G. Compensatory M1t1gat1on Plan. When a project involves wetland and/or buffer impacts, a compensatory mitigation plan prepared by a qualified professional shall be required, meeting the following minimum standards:
   1. Compensatory Mitigation Report. Full guidance can be found in Wetland Mitigation in Washington State- Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, Olympia, WA, March 2006 or as revised).
   2. The report must include a written report and plan sheets that must contain, at a minimum, the following elements:
      a) The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the compensatory mitigation report; a description of the proposal; a summary of the impacts and proposed compensation concept; identification of all the local, state, and/or federal wetland- related permit(s) required for the project; and a vicinity map for the project.
      b) A description of reasonable efforts made to apply mitigation sequencing, as defined in these regulations, to avoid, minimize, and otherwise mitigate impacts to critical areas.
      c) Description of the existing wetland and buffer areas proposed to be impacted. Include acreage (or square footage), water regime, vegetation, soils, landscape position, surrounding lands uses, and functions. Also describe impacts in terms of acreage by Cowardin classification, hydrogeomorphic classification, and wetland rating, based on LMC 16.08.740, Classification- Wetland rating system.
      d) Description of the compensatory mitigation site, including location and rationale for selection. Include an assessment of existing conditions: acreage (or square footage) of wetlands and uplands, water regime, sources of water, vegetation, soils, landscape position, surrounding land uses, and functions. Estimate future conditions in this location if the compensation actions are not undertaken (i.e., how would this site progress through natural succession?).
      e) A description of the proposed actions for compensation of wetland and upland areas affected by the project. Include overall goals of the proposed mitigation, including a description of the targeted functions, hydrogeomorphic classification, and categories of wetlands.
      f) A description of the proposed mitigation construction activities and timingof activities.
      g) A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs (for remaining wetlands and compensatory mitigation wetlands).
      h) Documentation of compliance with LMC 16.08.735.
      i) The scaled plan sheets for the compensatory mitigation must contain, at a minimum:
         i. Surveyed edges of the existing wetland and buffers, proposed areasof wetland and/or buffer impacts, location of proposed wetland and/or buffer compensation actions.
         ii. Existing topography, ground-proofed, at two-foot contour intervals in the zone of the proposed compensation actions if any grading activity is proposed to create the compensation area(s). Also existing cross-sections of on-site wetland areas that are proposed to be

impacted, and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation.

iii. Surface and subsurface hydrologic conditions including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions.

iv. Conditions expected from the proposed actions on site including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes.

v. Required wetland buffers for existing wetlands and proposed compensation areas. Explain how buffers comply with LMC 16.08.750(A) through (D), Wetland buffers, and the rationale for any deviations from the provisions of those subsections.

vi. A plant schedule for the compensation area including all species by proposed community type and water regime, size and type of plant material to be installed, spacing of plants, typical clustering patterns, total number of each species by community type, timing of installation.

vii. Performance standards (measurable standards reflective of years post-installation) for upland and wetland communities, monitoring schedule, and maintenance schedule and actions by each biennium.

j) Monitoring. Mitigation monitoring shall be required for a period necessary to establish that performance standards have been met, but not for a period less than five years. If a scrub-shrub or forested vegetation community is proposed, monitoring may be required for 10 years or more. The project mitigation plan shall include monitoring elements that ensure certainty of success for the project's natural resource values and functions. If the mitigation goals are not obtained within the initial five-year period, the applicant remains responsible for restoration of the natural resource values and functions until the mitigation goals agreed to in the mitigation plan are achieved.

3. Alternative Mitigation Plans. The administrator may approve alternative critical areas mitigation plans that are based on best available science, such as priority restoration plans that achieve restoration goals identified in the SMP. Alternative mitigation proposals must provide an equivalent or better level of protection of critical area functions and values than would be provided by the strict application of this chapter.

The administrator shall consider the following for approval of an alternative mitigation proposal:

a) The proposal uses a watershed approach consistent with Selecting Wetland Mitigation Sites Using a Watershed Approach (Ecology Publication No. 09-06-32, Olympia, WA, December 2009).

b) Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual habitat areas;

c) Mitigation according to subsection (E) of this section is not feasible due to site constraints such as parcel size, stream type, wetland category, or

geologic hazards;

d) There is clear potential for success of the proposed mitigation at the proposed mitigation site;
e) The plan shall contain clear and measurable standards for achieving compliance with the specific provisions of the plan. A monitoring plan shall, at a minimum, meet the provisions in LMC 16.08.220;
f) The plan shall be reviewed and approved as part of overall approval of the proposed use;
g) A wetland of a different type is justified based on regional needs or functions and values; the replacement ratios may not be reduced or eliminated unless the reduction results in a preferred environmental alternative;
h) Mitigation guarantees shall meet the minimum requirements as outlined in LMC 16.08.230;
i) i. Qualified professionals in each of the critical areas addressed shall prepare the plan;
j) The city may consult with agencies with expertise and jurisdiction over the resources during the review to assist with analysis and identification of appropriate performance measures that adequately safeguard critical areas. [Ord. 1395 § 1 (Exh. A), 2011.][i]

[i] Prior Legislation: Ords. 944, 1203 and 1357.

Appendix C
Restoration Plan

Chelan County
Grant No. G0800231

Chelan County Shoreline Master Program

FINAL

SHORELINE RESTORATION PLAN for Shorelines in Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth and Wenatchee

Project: Comprehensive Shoreline Master Program Update

- **Task 10: Prepare a Restoration Plan**

Prepared for:

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ICF INTERNATIONAL

ECOLOGY

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30 May 2010

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CHELAN COUNTY SHORELINE MASTER PROGRAM UPDATE
FINAL SHORELINE RESTORATION PLAN

1. INTRODUCTION

A jurisdiction's Shoreline Master Program applies to activities in the jurisdiction's shoreline[1] area. Activities that have adverse effects on the ecological functions and values of the shoreline must provide mitigation for those impacts. By law, the proponent of that activity is not required to return the subject shoreline to a condition that is better than the baseline level at the time the activity takes place. How then can the shoreline be improved over time in areas where the baseline condition is severely, or even marginally, degraded?

Section 173-26-201(2) (f) WAC of the Shoreline Master Program Guidelines[2] says:

> *"master programs shall include goals and policies that provide for restoration of such impaired ecological functions. These master program provisions shall identify existing policies and programs that contribute to planned restoration goals and identify any additional policies and programs that local government will implement to achieve its goals. These master program elements regarding restoration should make real and meaningful use of established or funded nonregulatory policies and programs that contribute to restoration of ecological functions, and should appropriately consider the direct or indirect effects of other regulatory or nonregulatory programs under other local, state, and federal laws, as well as any restoration effects that may flow indirectly from shoreline development regulations and mitigation standards."*

However, degraded shorelines are not just a result of pre-Shoreline Master Program activities, but also of unregulated activities and exempt development. The new Guidelines also require that "[l]ocal master programs shall include regulations ensuring that exempt development in the aggregate will not cause a net loss of ecological functions of the shoreline." While some actions within shoreline jurisdiction are exempt from a permit, the Shoreline Master Program should clearly state that those actions are not exempt from compliance with the

[1] "Shorelines" means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them..." (RCW 90.58.030(2)(d))

[2] The Shoreline Master Program Guidelines were prepared by the Washington Department of Ecology and codified as WAC 173-26. The Guidelines translate the broad policies of the Shoreline Management Act (RCW 90.58.020) into standards for regulation of shoreline uses. See http://www.ecy.wa.gov/programs/sea/sma/guidelines/index.html for more background.

Shoreline Management Act or the local Shoreline Master Program. Because the shoreline environment is also affected by activities taking place outside of a specific local master program's jurisdiction (e.g., outside of county/city limits, outside of the shoreline area within the county/city), assembly of out-of-jurisdiction actions, programs and policies can be essential for understanding how the County and Cities fit into the larger watershed context. The latter is critical when establishing realistic goals and objectives for dynamic and highly inter-connected environments.

As directed by the Guidelines, the following discussions provide a summary of baseline shoreline conditions, list restoration goals and objectives, and discuss existing or potential programs and projects that positively impact the shoreline environment. Finally, anticipated scheduling, funding, and monitoring of these various comprehensive restoration elements are provided. In total, implementation of the Shoreline Master Program (with mitigation of project-related impacts) in combination with this Restoration Plan (for restoration of lost ecological functions) should result in a net improvement within Chelan County, and the Cities of Cashmere, Chelan, Entiat, Leavenworth and Wenatchee's shoreline environment in the long term.

In addition to meeting the requirements of the Guidelines, this Restoration Plan is also intended to support the County's, Cities' or other non-governmental organizations' applications for grant funding, and to provide the interested public with contact information for the various entities working within the County and Cities to enhance the environment.

2. SHORELINE INVENTORY SUMMARY

2.1 Introduction

An inventory was conducted for all County and City shorelines as defined by the state's Shoreline Management Act (SMA) (RCW 90.58). The inventory was conducted according to direction provided in the Guidelines (WAC 173-26-201) and in the Grant Agreement promulgated by Ecology. It referenced "relevant and reasonably available" information (WAC 173-26-201(3)(c)) from County, City, State and Federal agencies; utilities; private non-governmental organizations; and Advisory Committee members, among others. The *Shoreline Inventory and Analysis Report* (*Analysis Report*) (The Watershed Company and ICF Jones & Stokes 2009 [TWC and J&S]) utilizes the existing watershed and sub-basin plans to the maximum extent practicable given the Guidelines and the topical coverage of those management plans. Many parties were active participants to the Advisory Committee for the SMP Update; the remaining parties have been and will continue to be notified at key project stages and

provided with opportunities to submit relevant information. Collected information was supplemented with other resources such as scientific literature, personal communications, aerial photographs, and internet documents.

The *Analysis Report* (TWC and J&S 2009) will serve as the baseline from which the possible effects of potential development actions in the shoreline will be measured. Ideally, the SMP, in combination with other County, City and regional efforts, will ultimately produce a net improvement in shoreline ecological functions. The *Analysis Report* (TWC and J&S 2009) describes existing physical and biological conditions in the shoreline area within County and City limits, including recommendations for restoration of ecological functions where they are degraded. The full *Analysis Report* (TWC and J&S 2009) is summarized below.

2.2 Shoreline Boundaries

As defined by the Shoreline Management Act of 1971, shorelines include certain waters of the state plus their associated "shorelands." At a minimum, the waterbodies designated as shorelines of the state are streams whose mean annual flow is 20 cubic feet per second (cfs) or greater or lakes whose area is greater than 20 acres. In addition, shorelines of statewide significance are those streams and rivers that meet one or more of the following criteria

> *"i. that have either: a mean annual flow of 200 cubic feet per second or more, or;*
>
> *ii. the portion downstream from the first 300 square miles of drainage areas.*

Shorelands are defined as:

> *"those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter...Any county or city may determine that portion of a one-hundred-year-floodplain to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred feet therefrom... Any city or county may also include in its master program land necessary for buffers for critical areas... (RCW 90.58.030)"*

The County and City shoreline boundaries have been updated (subject to Board of County Commissioners (BOCC), City Councils, and Ecology approval) concurrent with the *Analysis Report* (TWC and J&S 2009) through use of improved stream flow modeling by the United States Geological Survey and

improved lake area mapping that resulted in increased accuracy of jurisdiction identification and mapping. Past mapping errors by USGS and Ecology have been corrected so that federal lands are no longer excluded from shoreline jurisdiction.

2.2.1 Chelan County

Chelan County encompasses 2,294 square miles and is located in the north-central part of Washington. The county is bordered to the south by Kittitas County, to the southwest by King County, to the west by Snohomish County, to the northwest by Skagit County, to the northeast by Okanogan County, and to the east by Douglas County. Chelan County is predominantly rural in nature, with unincorporated areas making up most of the land area. Chelan County includes four Watershed Resource Inventory Areas (WRIAs) (WRIA 40a - Stemilt-Squilchuck and part of WRIA 40b located in Chelan County [Colockum Creek basin], WRIA 45 - Wenatchee, WRIA 46 - Entiat, and WRIA 47 – Chelan) and five incorporated cities (Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee).

The *Analysis Report* (TWC and J&S 2009) provided detail about 80 streams/rivers and 53 lakes that may meet shoreline jurisdiction criteria. The total acreage of upland shorelands (excluding area of the shoreline waterbodies) is approximately 42,693.

Federal lands make up 68 percent of that acreage, or 29,211 acres total. Of the 133 total shoreline waterbodies, 94 are entirely on federal lands and another 17 have more than 50 percent of their shoreland areas on federal land. The three federal entities that own the majority of the federal land are the United States Forest Service (USFS), the National Park Service (NPS), and the United States Bureau of Land Management (BLM). Four USFS wilderness areas are found along Chelan County shorelines: Lake Chelan Sawtooth Wilderness, Glacier Peak Wilderness, Henry M. Jackson Wilderness, and Alpine Lakes Wilderness. These areas have the greatest level of protection and stringent prohibitions on alteration. A large area at the north end of Lake Chelan is also part of NPS's Lake Chelan National Recreation Area.

Tables 1 and 2 of the *Analysis Report* (TWC and J&S 2009) present the list of shoreline jurisdictional waterbodies, and some basic jurisdictional history. These tables have been included in this document as Tables 1 and 2 below.

Table 1. Shoreline Jurisdiction Streams and Rivers

River/Creek Name	Mapped as Shoreline Under Existing SMP	Total Length of Proposed Shoreline (ft)	River/Creek Name	Mapped as Shoreline Under Existing SMP	Total Length of Proposed Shoreline (ft)
Agnes Creek	No	29,474	Mill Creek	No	6,781
Basin Creek	No	1,770	Mission Creek	Yes	39,870
Big Meadow Creek	No	5,541	Mountaineer Creek	No	15,747
Boulder Creek 1	No	20,203	Napeequa River	Yes	88,773
Boulder Creek 2	No	4,702	Nason Creek*	Yes	122,246
Bridge Creek	No	62,307	North Fork Bridge Creek	No	33,667
Buck Creek	No	19,291	North Fork Entiat River	No	34,972
Cady Creek	No	15,527	North Fork Thirtyfive Mile Creek	No	3,104
Chelan River*	Yes	21,818	Panther Creek	No	22,409
Chikamin Creek	Yes	14,641	Park Creek	No	28,140
Chiwaukum Creek	No	41,892	Peshastin Creek	Yes	64,582
Chiwawa River*	Yes	200,777	Phelps Creek	Yes	31,266
Chumstick Creek	No	24,601	Pole Creek	No	249
Colockum Creek	No	19,380	Prince Creek	No	27,914
Columbia River*	Yes	395,252	Prospect Creek	No	7,479
Company Creek	No	47,709	Railroad Creek	Yes	78,823
Cottonwood Creek	No	2,617	Rainbow Creek	No	21,952
Cougar Creek	No	41	Rainy Creek	No	25,678
Doubtful Creek	No	59	Rimrock Creek	No	2,849
Eightmile Creek	Yes	21,678	Roaring Creek	No	75
Entiat River*	Yes	269,902	Rock Creek	No	29,154
Fish Creek	No	20,158	Snowall Creek	No	11,418
Fish Creek	No	17,825	South Fork Agnes Creek	No	48,380
Flat Creek	No	41,871	South Fork Bridge Creek	No	12,953
French Creek	No	38,892	South Fork Chiwaukum Creek	Yes	16,709
Ibex Creek	No	3,443	South Fork Flat Creek	No	4,702
Ice Creek	No	6,088	Spruce Creek	No	16,427
Icicle Creek*	Yes	151,122	Stehekin River*	Yes	125,759
Indian Creek	No	35,568	Swamp Creek	No	5,190
Ingalls Creek	Yes	56,766	Thunder Creek	No	12,715
Jack Creek	No	45,045	Tommy Creek	No	7,255
Lake Creek	No	8,846	Trapper Creek	No	7,437
Lake Creek	No	21,104	Trout Creek	No	9,324
Leland Creek	No	24,814	Twentyfive Mile Creek	Yes	15,544
Lightning Creek	No	4,059	Wenatchee River*	Yes	278,629
Little Wenatchee River*	Yes	117,784	West Fork Agnes Creek	No	34,890

River/Creek Name	Mapped as Shoreline Under Existing SMP	Total Length of Proposed Shoreline (ft)	River/Creek Name	Mapped as Shoreline Under Existing SMP	Total Length of Proposed Shoreline (ft)
Mad River	Yes	104,360	West Fork Flat Creek	No	10,583
Maple Creek	No	10,153	White River*	Yes	153,763
McAlester Creek	No	12,397	Whitepine Creek	Yes	31,390
Meadow Creek	No	9,909	Wildhorse Creek	No	13,921
					TOTAL: 3,452,102 ft (653.8 miles)

* Streams/rivers that are partial or complete Shorelines of Statewide Significance.

Table 2. Shoreline Jurisdiction Lakes

Lake Name	Mapped as Shoreline Under Existing SMP	Total Area of Proposed Shoreline Lake (acres)	Lake Name	Mapped as Shoreline Under Existing SMP	Total Area of Proposed Shoreline Lake (acres)
Antilon Lake	Yes	35	Lichtenwasser Lake	No	26
Black Lake (aka Wheeler Hill or Spring Hill Reservoir)	Yes	33	Loch Eileen Lake	Yes	26
Chiwaukum Lake	Yes	70	Lost Lake	No	27
Colchuck Lake	Yes	88	Lyman Lake	No	74
Cortez Lake	Yes	34	Meadow Lake	Yes	36
Cub Lake	No	23	Mirror Lake	No	25
Domke Lake	No	273	Nada Lake	No	23
Doubtful Lake	No	30	Perfection Lake	No	21
Dry Lake	Yes	81	Rainy Lake	No	53
Eightmile Lake	Yes	65	Roses Lake	Yes	178
Fish Lake	Yes	503	Schaefer Lake	No	83
Glasses Lake	No	23	Shield Lake	No	39
Green View Lake	No	41	Snow Lake-Lower	Yes	65
Hart Lake	No	33	Snow Lake-Upper	Yes	126
Heather Lake	No	86	Square Lake	No	73
Ice Lakes (1)	No	44	Stemilt Project Reservoir	No	22
Ice Lakes (2)	No	20	Stuart Lake	No	41
Josephine Lake	No	24	Surprise Lake	No	40
Klonaqua Lakes (1) Lower	Yes	66	Theseus Lake	No	29
Klonaqua Lakes (2) Upper	Yes	65	Trapper Lake	No	148
Lake Augusta	No	24	Twin Lakes (1)	No	33

Lake Name	Mapped as Shoreline Under Existing SMP	Total Area of Proposed Shoreline Lake (acres)	Lake Name	Mapped as Shoreline Under Existing SMP	Total Area of Proposed Shoreline Lake (acres)
Lake Chelan*	Yes	32,623	Twin Lakes (2)	No	259
Lake Leland	No	36	Unnamed Lake 1	No	34
Lake Valhalla	No	25	Upper Wheeler Reservoir	Yes	34
Lake Victoria	Yes	26	Wapato Lake	Yes	195
Lake Wenatchee*	Yes	2,449	White Rock Lakes (1)	No	20
Larch Lake	No	30			
					TOTAL: 38,577 acres

* Lakes that are partial or complete Shorelines of Statewide Significance.

2.2.2 Stemilt/Squilchuck-Colockum (WRIA 40a/b)

The Stemilt/Squilchuck - Colockum watershed (WRIA 40a/b) is approximately 49,000 acres, and includes two shoreline streams/rivers and five lakes. The area of upland shoreline jurisdiction totals 739 acres along 137,001 linear feet (26 miles) of shoreline. Table 3 provides the name of each shoreline waterbody in WRIA 40a/b.

Table 3. Shoreline waterbodies in WRIA 40a/b, outside of cities and their urban growth areas.

Jurisdictional Streams/Lakes			
Colockum Creek	Black Lake	Meadow Lake	Upper Wheeler Reservoir
Columbia River	Cortez Lake	Stemilt Project Reservoir	

2.2.3 Wenatchee (WRIA 45)

The Wenatchee watershed (WRIA 45) is approximately 1,370 square miles, and contains 45 shoreline streams/rivers and 29 shoreline lakes. The area of upland shoreline jurisdiction totals 24,652 acres along 2,159,741 linear feet (409 miles) of shoreline. The headwaters of WRIA 45 originate in the Cascade Mountain range as the Little Wenatchee and White Rivers. These rivers flow into Lake Wenatchee, the source of the Wenatchee River. Table 4 provides the name of each shoreline waterbody in WRIA 45.

Table 4. Shoreline waterbodies in WRIA 45, outside of cities and their urban growth areas.

Jurisdictional Streams/Lakes				
Big Meadow Creek	Icicle Creek	Peshastin Creek	Wildhorse Creek	Loch Eileen Lake
Boulder Creek	Indian Creek	Phelps Creek	Chiwaukum Lake	Lost Lake
Buck Creek	Ingalls Creek	Pole Creek	Colchuck Lake	Nada Lake
Cady Creek	Jack Creek	Prospect Creek	Eightmile Lake	Perfection Lake
Chikamin Creek	Lake Creek	Rainy Creek	Fish Lake	Schaefer Lake
Chiwaukum Creek	Leland Creek	Roaring Creek	Glasses Lake	Shield Lake
Chiwaukum Creek SF	Lightning Creek	Rock Creek	Heather Lake	Snow Lake Lower
Chiwawa River	Little Wenatchee River	SF Chiwaukum Creek	Josephine Lake	Snow Lake Upper
Chumstick Creek	Meadow Creek	Snowall Creek	Klonaqua Lakes Lower	Square Lake
Columbia River	Mill Creek	Thunder Creek	Klonaqua Lakes Upper	Stuart Lake
Cougar Creek	Mission Creek	Trapper Creek	Lake Augusta	Theseus Lake
Eightmile Creek	Mountaineer Creek	Trout Creek	Lake Leland	Twin Lakes 1
Fish Creek	Napeequa River	Wenatchee River	Lake Valhalla	Twin Lakes 2
French Creek	Nason Creek	White River	Lake Victoria	
Ibex Creek	Panther Creek	Whitepine Creek	Lake Wenatchee	

2.2.4 Entiat (WRIA 46)

WRIA 46 contains 305,641 acres, including 5,065 acres of shorelands and 526,093 linear feet (100 miles) of shoreline along seven streams/rivers and two lakes. Table 5 provides the name of each shoreline waterbody in WRIA 46.

Table 5. Shoreline waterbodies in WRIA 46, outside of cities and their urban growth areas.

Jurisdictional Streams/Lakes		
Columbia River	Lake Creek	Tommy Creek
Entiat River	Mad River	Ice Lake 1
Ice Creek	NF Entiat River	Ice Lake 2

2.2.5 Chelan (WRIA 47)

Chelan watershed (WRIA 47) as a whole contains 670,080 acres, including 11,160 acres of shorelands along 1,596,517 linear feet (302 miles) of shoreline, distributed

among 30 shoreline streams/rivers and 17 shoreline lakes. Table 6 provides the name of each shoreline waterbody in WRIA 47.

Table 6. Shoreline waterbodies in WRIA 47, outside of cities and their urban growth areas.

Jurisdictional Streams/Lakes				
Agnes Creek	Flat Creek	SF Agnes Creek	Antilon Lake	Rainy Lake
Basin Creek	Maple Creek	SF Bridge Creek	Cub Lake	Roses Lake
Boulder Creek 1	McAlester Creek	SF Flat Creek	Domke Lake	Surprise Lake
Bridge Creek	NF Bridge Creek	Spruce Creek	Doubtful Lake	Trapper Lake
Chelan River	NF Thirtyfive Mile Creek	Stehekin River	Dry Lake	Unnamed Lake 1
Columbia River	Park Creek	Swamp Creek	Green View Lake	Wapato Lake
Company Creek	Prince Creek	Twentyfive Mile Creek	Hart Lake	White Rock Lake 1
Cottonwood Creek	Railroad Creek	WF Agnes Creek	Lake Chelan	
Doubtful Creek	Rainbow Creek	WF Flat Creek	Lyman Lake	
Fish Creek 1	Rimrock Creek	WF Agnes Creek	Mirror Lake	

2.2.6 City of Cashmere

Shorelands in the City of Cashmere include areas within 200 feet of the ordinary high water mark, floodways, portions of their adjacent floodplains, and any associated wetlands within those floodplains. Waters identified within jurisdiction include Mission Creek and the Wenatchee River. The shoreline acres in the City and UGA equal 238, and the shoreline length equals 12,159 feet.

2.2.7 City of Chelan

Shorelands in the City of Chelan include only areas within 200 feet of the ordinary high water mark, floodways, portions of their adjacent floodplains, and any associated wetlands within those floodplains. Waters identified within jurisdiction include Lake Chelan, the Chelan River and a very small portion of the Columbia River. Together the City and its UGA have 517 acres and 109,558 linear feet in shoreline jurisdiction.

2.2.8 City of Entiat

Shorelands in the City of Entiat include only areas within 200 feet of the ordinary high water mark, floodways, portions of their adjacent floodplains and any associated wetlands within those floodplains. Waters identified within jurisdiction include the Entiat and Columbia Rivers. The City of Entiat contains 117 acres and 22,500 linear feet in shoreline jurisdiction.

2.2.9 City of Leavenworth

Shorelands in the City of Entiat include only areas within 200 feet of the ordinary high water mark, floodways, portions of their adjacent floodplains and any associated wetlands within those floodplains. Waters identified within jurisdiction include Chumstick Creek and the Wenatchee River. The City of Leavenworth and its UGA contain a total shoreland area of approximately 148 acres and runs 5,071 linear feet.

2.2.10 City of Wenatchee

Shorelands in the City of Wenatchee include only areas within 200 feet of the ordinary high water mark, floodways, portions of their adjacent floodplains and any associated wetlands within those floodplains. Waters identified within jurisdiction include the Wenatchee and Columbia Rivers. In the City and its UGA, shoreline jurisdiction contains 282 acres and 51,484 linear feet.

2.3 Inventory and Analysis Summary

The *Shoreline Inventory and Analysis Report* (TWC and J&S 2009) is divided into seven main sections: Introduction, Current Regulatory Framework Summary, Elements of the Shoreline Inventory, Shoreline-Specific Conditions, Analysis of Ecological Functions and Ecosystem-wide Processes, Land Use Analysis, and Public Access Analysis. Most of these chapters were subdivided into sections for the County and watershed. Discussions were broken into the four WRIAs (WRIA 40a - Stemilt-Squilchuck and part of WRIA 40b located in Chelan County [Colockum Creek basin], WRIA 45 - Wenatchee, WRIA 46 - Entiat, and WRIA 47 – Chelan) and five Cities (Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee). The WRIA discussions do not include information for the incorporated Cities and their UGAs. The City discussions include each City's UGA. The following inventory is summarized from detailed information presented in the *Analysis Report* (TWC and J&S 2009).

2.3.1 Chelan County

Land Use and Physical Conditions

Most human settlements (both pre-historic and historic) in Chelan County have developed along waterbodies. The communities that developed are likewise connected along waterbodies by transportation and utility corridors. County-wide water-oriented uses include: agriculture, fish hatcheries, certain hotels/motels, marine craft transportation, open space, parks, recreational activities, resorts and group camps, and retail trade-eating/drinking.

In the unincorporated WRIAs, the current land use patterns are predominantly rural residential, government/utility, and forestry and agriculture resource lands,

with exceptions – such as small towns along rivers and streams, lake communities, and some focused areas of rural industrial and rural waterfront commercial. Relatively more urban and intensive development is found in the cities, particularly Chelan (commercial, tourist, recreation), Cashmere (mixed use), and Wenatchee (utility and industrial). Some cities have extensive open space along their shorelines, such as Entiat, Leavenworth and Wenatchee, due to municipal, Public Utility District (PUD), County, or state park lands.

Future land use designations tend to reinforce current land use patterns, but there are areas of the County that are identified for new or greater uses. Unincorporated shorelines that are in public ownership tend to be identified for resource uses, while those in private ownership tend to be planned for rural residential, rural commercial/waterfront, or rural industrial uses. City shorelines are planned for a wider variety of activities to support their role as centers of the local community. Many areas in the cities that are already developed are likely to see re-development. Entiat and Wenatchee have the most ambitious of these re-development/waterfront plans. All of the WRIAs are likely to see additional rural residential growth.

Biological Resources and Critical Areas

Numerous wetlands are associated with Chelan County shorelines, including emergent and palustrine wetlands. In Chelan County, emergent wetlands are most likely to be sedge meadows and montane meadows, and palustrine wetlands would be dominated by woody vegetation occurring along watercourses. Old-growth forest corridors are found throughout the county, having been mapped by the USFS as part of its *Northwest Forest Plan*.

Chelan County has many critical areas discussed in more detail in the sections below.

2.3.2 Stemilt/Squilchuck–Colockum (WRIA 40a/b)

Land Use and Physical Conditions

WRIA 40a/b is dominated by resource lands, including commercial agriculture and commercial forestry. Residential and industrial uses tend to congregate closer to the Columbia River and other waterbodies in the eastern portion of the WRIA (RH2 Engineering, Inc. 2007). Geologically hazardous areas are common, particularly around the three reservoirs (which are considered to have 100% geohazard coverage). Shorelands within WRIA 40a/b are currently used for: agriculture; cultural/recreation/assembly; forestry; government/utility; manufacturing/industry; natural resources; residential; and transportation.

Twenty-seven percent (27%) of the WRIA remains undeveloped, although plans for additional single-family rural residential dwellings (23% of the current land

use, planned to increase to 65% of the shoreland area) would reduce the amount of undeveloped land in time. Likewise, increases in rural industrial shoreline use, accounting for 3% of the existing shoreline use, would increase to 22 percent. Current open space in shoreline jurisdiction totals about 166 acres, mostly along the Columbia River.

Biological Resources and Critical Areas

Shorelines contain a combined total of 569 acres of priority habitats and habitat features, including wetlands, riparian zones, cliffs/bluffs, elk and mule deer habitat, and wood duck breeding areas. WRIA 40a/b waters contain priority fish species as well. According to the National Wetlands Inventory (NWI) and hydric soils information, as much as 17% of the total shoreline area may be wetlands.

2.3.3 Wenatchee (WRIA 45)

Land Use and Physical Conditions

Government/utility uses and resource lands (forestry, agriculture, and other natural resources) dominate the majority of the 75 shorelines. Shorelands within WRIA 45 are currently used for: agriculture, commercial, cultural/recreation/assembly, forestry, government/utility, manufacturing/industry, natural resources, residential, transportation, and open space. WRIA 45 contains unincorporated and incorporated lands.

Water-oriented uses along shorelines in WRIA 45 include agriculture, parks/recreation/recreational activities, resorts and group camps, certain hotel/motels, eating and drinking places, and others. Much of the shorelines tend to be parcels without buildings, largely due to the commercial forest lands in the watershed. Most of the shoreline land is being used for government/utility is expected to remain, even where there are vacant parcels. With future development, the shorelines are likely to see added rural residential, which makes up 17 percent of the current land use, but is planned for over 24 percent of the shoreline lands.

Parks and open space are found along numerous shorelines in WRIA 45. Open space is estimated at approximately 24,699 acres, and park lands total about 17 acres (found along the Columbia and Wenatchee Rivers). Developed public access points include: trails, campgrounds, picnic areas, fishing easements, and boat launches. The trails are extensive, linking various waterbodies as well as running alongside waterbodies. Fishing easements and boat launches are located along the Wenatchee River.

Biological Resources and Critical Areas

Shorelines in WRIA 45 contain a combined total of 19,433 acres of priority habitats and habitat features. The most common habitats, in order of frequency

of occurrence, are those for elk calving, migration, concentrations, or foraging and mountain goat breeding or concentrations. Twenty-seven separate osprey nest sites are mapped in shoreline jurisdiction, distributed on five waterbodies. Many of the rivers, streams and lakes also contain priority fish species. According to the NWI and hydric soils information, as much as 39 percent of the total shoreline area may be wetlands. Floodplains and a few geohazard areas are also documented in the WRIA.

2.3.4 Entiat (WRIA 46)

Land Use and Physical Conditions

Current land uses in WRIA 46 shorelines are dominated by orchards, livestock production and grazing, timber harvest, residential housing, and recreation. The USFS and timber lands dominate in terms of acres (Chelan County Conservation District [CCCD] 2004). Non-federal shoreline uses include: agriculture, commercial, cultural/recreation/assembly, forestry, government/utility, natural resources, residential, and undeveloped land.

Water-oriented land use is primarily agriculture (at approximately 170 acres), with most of the acreage on the Entiat River, followed by the Columbia River. Other water-oriented uses include open space (non-commercial forest) and recreational activities. The majority of shorelines contain parcels without buildings. Most of the undeveloped land in the watershed is planned for commercial forestry, rural residential, and rural waterfront uses. Forestry uses likely would not result in permanent shoreline development, and residential lands are likely to continue in similar patterns as today, with some infill on vacant parcels. Rural waterfront uses include residential, and water related/water dependant recreational and tourist development.

Public access consists of view corridors, open space and parks. View corridors are prominent along the Columbia and Entiat Rivers (from higher elevations). Open space is estimated at approximately 3,084 acres with park land totaling about 1 acre (along the Entiat River). Developed public access points include trails and campgrounds in shoreline jurisdiction. Three of 10 shorelines have campground facilities and one shoreline has several trailheads. The trails are extensive, linking various waterbodies as well as running alongside waterbodies.

Biological Resources and Critical Areas

Shorelines in WRIA 46 contain a combined total of 5,504 acres of priority habitats and habitat features. The most common priority habitats, in order of frequency of occurrence, are those for lynx, followed by old-growth/mature forests and priority riparian zones. Many of the rivers, streams and lakes also contain priority fish species. According to the NWI and hydric soils information, as

much as 24 percent of the total shoreline area may be wetlands. Floodplains and a few geohazard areas are also documented in the WRIA.

2.3.5 Chelan (WRIA 47)

Land Use and Physical Conditions

Approximately 87 percent of WRIA 47 is in federal, state, and local government ownership. The remaining 13 percent is in private ownership. Current land uses in the WRIA as a whole include conservation, recreation, primary and secondary (vacation and second homes) residential, resorts, and agriculture. The upper two-thirds of the watershed can be accessed only by water, foot, horseback or air (floatplane) (Berg 2004). The shoreline land uses include: agriculture, commercial, cultural/recreation/assembly, forestry, government/utility, natural resources, residential, and undeveloped land. The existing land uses vary by individual waterbody, with some shorelines dominated by residential uses (Lake Chelan, Roses Lake, Wapato Lake), commercial uses (Chelan River, Twentyfive Mile Creek), and undeveloped lands (Fish Creek, Dry Lake).

WRIA 47 shorelines contain unincorporated and incorporated lands. Unincorporated lands are primarily used as commercial forest (71%) or residential (20%) lands. Shorelines planned for focused rural development (including rural waterfront development) include Twentyfive Mile Creek, Roses Lake, and Wapato Lake.

Parks and open space are found along numerous shorelines in the unincorporated area. Open space is estimated at approximately 9,417 acres, and park lands total less than 1 acre along Lake Chelan. Developed public access points include: trails, campgrounds, and boat launches. The trails are more extensive in the northern and western portion of the WRIA and alongside and between waterbodies. Most trails near Lake Chelan do not parallel the water, and radiate to other destinations away from the lake. Boat launches are numerous along Lake Chelan. View corridors are prominent along Lake Chelan in the vicinity of the City of Chelan. Lake Chelan is the most developed shoreline in WRIA 47, with boating and camping facilities. There are fewer facilities on a handful of other waterbodies.

Biological Resources and Critical Areas

Shorelines in WRIA 47 contain a combined total of 7,858 acres of priority habitats and habitat features. The most common priority habitats, in order of frequency of occurrence, are those for lynx (found in 28 shorelines), followed by mule deer breeding areas, concentrations, and migratory corridors. Many of the rivers, streams and lakes also contain priority fish species. According to the NWI and hydric soils information, as much as 16 percent of the total shoreline area may be

wetlands. Floodplains and a few geohazard areas are also documented in the WRIA.

2.3.6 City of Cashmere

Cashmere is a historic community in the lower Wenatchee River valley known for its agricultural-oriented industries, traditional downtown, and residential character.

Land Use and Physical Conditions

Mission Creek is largely flanked by single-family residential, but also commercial and government uses. The Wenatchee River is fronted mostly by government/utility uses, such as the City's wastewater treatment plant, Riverside Park, City sanitation and recycling facility, and a City mulching facility. Planned land uses are likewise a mix, maintaining the existing pattern of the majority of land for single family on Mission Creek and public for the Wenatchee River. Potential water-oriented uses include agricultural uses, and uses at public parks and open space along both Mission Creek and the Wenatchee River.

There are parcels which do not contain buildings on both Mission Creek (4% of land in the shoreline jurisdiction) and the Wenatchee River (29% of land in the shoreline jurisdiction). The City's two shorelines are mostly committed to urban development today, primarily single-family residential. However, some of the land along the Wenatchee River in the City limits contains older industrial structures or improvements that may redevelop. There may be additional growth on shorelines in the UGA, since this area has not yet fully developed. The City may see additional commercial or industrial uses along Mission Creek, which currently has 9 percent of the land being used for commercial purposes (but 15% of the land is planned for mixed commercial/light industrial and 10% in warehouse industrial).

Public access features include parks and open space along Mission Creek (having approximately 3 acres of parks and 1 acre of open space, equaling 7% of shoreline jurisdiction) and the Wenatchee River (with approximately 36 acres of open space at 33% of shoreline jurisdiction and over 32 acres in parks, equaling 29% of shoreline jurisdiction). Other public access features include a river access ramp easement along the Wenatchee River within Riverside Park, as well as visual access corridors from lands east and west of the Wenatchee River in the vicinity of US 2, Riverside Park, and higher elevations. Shoreline trails are present along both Mission Creek (602 feet in length) and the Wenatchee River (14,522 feet in length).

Biological Resources and Critical Areas

Shorelines in the City of Cashmere and its UGA contain a combined total of 46 acres of priority habitats and habitat features. Both the Wenatchee River and Mission Creek contain priority fish species. According to the NWI and hydric soils information, as much as 24 percent of the total shoreline area may be wetlands.

The critical area most prevalent on the City's Wenatchee River shoreline is "frequently flooded areas." Most of the City is protected by a City-owned, Corps-certified/built levee on the Wenatchee River. However, there is a gap in the Wenatchee River levee along Riverfront Drive, south of the Cotlets Way bridge. The area near Riverfront Drive is susceptible to flooding during heavy rains or high elevation snow melt.

2.3.7 City of Chelan

The City of Chelan is found along the eastern shore of Lake Chelan. The Chelan community attracts tourists and seasonal residents due to its historic charm, provision of commercial services, and recreational opportunities along Lake Chelan.

Land Use and Physical Conditions

Current land uses along the entire City and UGA shorelines are dominated by residential, commercial, recreation, government, but also include: agriculture, commercial, cultural/recreation/assembly, natural resources, residential, and undeveloped land. Most of the shoreline is developed apart from parklands. Plans for development or redevelopment along Lake Chelan and other public open space will be oriented to tourist, commercial, recreational services, activities, and residential uses (Land Use Element Commercial Policy 18). The City encourages efficient public use of shoreline properties (Land Use Element Urban Growth Area Policy 4), and will allow public and private development for adequate camping, boat launching, docking and moorage facilities, marinas, and other water-related recreational opportunities on Lake Chelan and the Columbia River (Economic Development Element Open Space and Recreation Policy 3).

Land uses have been proposed for all the City's shorelines, and may include: high density commercial, highway service commercial, waterfront commercial, public lands and facilities, single-family residential, multi-family residential, special use district, tourist accommodations, and warehousing and industrial land uses. Potential growth could occur on properties that are vacant or that do not have structures, as well as on lands the City has identified for further development in its plans.

Lake Chelan shorelines contain some water-oriented uses including parks (about 18 acres), agriculture (about than 2 acres), recreational activities (about 2 acres), resorts and group camps (about 8 acres), marine craft transportation (more than 1 acre), and eating/drinking places (more than 1 acre). The Chelan River has about 7 acres in shoreline jurisdiction for park use. Waterfront commercial and tourist accommodation are also water-oriented land uses found throughout City shorelines.

Public access consists of view corridors, open space and parks. View corridors are prevalent along roadways paralleling the water, and from higher elevations above the lake. Open space acres in the shoreline jurisdiction total about 47 acres, along the Chelan River (~ 17 acres) and along Lake Chelan (~ 30 acres). Based on the shoreline inventory, there are 17 recreation facilities on Lake Chelan within the City and UGA consisting of boat launches (2), boating facilities (2), community dock/marina (5), and other marinas (3).

Biological Resources and Critical Areas

Shorelines in the City of Chelan and its UGA contain less than 0.1 acre of priority habitat, limited to mule deer habitat in the small area of Columbia River shoreline. All of the City's shorelines contain priority fish species. According to the NWI and hydric soils information, as much as 11 percent of the total shoreline area may be wetlands. Most of these potential wetlands are located in the Chelan River shorelands. The portions of the Chelan River and Columbia River in the City and UGA contain substantial areas identified as geologic hazards.

2.3.8 City of Entiat

The City of Entiat serves as a central gathering point for a broader community surrounding the City limits.

Land Use and Physical Conditions

Primarily land is used for government/utility and residential purposes, but also as open space. Along both the Columbia and Entiat Rivers, future land use plans call for a wider mix of uses, including commercial and business. Existing water-oriented uses in the City limits include a large park with shoreline recreation facilities.

There are a number of lots without structures (not necessarily without uses) along the Columbia (15 parcels, encompassing 71% of shoreline acres) and Entiat Rivers (7 parcels, encompassing 68% of shoreline acres). The Entiat Waterfront Master Plan (ESA Adolfson 2009) intends to facilitate tourism, commercial uses and economic development for the community along approximately 18 acres of Columbia River shoreland. Conceptual plans (dated December 2009) identify

potential uses for the shorelands including: a marina, mixed-use condominiums and retail, a hotel, a restaurant row, an amphitheatre, waterfront parks, picnic areas, riparian restoration, a fishing dock, multi-use trail, sidewalks, a new waterfront road and short side roads, and parking.

The Columbia River is lined with a park (Entiat City Park) and PUD-owned open space estimated at about 46 acres (54% of the shoreline). The remaining space is residential, City wastewater treatment facility, and a gravel mine. Open space land along the Entiat River is estimated at about 15 acres (47% of the shoreline). Shoreline viewing access is available for the Columbia and Entiat Rivers along roadways, and from hilltops or immediately along the shoreline. Physical access is primarily found at the Entiat City Park, providing over 4,000 feet of shoreline. The facilities at this park include 3 restrooms, 2 showers, 25 tent camping sites, 31 RV camping sites, and a boat launch. At this location, park users can boat, water ski, jet ski, swim and picnic. Additionally, a local museum is also located adjacent to the site. The Chelan County PUD is planning improvements to the park that may include additional boat launching facilities.

Biological Resources and Critical Areas

Shorelines in the City of Entiat and in the Columbia River fronting the City contain 130 acres of priority habitats, including bald eagle, riparian zones, mule deer, and waterfowl concentration areas. All of the City's shorelines contain priority fish species. According to the NWI and hydric soils information, as much as 16 percent of the total shoreline area may be wetlands. All of the potential wetlands identified by NWI are located along the Entiat River.

2.3.9 City of Leavenworth

Leavenworth is located in the upper reaches of the Wenatchee River Valley. Leavenworth is known for its Bavarian-themed downtown, as well as for its environmental quality along the Wenatchee River, where the City has obtained much of the shoreline for recreation or open space purposes.

Land Use and Physical Conditions

Along Leavenworth's combined shoreline area (including the UGA), the current land uses are dominated by government/utility, residential, and commercial uses, but also include: cultural/recreation/assembly and undeveloped land. Along the Wenatchee River and Chumstick Creek, future land plans generally follow current patterns, though some additional development would occur consistent with the following categories: central and general commercial zones, light industrial zone, recreation public zone, recreation zone, residential multi-family zone, rl-12 zone, rl-6 zone, and a tourist commercial zone.

Extensive park and recreation uses along the Wenatchee River (in the City) total approximately 54 acres in shoreline jurisdiction. There are also hotels/motels (4 acres approx.), a wastewater treatment plant (about 2 acres), and eating and drinking venues (less than 1 acre). Water-oriented uses include a small agricultural property (0.10 acre) on Chumstick Creek.

There are several public and private parcels with no structures on them, which may be locations for future waterfront development. Four of 13 parcels on Chumstick Creek do not have buildings (representing 40% of the shoreland), and 73 of the 172 parcels on the Wenatchee River (representing 32% of the shoreland) do not contain buildings presently. Generally, extensive changes along the shoreline are not anticipated due to the public recreation ownership of the public golf course and parks along much of the shoreline and the remaining already developed condition.

Shoreline visual access along the Wenatchee River is possible from public parks and access points on both sides of the river. Improvements to shoreline visual access points have been outlined in the *Downtown Master Plan* (City of Leavenworth 2007). Approximately 65 acres of park land and open space lie within the City's shoreline jurisdiction, with most located on the Wenatchee River. Four City-owned parks and recreation facilities (along the Wenatchee River) provide physical and visual shoreline access.

Biological Resources and Critical Areas

Shorelines in the City of Leavenworth and its UGA contain 115 acres of priority habitats, consisting only of priority riparian zones concentrations. All of the City's shorelines contain priority fish species. According to the NWI and hydric soils information, as much as 26 percent of the total shoreline area may be wetlands. No information was available regarding presence of geologically hazardous areas in the City of Leavenworth shorelines.

2.3.10 City of Wenatchee

The City of Wenatchee and its UGA are located along the banks of the Columbia River at the confluence of the Wenatchee River. Wenatchee is the largest city in Chelan County and is the primary center for jobs.

Land Use and Physical Conditions

Along the two shorelines in the City of Wenatchee, current land uses are dominated by government/utility and open space, but also include: agriculture, commercial, manufacturing/industrial, residential, transportation, and undeveloped land. Water-oriented uses include parks/open space (approximately 80 acres) and agriculture (6 acres), with 50 combined acres on the Columbia River and 30 combined acres on the Wenatchee.

Planned development along the City's shorelines may include: industry, the north Wenatchee business district, residential high/moderate/single-family, and waterfront mixed use. These planned land uses along the Columbia River shoreline may include industrial, high density residential, and parks. Planned land uses along the Wenatchee River may include single-family residential, industrial, and parks.

The Columbia River waterfront is flanked by public properties such as PUD recreation facilities and the railroad. The Sunnyslope area along the Wenatchee and Columbia Rivers is generally developed with homes and industrial uses, and is unlikely to see a significant change in the land use pattern (B. Frampton, personal communication, April 2008). There are several public and private parcels with no structures on them. Future development could occur on vacant parcels and on parcels subject to the *Wenatchee Waterfront Sub-Area Plan* (2003) which promotes redevelopment. Seventy-seven of 125 parcels on the Columbia River do not have buildings (representing 66% of the shoreland), and 20 of the 31 parcels on the Wenatchee River (representing 94% of the shoreland) do not contain buildings.

Open space and park land within the City's shoreline jurisdiction (totaling ~120 acres), may offer water access via boat launches, piers, or trails at some locations. Four waterfront parks and trails are present in the City and UGA. Planned parks and recreation improvement in or near the shoreline include waterfront moorage and parking, waterfront trail upland access and boathouse, and open space acquisition in the City of Wenatchee and its UGA at +/- 200 acres (City of Wenatchee 2008).

Biological Resources and Critical Areas

Shorelines in the City of Wenatchee and its UGA contain 253 acres of priority habitats, consisting of bald eagle, bighorn sheep, mule deer, and priority riparian zones concentrations. All of the City's shorelines contain priority fish species. According to the NWI and hydric soils information, as much as 38 percent of the total shoreline area may be wetlands. However, this figure is high because of the inclusion of some of the mainstem Columbia River as wetland. No information was available regarding presence of geologically hazardous areas in the City of Wenatchee.

3. Restoration Goals and Objectives

3.1 Chelan County

The following subsections discuss restoration goals and objectives previously identified in local WRIA, City and County planning efforts. Discussions are

broken into the four WRIAs and five Cities when applicable. The WRIA discussions do not include information for the incorporated Cities and their UGAs. The City discussions include each City's UGA.

3.1.1 County-Wide

Many of the watershed planning and salmon recovery efforts are administered by the Chelan County Natural Resources Department (CCNRD). Current activities include Wenatchee River Watershed (WRIA 45) planning and implementation, Squilchuck/Stemilt Watershed (WRIA 40a) planning and implementation, a County-wide salmon recovery grant program through Washington Salmon Recovery Funding Board, and habitat conservation plan development under the Federal Endangered Species Act (Chelan County website). CCNRD is also a partner with the Cascadia Conservation District (CCD) (formerly the Chelan County Conservation District) in the planning and implementation of the Entiat (WRIA 46) watershed plan, and the early planning stages of the Lake Chelan (WRIA 47) watershed plan. The goals and objectives of the above plans will be discussed in the appropriate WRIA subsections below.

The CCNRD also supports a regional salmon recovery effort, the Upper Columbia Salmon Recovery Board (UCSRB), and staffs the Chelan County Water Conservancy Board (Chelan County website).The mission statement of the UCSRB, whose planning area includes all of Chelan County except for the Chelan watershed, is:

> *"To restore viable and sustainable populations of salmon, steelhead, and other at risk species through collaborative, economically sensitive efforts, combined resources, and wise resource management of the Upper Columbia region."*

Restoration efforts throughout the County could focus on addressing the 12 factors for decline that were identified in the *Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan* (UCSRB 2007) for covered species. Areas for improvement may address the following factors:

- Social, Cultural, and Economic Factors
- Public Policy
- Management Actions
- Harvest
- Hatcheries
- Hydropower
- Habitat (includes alteration from land use practices, logging, mining, diversions, and other uses)
- Ecological Factors
- Factors Outside the ESU [Evolutionarily Significant Unit] and DPS [Distinct Population Segment]

- Interaction of Factors
- Current Threats
- Uncertainties

3.1.2 WRIA 40a/b

WRIA 40a Watershed Plan Restoration Objectives

The *WRIA 40a Watershed Plan* (RH2 Engineering, Inc. 2007) developed objectives for desired future conditions within the Squilchuck and Stemilt basins. Phase 1 (discussions) and Phase 2 (assessment work) of the Plan led to the development of three general principal recommendations, which are listed in the general order of the Planning Unit's priority:

1. Increase the availability of water, the reliability of the water supply, and/or increase water use efficiency.

2. Improve the management of water and related land resources in WRIA 40a.

3. Improve the understanding of the hydrology of WRIA 40a.

Objectives were organized by sub-basin, and ranked and revised based on the information obtained during the development of the *Water Quantity Assessment* (2007), the *Multi-Purpose Water Storage Assessment* (2007) and the preliminary draft of the Watershed Plan during WRIA 40a Planning Unit (Planning Unit) meetings (RH2 Engineering, Inc. 2007). Planning Unit objectives identified in the *WRIA 40a Watershed Plan* focus primarily water storage and address the three objectives listed in the plan and above. These are in the general order of ranking, as follows:

1. Perform emergency infrastructure repairs to ensure continued system operation.

2. Upgrade existing water reservoir storage and irrigation water distribution systems for water conservation and continued safety protection (fire suppression water). The availability of fire suppression water protects the watershed and natural resources within the WRIA. If this area were to experience a catastrophic wildfire, it would drastically impact the water balance in the area because of changes to runoff and evapotranspiration that would occur.

3. Implement cost-effective new water storage projects in both the Stemilt and Squilchuck Creek watersheds to sustain flow during the agricultural water use period and the fall low flow period.

4. Obtain needed data to enhance the water balance developed by RH2 as part of the watershed planning effort and consider the water balance in all decisions related to water supply in the WRIA 40a study area.

5. Evaluate artificial snow-making and reservoir construction at the Mission Ridge Winter Sports Area to determine opportunities for enhancing water delivery in terms of timing and flow in the Squilchuck Creek watershed.

6. Where feasible, transfer existing interruptible Columbia River water rights to non-interruptible sources. Coordinate with Ecology's Columbia River Water Management Program (CRWMP) to ensure this issue is adequately addressed in that effort.

7. Where feasible, provide domestic water from the regional water supply to support future residential and industrial development in WRIA 40a.

In addition to the objectives above, the *WRIA 40a Watershed Plan* (RH2 Engineering, Inc .2007) identifies the following goal toward implementing restoration:

8. Work with CCNRD and other State and local agencies to protect identified wetland, riparian and ground water recharge areas.

Planned and implemented restoration projects addressing goal number 8 are listed in Table 3-8 of the *Final WRIA 40a Detailed Implementation Plan* (WRIA 40a Planning Unit 2008). Habitat issues are addressed with projects that include channel connectivity, off-channel habitat, culvert removal and improvement, bank stabilization, and habitat enhancement.

WRIA 40a Watershed Plan Restoration Implementation Strategies, Benchmarks, and Funding

The *Final WRIA 40a Detailed Implementation Plan* (WRIA 40a Planning Unit 2008) calls for concurrent implementation of the three general principal recommendations and the eight objectives above. The Planning Unit applied the same prioritization process to each goal and objective. The Implementation Plan employs flexibility in its strategy so that variable water needs, available funds, and commitment to projects may be accommodated. The strategy calls for determining targets for instream flow and acceptable instream habitat loss by conducting studies on the Wenatchee River and tributaries. Periodic review is part of the strategy, as is the pursuit of funding through partnerships and innovative means. Implementation schedules depend on size and complexity of projects, funding, permitting, and the capacity of involved parties to complete projects. Near-term funded actions were scheduled for implementation in 2008

to 2011 at the time of Implementation Plan completion. Implementation of 50 percent of near-term unfunded actions (top-tier priority only) was scheduled for 2009 to 2013 implementation; the remaining 50 percent and 50 percent of second-tier projects are scheduled for 2014 to 2018. The remaining projects of second-tier priority are scheduled for implementation. All remaining second- and third-tier projects are to be implemented in 2019 to 2023. Evaluation of the status of water reservation is scheduled for every five years until 2025.

Three funding mechanisms are addressed in the Implementation Plan. Funds appropriated by the State legislature for watershed planning implementation will be used primarily for first- and second-tier projects and implementation of the *WRIA 45 Watershed Management Plan*. Secondly, implementing entities (Ecology, CCNRD, BOR, SRFB, and BPA, for example) have made unspecified finding commitments. Finally, grant funding will be coordinated with other processes, such as the Chelan County Lead Entity process and the CCD. Additional funds for projects not funded through these avenues may be sought from a variety of sources, included other State agency grants, other SRFB funding, BPA grants, and many private sources, which can be located through the Boise State University Finance Center website at http://efc.boisestate.edu/watershed/searchmenu.asp.

Washington Department of Fish and Wildlife Diversion Screening and Fish Passage Inventory Report for Colockum Creek, Stemilt Creek and Squilchuck Creek Objectives

The Washington Department of Fish and Wildlife (WDFW) completed a *Diversion Screening and Fish Passage Inventory Report for Colockum Creek, Stemilt Creek and Squilchuck Creek* in 2006. The goal of the inventory was to 1) assess unscreened or inadequately screened surface water diversions and 2) identify fish passage barriers and to assess the potential available habitat gain for each feature. Data obtained from the diversion screening and fish passage inventory and concurrent habitat survey will allow for prioritization for correction of noncompliant surface water diversions and fish passage barriers to ensure compliance with Washington State laws. The report identifies an additional goal toward shoreline restoration in WRIA 40a/b: In the area of Colockum Creek within the shoreline jurisdiction, at least five barriers to fish passage were identified. These are all recommended for removal or repair, as they block anadromous salmonids access to suitable habitat.

Washington Department of Fish and Wildlife Diversion Screening and Fish Passage Inventory Report for Colockum Creek, Stemilt Creek and Squilchuck Creek Implementation Strategies, Benchmarks, and Funding

The goals of the *Diversion Screening and Fish Passage Inventory Report for Colockum Creek, Stemilt Creek and Squilchuck Creek* (WDFW 2006) to assess surface water diversion and fish passage issues were largely completed during the inventory process. The results yielded the third goal in the preceding section, the removal

and/or repair of fish passage barriers. The potential fish barrier projects were also ranked and prioritized as part of the inventory. No timeline or implementation strategy was included in the analyses. This, a recommended first step would be to completed a detailed implementation plan for fish passage barrier projects in the three creeks. Potential funding sources include many of those listed in the preceding paragraph.

3.1.3 WRIA 45

Planning Unit Objectives

The Wenatchee Watershed Planning Unit, which includes Chelan County and the Cities of Wenatchee, Cashmere and Leavenworth, has a defined mission "to collaboratively develop a management plan for sustaining and improving watershed and community health." To implement this plan, the WRIA 45 Planning Unit's goal is to: "protect water resources, habitat and water use in a way that balances the educational, economic and recreational values associated with a healthy community." The WRIA 45 Planning Unit will work to achieve this goal by meeting the following three objectives:

1. Assess water supply and use, and develop strategies for meeting current and future needs for both in-stream and out-of-stream use (Water Quantity and Instream Flow Subcommittee).

2. Protect and enhance habitat of threatened and endangered and culturally important species throughout the Wenatchee Watershed, improving overall habitat function and connectivity (Habitat Subcommittee).

3. Address polluted water bodies that do not meet state and federal water quality standards (Water Quality Technical Subcommittee).

The WRIA 45 Planning Unit identified 25 opportunities for actions in the Wenatchee watershed, including six short-term actions and four hatchery-oriented actions. Details are covered in Volume 1 of the *Wenatchee Watershed Management Plan* (WWMP) (Wenatchee Watershed Planning Unit 2006). These recommended actions and planned implementation strategies meet the WRIA 45 Planning Unit's three objectives by indentifying watershed-wide actions (pertaining to instream flow, quantity, growth and land use, quality, habitat, implementation, and outreach) and sub-watershed specific actions. Tables 2-1 through 2-16 of the WWMP (2006) present summaries of the recommended actions and the agency(s) or entity(s) responsible for implementation; Table 2-6 lists specific implementation actions.

Planning Unit Implementation Strategies, Benchmarks, and Funding

The WWMP suggests that voluntary, cooperative measures are preferable to regulatory enforcement approaches. Implementation actions in the WWMP may need additional assessment and planning before implementation can proceed and responsibilities can be assumed, and that funding considerations may limit the implementation process, although federal entities are expected to support the strategies in the plan within the limits of available financial resources.

Funding sources for recommended actions would be determined by the implementation entity. Examples of potential private and public funding sources include Aquatic Lands Enhancement Account (ALEA), Bonneville Environmental Foundation Watershed Program, The Bullitt Foundation, Coastal Protection Fund (CPF), The Compton Foundation Environmental Grants, Family Forest Fish Passage Program (WDNR), Fish America Foundation Conservation Grant, Riparian Habitat Protection in the Washington Wildlife and Recreation Program (WWRP), and the UCSRB.

The UCSRB *Draft Upper Columbia Spring Chinook Salmon, Steelhead, and Bull Trout Recovery Plan* (2005) calls for administrative reviews to assess project implementation success, as well and for monitoring of recovery actions for their effectiveness in fulfilling goals. The WWMP also recommends an adaptive management strategy for actions that may require further development, additional data collection, or subsequent modification.

The *Wenatchee River Integrated Status and Effectiveness Monitoring Program* (ISEMP) is also in place to evaluate and document the progress and success of habitat actions. The ISEMP is a collaborative effort funded through various federal, state and local efforts. It builds on existing monitoring programs and consists of pilot status and trend monitoring efforts for anadromous salmonids and their habitat, as well as effectiveness monitoring for suites of habitat restoration projects in the Wenatchee Watershed.

Wenatchee River Channel Migration Zone Study Objectives

CCNRD conducted a *Wenatchee River Channel Migration Zone Study-Phase I* in 2003. The purpose of the CMZ Study Phase I was to provide the technical foundation to allow the selection and prioritization of salmonid habitat restoration, enhancement, and preservation projects (Jones and Stokes Inc. 2004). The study objectives were to 1) evaluate historic changes in channel behavior and vegetation for the lower Wenatchee River (from Leavenworth to the mouth) and some of its tributaries (mouths of the Icicle, Peshastin and Mission Creeks, and the lower four miles of Nason Creek), 2) project areas where these rivers and streams may migrate or erode their banks in the future, and 3) identify potential restoration sites to improve salmon habitat (CCNRD website).

Phase II of the CMZ Study was subsequently completed to quantify physical and biological mechanisms linked to the salmonid habitat limiting factors, and prioritize potential habitat restoration, enhancement, and preservation actions. Twenty-four restoration sites were selected for preservation, enhancement, or restoration. The sites included areas that could be preserved because of their existing high-quality habitat adjacent to the Wenatchee River, and their need for additional off-channel habitat and riparian vegetation. The CCNRD has made it a goal to restore and protect these 24 sites.

Wenatchee River Channel Migration Zone Study Implementation Strategies, Benchmarks, and Funding

Potential restoration and protection opportunities are reviewed by CCNRD in an ongoing manner. No timetable or implementation strategy specific to the 24 sites listed in the CMZ study exists. Rather, the sites will be considered as viable options for restoration and preservation activities discussions. Funding for restoration and preservation projects may differ, as some public funds and private entities may be available solely for one of these project types. For example, one of the projects (identified as CMZ 2, and referenced in the WWMP) was initiated by a private property owner and then was finalized and will be constructed by the Yakama Nation using Bonneville Power Administration mitigation funds. The Boise State University Finance Center website (http://efc.boisestate.edu/watershed/searchmenu.asp) provides a potential listing of available grants and other funds for the projects and sites suggested in the CMZ study.

Upper Valley Plan Objectives

A Steering Committee and the Chelan County Public Utilities District (CCPUD) partnered to develop a vision plan with opportunities for the upper Wenatchee River valley, including the communities of Leavenworth, Peshastin, Dryden, Cashmere, and Monitor. They identified goals, objectives and a list of potential river access sites and fisheries enhancement opportunities along the Wenatchee River.

A summary of the *Upper Valley Plan*'s purpose was to: 1) identify interpretive sites, river access points, and fisheries and wildlife enhancement opportunities along the Wenatchee River corridor, that have the potential to increase the public's knowledge and understanding of CCPUD's salmon and wildlife habitat enhancement programs; and to 2) build on existing tourism by creating attractions, new tourism opportunities (with an emphasis on the environment, education, recreation, culture, and art), visibility of the valley's resources, leveraging efforts of other groups that share common goals, and protect and enhance natural habitats (J.T. Atkins & Company PC. 2003). The plan identifies opportunity sites in:

1. Leavenworth (at the Leavenworth National Fish Hatchery, Blackbird Island, Icicle Creek/Wenatchee River confluence, irrigation projects, Wenatchee River habitat work, Icicle Loop Trail, potential interpretive trail at an old railbed site east of Leavenworth, gateway for "back roads" scenic drive, and Trout Unlimited projects).

2. Peshastin (at an old mill site, mill intake station, old railroad corridor, Kiwanis Park, Main Street, a historic log structure, Peshastin Creek/Wenatchee River confluence, and at railroad bridge and sandy beach).

3. Dryden (at a beaver pond site, dam site, powerhouse site, old school site, downtown Dryden, old dump site and public access above railroad and between railroad and SR 2).

4. Cashmere (at the Chelan Co. museum, a fishing hole on the north shore of the Wenatchee R., Old Mill, Raft Park and PUD kiosk, a flood area below Bethlehem construction, Goodwin Bridge, and Devil's Gulch mountain bike area).

5. Monitor (at Sleepy Hollow viewpoint, Green Bridge, gateway for "back roads" scenic drive, irrigation site, Monitor Bridge, riparian area, Chelan Co. Park, Wenatchee Foothills trail).

Upper Valley Plan Implementation Strategies, Benchmarks, and Funding

Implementation plans for the Upper Valley Plan goals begin obtaining 501c3 for the Steering committee, hiring a project director, and acquiring office space and equipment. Community meetings and meetings with reviewing agencies to determine permitting requirements are the following step. The remainder of the plan is aimed at identifying and procuring funding. Potential funding sources are not specified but may include both acquiring project specific funds from private and public entities as well as teaming to complete projects with existing programs and groups such as the Chelan-Douglas Land Trust, Washington State Department of Transportation, The Audubon Society, and CCNRD.

Washington Department of Ecology Total Maximum Daily Load (TMDL) Objectives

The U.S. Environmental Protection Agency (EPA) has approved a TMDL (the Wenatchee River Watershed Dissolved Oxygen and pH Total Maximum Daily Load Water Quality Improvement Plan (TMDL) (Ecology 2009). The TMDL identified three water bodies in the project area exceeding dissolved oxygen standards and six exceeding pH standards. The overarching goal of the TMDL plan is to meet water quality standards; thus, the goal is to reduce total phosphorus from point and nonpoint sources to the Wenatchee River. The timeline for compliance with water quality standards is 10 years from TMDL

approval, or 2019. Fifty specific activities and goals are identified in Table 5 of the TMDL. They include supporting and regional phosphorus reduction activities, point and nonpoint source activities, facility planning and design, monitoring activities, and habitat improvements.

Washington Department of Ecology Total Maximum Daily Load (TMDL) Implementation Strategies, Benchmarks, and Funding

Three phases and a number of targets are defined to track progress toward goals. Timelines are in Table 3 of the TMDL and summarized below:

Phase/Target	Definition	Timeline
Phase 1	Point and nonpoint source reductions, data collection and model calibration	2009-2013
Target 1	50% nonpoint source loading reduction	2014
Phase 2	Modification of load and wasteload allocations (if needed); identification of additional nonpoint source reductions	2014-2015
Phase 3	Additional load reductions implemented	2015-2019
Target 2a	NPDES compliance	2019
Target 2b	Reduction in remaining nonpoint source poading	2019
Final Target	Water quality standards achieved	2019

Dissolved oxygen and pH data will be collected every five years to monitor progress toward the goals. Adaptive management will be employed to ensure that goals are achieved. Compliance monitoring will continue after compliance with water quality standards is achieved.

A number of funding resources presently support the TMDL or will potentially provide technical assistance or monetary support as projects are implemented. These sources include the CCD, which is a current recipient of a Centennial Clean Water Fund grant for TMDL activities; CCNRD, which provides incentive payments for implementation of riparian restoration activities; NRCS, which provides technical assistance to farmers and ranchers and may also be a funding source; and a number of jurisdictions and entities, including Chelan County, the Chelan County PUD, and the Cities of Wenatchee, Leavenworth, and Cashmere, have all shown interest in investigating sources of nonpoint source phosphorus loading.

3.1.4 WRIA 46

Planning Unit Objectives

The Entiat sub-basin community is recognized as being a leader in restoration planning, implementation and monitoring. The Entiat Watershed Planning Unit (EWPU) has won three awards for its restoration and planning efforts. Restoration projects have been designed and implemented by a variety of agencies, including BLM, WDFW, USFS, and the Natural Resources Conservation Service (NRCS).

The EWPU consists of Entiat valley landowners, government and non-government employees, and other stakeholders. The revised vision of the EWPU (adopted 19 April 2000) is to "voluntarily bring people together in a collaborative setting to improve communication, reduce conflicts, address problems, reach consensus and implement actions to improve coordinated natural resource management on private and public lands in the Entiat Water Resource Inventory Area (WRIA 46)" (CCCD 2004).

The EWPU's *specific goals* are as follows:

1. Optimize quantity and quality of water to achieve a balance between natural resources and human use, both current and projected.

2. Provide for coexistence of people, fish and wildlife while sustaining lifestyles through planned community growth, and maintaining and/or improving habitats.

3. No avoidable human-caused mortality of state and federal threatened, endangered and candidate species.

4. Develop and implement an adaptive action plan to address priority issues, emphasizing local customs, culture and economic stability in balance with natural resources. All actions will comply with existing laws and regulations. However, changes to existing laws and regulations will be recommended as needed to attain our common vision and avoid one-size-fits-all solutions.

5. Recognizing the significance of the roles of limiting factors outside of the watershed and natural events within the watershed, the long-term goal is to have the Entiat River's existing and future habitats contribute to the recovery of listed species and to eventually provide harvestable and sustainable populations of fishes and other aquatic resources.

Planning Unit Implementation Strategies, Benchmarks, and Funding

The *Detailed Implementation Plan Entiat Water Resource Inventory Area (WRIA) 46* (CCCD 2006) provides a framework for implementing habitat restoration actions. The strategy first prioritizes geographic location; next, biological data and primary limiting factors are considered in the prioritization process. While implementation strategies pertain primarily to water quantity and instream flow issues (See Chapter 9 of the *Detailed Implementation Plan*), the *Entiat Water Resource Inventory Area (WRIA) 46 Management Plan* (CCCD 2004) resulted in a number of potential habitat projects that are also recommended for consideration. The Plan places importance on channel restoration, LWD placement, side channel and floodplain reconnection, streamside revegetation, fish passage, and community outreach.

Monitoring strategies outlined in the plan focus on maintaining favorable natural resources trends, implementing habitat improvements that address limiting factors, and ensuring that Management Plan (CCCD 2004) goals are being met. Monitoring items (e.g., water quality, noxious weeds, wetlands, etc.) are identified; monitoring techniques appropriate to the type of project are suggested; the responsible entities are identified; and a monitoring schedule (frequency and duration) specific to the project type is determined. Evaluation of monitoring results is required to meet legal responsibilities, and adaptive management is recommended. Funding sources include Ecology Phase 4 grant funds, general Washington Conservation Commission/ County operating funds, federal operating funds and legislative appropriations, partner grants, and agreements.

The EWPU hopes that their "living" watershed management plan will grow, advance, and improve over time. In keeping with that spirit, the EWPU views this document as a "working" *Entiat Water Resource Inventory Area (WRIA) 46 Management Plan* (CCCD 2004). The EWPU fully anticipates that the Plan will be revisited and updated in the years to come. Within Appendix A of the *Entiat Water Resource Inventory Area (WRIA) 46 Management Plan* (CCCD 2004), the EWPU proposed 21 potential restoration projects within the Entiat sub-basin and 3 projects within minor Columbia River tributaries. This living and working document can be found online at the Cascadia Conservation District website at: http://www.cascadiacd.org/index.php?page_id=255.

Entiat Tributary Assessment

The Bureau of Reclamation (BOR) (U.S. Department of the Interior) recently completed an *Entiat Tributary Assessment* (2009) that summarized impacts and restoration opportunities related to channel and floodplain complexity in the lower 26 river miles of the Entiat River. This information is intended to provide technical information to decision makers to assist with restoration planning

efforts. To summarize, human impacts to the Entiat River channel and floodplain primarily occur within the lower 26 river miles, and have not significantly altered the large-scale morphological characteristics of the river. Impacts are generally limited to localized areas where specific disturbances have occurred (i.e. levees or channelization) and do not extend far upstream or downstream of the impacted area (BOR 2009).

The analysis provided the extent of human impacts to river processes that may offer opportunities for restoration. In turn, this analysis also showed where river processes have not been significantly impacted and offers opportunities for protection from future anthropogenic impacts.

In the *Entiat Tributary Assessment* (BOR 2009), Table 17 summarized findings for geomorphic reaches within three valley segments. The BOR successfully identified opportunities for improving habitat complexity through channel and floodplain restoration or enhancement efforts. Six reaches had the highest potential to improve steelhead or spring Chinook salmon habitat complexity by addressing present impacts, and four reaches were recommended for further analysis prior to development of recommended restoration concepts. Recommendations for additional analysis included addressing habitat, vegetation, hydraulic, and morphology data gaps.

Upper Columbia Salmon Recovery Plan Objectives

The *Upper Columbia Salmon Recovery Plan* (UCSRB 2007) identified general habitat actions for the Lower Entiat and Middle Entiat to address limiting factors that include:

1. Riparian restoration: Improving riparian conditions along the Entiat River and adjacent floodplain to improve bank stability, shading, and potential for LWD recruitment.

2. Floodplain restoration and enhancement: Improving channel and floodplain function including increased connectivity where blocked off, increased lateral migration and reworking of the active floodplain where artificially constrained, and addressing altered channel geometry where it has been disrupted due to channel straightening or bank protection.

3. LWD restoration and enhancement: Increasing amounts of LWD in the main channel or off-channel habitat areas, taking into account the role of LWD for a given geomorphic setting.

4. In-channel restoration: Generally implies construction of in-channel features to create man-made scour pools and slower velocity areas where channel and floodplain restoration cannot occur due to existing land use

constraints, or where new habitat is desired to increase habitat availability to mitigate for other impacts possibly even those outside of the subbasin.

5. Road maintenance: Addressing bridges and roads that are no longer in use or that impede channel and floodplain processes, particularly those with embankments that alter floodplain inundation. Floodplain inundation may be more frequent in areas upstream of constricted floodplain sections (backwater), or may be less frequent in areas no longer accessible due to features that cut off access to the floodplain

6. Obstruction restoration: Removing barriers to fish migration; no fish passage issues were identified along the mainstem Entiat River

7. Water quality and quantity: Improvement of water characteristics including temperature, nutrients, contaminants, and flow quantity during low-flow periods.

Upper Columbia Salmon Recovery Plan Implementation Strategies, Benchmarks, and Funding

Implementation of the above actions is intended to be voluntary under the coordination of a UCSRB Implementation Leader, to be hired, and Implementation Team. The Team will facilitate implementation, monitoring, and adaptive management of projects. Responsibilities of the Team will include identifying benchmarks for each project, tracking progress, preparing progress reports for the public and interested agencies and entities, incorporating the Upper Columbia Regional Technical Team's (RTT) (created by the UCSRB to recommend region-wide approaches to protect and restore salmonid) work to ensure that effective monitoring and analysis are implemented.

The adaptive management strategy will employ a Water Action Team (WAT) to work with UCSRB to update implementation schedules if needed, and to facilitate monitoring to promote consistency across the region. A representative nominated by the WAT will coordinate funding sources, implementation schedules on a regional scale, monitoring, and adaptive management. The RTT will also be responsible for project technical review. Detailed monitoring and review processes for the Recovery Plan as a whole are described in the Plan (UCSRB 2007).

Funding sources for the restoration projects taken from the UCSRB Recovery Plan (2007) are the following:

1. The Washington Salmon Recovery Board

2. PUD funds

3. The BPA Fish and Wildlife Program
4. The Federal Columbia River Power System Biological Opinion
5. State agencies budgets (WDFW, Ecology, Conservation Districts
6. NMFS Pacific Coast Recovery Fund
7. Federal agencies monies appropriated by the U.S. Congress (Corps, USFWS, USGS, USFS, NRCS, BOR, and BLM)
8. Local government finding through state legislative appropriations
9. NGOs, including the National Fish and Wildlife Foundation, regional fishery enhancement groups, and the Bullitt Foundation
10. NOAA's Community-Based Restoration Program
11. Public and private partnership funding for voluntary projects

3.1.5 WRIA 47

WRIA 47 Final Draft Planning Unit Charter Objectives

The Lake Chelan Watershed (WRIA 47) Planning Unit's vision is to "recognize, inform, educate, monitor, understand and protect the unique water resource that is Lake Chelan; the ecological processes and pathways essential to maintaining this high quality water body, and the ways in which we can live on this lakeshore, enjoy this unique treasure and protect it for generations to come."

The WRIA 47 Planning Unit has the goal "to implement a management plan for water use and protection that sustains the environmental, educational, economic and recreational values associated with a healthy lakeside community and watershed." The following objectives were outlined in the *WRIA 47 Final Draft Planning Unit Charter* (2008):

1. Assess water supply, use and projected needs.
2. Develop and implement a comprehensive, long-term monitoring program of key parameters that will ensure water quality sustainability throughout the Lake Chelan Watershed.
3. Address waterbodies with constituents on the State 303(d) list and other parameters of potential concern that threaten lake water quality.
4. Inform and educate local communities and visiting populations about water quality protection.

5. Develop a Water Quality Improvement Plan and Water Quality Management Plan to understand, restore and protect water resources.

WRIA 47 Final Draft Planning Unit Charter Implementation Strategies, Benchmarks, and Funding

Strategies for achieving the plan objectives are summarized as follows in the *WRIA 47 Final Draft Planning Unit Charter* (2008):

1. Fully engage all stakeholders through an open, accessible and collaborative process.

2. Develop clear objectives, decision-making and evaluation processes, and planning products to ensure accountability for implementation.

3. Identify gaps in the understanding of water resource issues within the watershed. Develop a scope of work to address important issues using credible scientific information to understand, protect and restore the most critical aspects of a healthy watershed.

4. Use new and existing information to forge a plan to meet stated objectives.

5. Integrate the watershed planning process and ensuing plan with other programs, initiatives and activities affecting the Lake Chelan Watershed.

As a separate goal, a Watershed Plan is presently being completed and will include restoration goals and recommendations. CCNRD is the lead entity on this project, proposed for draft submittal to the CCNRD in June 2010.

Funding of the efforts will be pursued on a project-by-project basis by various lead entities, including the initiating governments of WRIA 47 under the Watershed Planning Act (RCW Chapter 90.82). These governments are Chelan County, the City of Chelan, and the Lake Chelan Reclamation District. Each of these initiated the watershed planning process by applying for grants from Ecology. Implementation funds for recommended actions will be drawn from a number of grants and other sources, including State grants of up to $500,000 per WRIA. No timeline is defined for the general goals. A number of them overlap with other plans and activities described in this document.

Lake Chelan Subbasin Plan Objectives

The *Lake Chelan Subbasin Plan* (Berg 2004) established the goal to "restore conditions to a more natural state" by employing "ecosystem-based perspectives that consider multiple species, their life histories, and their inter-relationships." The Subbasin Plan includes a detailed inventory, and concludes with a number of habitat or biological objectives for key species and key habitats in the basin.

Many of the objectives are to conduct additional species/habitat assessments, "identify and provide biological and social conservation measures to sustain focal species populations and habitats," and in a number of instances to "[m]aintain and/or enhance habitat function (i.e., focal habitat attributes) by improving silvicultural practices, fire management, weed control, livestock grazing practices, and road management..." Below are terrestrial and aquatic general restoration and conservation strategies suggested in the *Lake Chelan Subbasin Plan* (2004):

Terrestrial

- Improve habitat quantity and quality by emphasizing conservation, protection, and connectivity of large blocks of high quality focal habitat.
- Protect and restore beaver habitat and, where possible, prepare for reintroduction into suitable habitat where natural recolonization may not occur.

Aquatic

- Increase populations of westslope cutthroat trout by reducing direct harvest impacts and eliminating introductions of, and/or removing, non-native species.
- Reintroduce bull trout to form self-sustaining nonmigratory populations. Measures that support this goal include reducing abundance of non-native fish, maintaining suitable habitat and ecosystem-wide processes, and increasing harvest on competitor or predator fish.
- Increase the abundance and productivity of kokanee to ensure self-sustaining populations by increasing harvest of Chinook salmon and lake trout, reducing the abundance of mysids, and planting appropriate numbers of hatchery fish.

Lake Chelan Subbasin Plan Implementation Strategies, Benchmarks, and Funding

The Lake Chelan Subbasin Plan outlines suggested strategies toward achieving the goals listed above. These are summarized for terrestrial and aquatic goals.

Terrestrial

A general strategy to move toward the goal of terrestrial habitat protection and conservation is described in the Subbasin Plan: "Strategies to achieve this goal include promoting local planning and zoning, utilizing governmental plans and programs, implementing habitat stewardship projects with private landowners, and protecting lands through acquisition, conservation easements, and cooperative agreements."

Another proposed general strategy addresses beaver habitat directly: "Both the fish and wildlife portions of this management plan provide strategies to protect

and restore beaver habitat and, where possible, to prepare for reintroduction into suitable habitat where natural recolonization may not occur. The restored habitat would benefit beaver, whose activities would in turn benefit the salmon and steelhead that use the watershed for a portion of their life history...The plan also provides for the maintenance of mule deer populations and ensures their habitat needs are met."

Strategies and recommendations call for the involvement of government, NGO and/or land managers, or some coordinated effort between these groups.

Specific strategies and suggested timelines include the following actions:

- Identify existing quantity and quality of habitat (2008).
- Survey populations of focal species (2008).
- Utilize existing government and private programs to conserve habitat, with priority for large blocks and high connectivity (2010).
- Develop and implement fire management protocols (protection and prescribed burning), and weed control and road management plans (unspecified/subsequent to 2010 strategies).
- Monitor wildlife focal species (unspecified/subsequent to 2010 strategies).
- Implement federal, state and tribal management and recovery plans (unspecified/subsequent to 2010 strategies).
- Institute beaver protections, including harvest restrictions and reintroduction (unspecified/subsequent to 2010 strategies).

Aquatic

The Subbasin Plan generally calls for promoting self-sustaining kokanee and westslope cutthroat trout through harvest reduction and eliminating non-native species, and for reintroducing bull trout. The following strategies are aimed at achieving the aquatic goals of the Subbasin Plan.

- Eliminate introductions of nonnative species that may impact westslope cutthroat trout by completing a comprehensive stocking plan (complete by 2010).
- Remove cutthroat trout spawning barriers (remove in first year, monitor spawning activity and success in two subsequent years).
- Increase Chinook salmon and lake trout harvest limits (plan for decreased abundance by 2015).
- Remove brook trout and rainbow trout harvest limits (plan for decreased abundance by 2015).
- Identify early life history requirements of cutthroat trout and determine whether kokanee spawning interferes with fry emergence (studies should span 6 to 10 years, with yearly reports).

- Examine life history requirements of other species that may interact with cutthroat trout (studies should be two years in length with draft and final reports).
- Delay fishing season until after cutthroat trout spawning.
- Determine if bull trout are present in the basin through exploration of potential habitat areas (study should be two years in length with draft and final reports).
- Preserve or restore bull trout spawning habitat.
- Reduce abundance of competing introduced fish (2010).
- Determine predator-prey relationships for Chinook salmon and lake trout (Five-year study effort with yearly reports).
- Institute bull trout reintroduction program (2010).

Funding sources for recommended actions are not specified. However, funding for each project could be pursued from a variety of sources, including those specified elsewhere in this document.

3.2 City of Cashmere

The *City of Cashmere Comprehensive Land Use Plan* (2008) is intended to be a guide for the growth and development within and surrounding the community that is both sensitive to the environment and to guide the needs of the community residents. Environment-related goals of the plan are as follows:

1. Encourage the most appropriate use of land throughout the community.

2. Conserve and protect and restore natural beauty and other natural resources.

The City of Cashmere is a member of the Wenatchee Watershed Planning Unit, and as such is committed to supporting the relevant objectives and actions of the *Wenatchee Watershed Management Plan.* As reported in the *Shoreline Inventory and Analysis Report* (TWC and J&S 2009), the *Wenatchee Watershed Management Plan* (Wenatchee Watershed Planning Unit 2006) includes four specific habitat actions for the Lower Wenatchee Watershed, which includes the City of Cashmere:

- LowWenH-1: Use practical and feasible means to increase stream flows (within the natural hydrologic regime and existing water rights) in the Wenatchee River (UCSRB 2005).
- LowWenH-2: Reduce water temperatures by restoring riparian vegetation along the river (UCSRB 2005).
- LowWenH-3: Increase habitat diversity and quantity by restoring riparian habitat along the Wenatchee River, reconnecting side channels and the

floodplain with the river, and increasing large woody debris in the side channels (UCSRB 2005).
- LowWenH-4: Protect existing riparian habitat and channel migration floodplain function (UCRTT 2002).

Five separate habitat actions, as follows, are included for the Mission sub-watershed:

- MissionH-1: Re-establish connectivity throughout the assessment unit by removing, replacing, or fixing artificial barriers (culverts and diversions) (UCSRB 2005).
- MissionH-2: Use practical and feasible means to increase stream flows (within the natural hydrologic regime and existing water rights) in Mission Creek (UCSRB 2005).
- MissionH-3: Decrease water temperatures and improve water quality by restoring riparian vegetation along the stream (UCSRB 2005).
- MissionH-4: Reduce unnatural sediment recruitment to the stream by restoring riparian habitat and improving road maintenance (UCSRB 2005).
- MissionH-5: Increase habitat diversity and quantity by restoring riparian habitat, reconnecting side channels and the floodplain with the channel, increasing large woody debris within the channel, and by adding instream structures (UCSRB 2005).

Several of the water-quality actions for the lower Wenatchee watershed address inputs of nutrients, particularly phosphorus to the Wenatchee River. Many parks and other intensively maintained lawns or landscape areas are potential sources of nutrient run-off. The Plan specifically mentions a need to reduce phosphorus inputs from wastewater treatment plants, including the City of Cashmere's facility, and notes that the City is one of several members of a partnership formed to address dissolved oxygen and pH problems that are related to phosphorus. The Plan also includes 19 water-quality actions in the Lower Wenatchee Watershed and 33 water-quality actions for the Mission sub-watershed.

The *Wenatchee Watershed Management Plan* provides guidelines regarding implementation strategies, timelines, and potential funding sources. These are described in Section 3.1.3 of this document.

3.3 City of Chelan

The *City of Chelan Comprehensive Land Use Plan* (2007) is intended to implement comprehensive land use planning at the local level, maintain local decision making power, and promote desired changes. An element to the Plan is the

Parks and Recreation Comprehensive Plan 2008-14 (2007). The mission of the Chelan Parks and Recreation Department is to "build a great community through people, parks, and programs." It also includes a commitment to managing and expanding the community's resources, including conservation of natural resources and support for the City's economic vitality (City of Chelan Parks and Recreation Department 2007).

The Department established goals and objectives, including priority actions. The environment protection goal is listed below.

PRG 6.0: Protect and preserve as open space areas that: are ecologically significant sensitive areas; provide significant opportunities for restoration buffers between uses and link open space; provide trails and/or wildlife corridors; or enhance fish habitat.

The City of Chelan's *Strategic Plan 2008-2009* (2008) vision statement includes relevant information "to preserve and improve the quality of life for the citizens of the community and for visitors to the area by achieving/creating....the preservation of natural resources and water quality....and a commitment to maintaining existing city resources/facilities" (City of Chelan 2008). The City of Chelan's mission statement again mentions the provision of "maintenance and preservation of existing resources/facilities/neighborhoods with a focus on community sustainability...." (City of Chelan 2008). The relevant strategic goal and objectives were defined as follows:

- Goal: To improve the quality of life and environment in the Lake Chelan area;

- Objective: Complete Don Morse Park Master Plan and initiate phased development with a focus on shoreline stabilization, beach enhancement, and reassessment of size of marina;
- Objective: Create a City sustainability plan.

As previously mentioned, the City of Chelan is an initiating government in development of a watershed management plan for the Chelan watershed. Because this plan is still in preparation, there are currently no identified projects or timelines. However, the City is committed to developing and implementing its future actions and/or programs consistent with the already agreed upon goals and objectives. See discussion under 3.1.5 above for more detail.

3.4 City of Entiat

In the *City of Entiat Comprehensive Land Use Plan* (2009), the Entiat Planning Area Statement of Intent is:

> *"to provide a guide for development for the citizens of the Entiat Planning Area. The plan will strive to maintain the existing quality of life that includes: culture, customs, economy, agricultural opportunities, sense of community, water quality, and recreational opportunities. This plan should provide for expansion of these opportunities and promotion of commercial waterfront development, while maintaining an adequate infrastructure to accommodate this growth. Continuous public participation is warranted, with decision-making and implementation at the local level."*

The City of Entiat believes that goals provide the motivating force behind all planning efforts. Therefore, the following goals related to environmental protection or restoration were established utilizing provisions of the Shoreline Management Act and Guidelines as a basic theme, in combination with the ideas and evaluation of the Citizens Advisory Committee (from City of Entiat 2009a, Section 6.1):

1. Promote reasonable and appropriate use of the shorelines which will not jeopardize public and private interests.

2. Protect against adverse effects to the public health, the land, its vegetation and wildlife, and the waters and their aquatic life within Chelan County.

3. Protect rights of navigation.

4. Recognize and protect private property rights.

5. Maintain or recreate a high quality of environment along the shorelines of the County.

6. Preserve and protect fragile natural resources and culturally significant features.

7. Increase public access to publicly owned areas of the shorelines where increased levels are desirable.

8. Protect public and private properties from the adverse effects of improper development in hazardous shorelines areas.

9. Recognize the importance of an informed and responsible public, observing basic rules of good behavior in the use and enjoyment of all shorelines.

In the case of those shorelines that have been designated as having statewide significance, the City of Entiat recognizes the following protection goals (City of Entiat 2009a, Section 6.2):

1. Recognize and protect statewide interest.
2. Preserve or enhance the natural character of the shoreline.
3. Address uses which result in long-term over short-term benefit.
4. Protect the resources and ecology of the shorelines.
5. Increase public access to publicly owned areas of the shorelines where increased use levels are desirable.
6. Increase recreational opportunities on the shorelines open to the public.

More specific goals that include an environmental protection element are as follows (City of Entiat 2009a, Section 6.3):

Economic Development Goal: Permit those commercial and industrial[3] developments requiring shorelines locations which may contribute to the economic well-being of the City of Entiat with minimum disruptions of the environment.

Public Access Goal: Assure safe, convenient and diversified access to the public shorelines of the City of Entiat; assure that the intrusions created by public access will not endanger life or have adverse effects on property or fragile natural features; assure that the provisions for public access will minimize conflicts between public and private property.

Circulation Goal: Since the major transportation systems pre-exist near many shorelines, additions or modifications to these systems should minimize the conflicts between those systems and shorelines uses.

Recreational Element Goal: Assure diverse, convenient, and adequate recreational opportunities along the public shorelines of the City of Entiat for the local residents and a reasonable number of transient users.

Shoreline Use Goal: Assure an appropriate pattern of sound development in suitable locations without diminishing the quality of environment along the shoreline of the City of Entiat.

[3] Note: The City will be updating this goal in a future Comprehensive Plan update as industrial development will not be allowed in the City's shorelines.

Historical/Cultural Element Goal: Protect and restore areas having significant historic, cultural, educational, or scenic values.

Conservation Goal: Assure preservation of unique, fragile and scenic elements; assure conservation of non-renewable natural resources; assure continued utilization of the renewable resources such as timber, water and wildlife.

Rehabilitation Goal: Encourage the restoration of shoreline areas which have been modified, blighted, or otherwise disrupted by natural or human activities.

The City of Entiat was an initiating government and is a member of the Entiat Watershed Planning Unit (EWPU), and as such has committed to "coordinat[ing] their policy and planning activities in a manner that compliments and helps support overall EWPU goals" (Chelan County Conservation District 2006).

3.5 City of Leavenworth

As reported in the *Analysis Report* (TWC and J&S 2009), the City of Leavenworth is engaged in a number of cooperative restoration efforts with Trout Unlimited and U.S. Fish and Wildlife Service (USFWS). The City is working with Trout Unlimited to enhance ponds in public recreation areas, including Enchantment Park and Blackbird Island. The north channel of the Wenatchee River around Blackbird Island is the subject of a study by USFWS for inclusion of large woody debris to provide instream habitat.

The City of Cashmere is a member of the Wenatchee Watershed Planning Unit, and as such is committed to supporting the relevant objectives and actions of the *Wenatchee Watershed Management Plan.* Four habitat actions for the lower Wenatchee watershed previously mentioned for the City of Cashmere (identified in the WWMP) are relevant to City of Leavenworth's Wenatchee River and Chumstick Creek shorelines. Five separate habitat actions, as follows, are included for the Chumstick sub-watershed, which is located for a small area at its downstream end in the City of Leavenworth:

ChumH-1: Re-establish connectivity throughout the assessment unit by removing, replacing, or fixing artificial barriers (culverts and diversions) (UCSRB, 2005).

ChumH-2: Use practical and feasible means to increase stream flows (within the natural hydrologic regime and existing water rights) in Chumstick Creek (UCSRB, 2005).

ChumH-3: Decrease water temperatures and improve water quality by restoring riparian vegetation along the stream (UCSRB, 2005).

ChumH-4: Increase habitat diversity and quantity by restoring riparian habitat, reconnecting side channels and the floodplain with the channel, increasing large woody debris within the channel, and by adding instream structures (UCSRB, 2005).

ChumH-5: Protect remaining floodplain and riparian habitat (UCRTT, 2002).

Several of the water-quality actions for the lower Wenatchee watershed address inputs of nutrients, particularly phosphorus to the Wenatchee River. The *WWMP* (WWPU 2006) specifically mentions a need to reduce phosphorus inputs from wastewater treatment plants, including the City of Leavenworth's plant, and notes that the City is one of several members of a partnership formed to address dissolved oxygen and pH problems that are related to phosphorus. To date, the cities and town sites within the Upper Valley area are working to determine all sources of phosphorus contamination, as there appears to be very little loading capacity for phosphorus in the area. The *WWMP* (WWPU 2006) also includes 20 water-quality actions in the Chumstick sub-watershed.

3.6 City of Wenatchee

The *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2008) states that "scenic resources and open space have become topics of community preservation and value. These natural resources are intrinsic to Wenatchee's identity and attraction and need to be protected." The Wenatchee vision statement identified by locals in 2002 reads, "the City will protect and enhance its natural setting and environmental quality, including the surrounding hillsides, shorelines, and scenic vistas."

The City of Wenatchee and the CCPUD developed a long range *Wenatchee Waterfront Sub-Area Plan* (2003). Plan goals and objectives look at the Waterfront as a whole and identified what needs to happen on a global perspective. Environment protection goals are as follows:

Parks, Recreation, and Shoreline Goal: Preserve and enhance Wenatchee's system of waterfront park and trails.

Shoreline and Environment Goal: Upgrade the environmental quality of the shoreline and larger waterfront area.

More information about this Sub-Area Plan is available online at the City's website: http://www.wenatcheewa.gov/Index.aspx?page=79.

The City of Wenatchee was an initiating government and is a member of the Wenatchee Watershed Planning Unit, and as such is committed to supporting the relevant objectives and actions of the *Wenatchee Watershed Management Plan.* The four habitat actions for the lower Wenatchee watershed previously mentioned for the City of Cashmere (identified in the *WWMP* 2006) are relevant to City of Wenatchee's Wenatchee River shoreline.

4. List of Existing and Ongoing Programs

4.1 WRIA 40a/b Watershed Plans

As reported in the *Shoreline Inventory and Analysis Report* (TWC and J&S 2009), the *WRIA 40a Watershed Plan* (RH2 Engineering, Inc. 2007) was the deliverable for Phase 3 of the watershed planning process. Phase 4, the implementation plan, is currently underway. Opportunities and strategies for carrying out each of the three principal recommendations presented in Section 3.1.2 above are presented in Table 3 of the *WRIA 40a Watershed Plan* and described in detail in the Plan's Section 3.3. These opportunities will be further evaluated in Phase 4 (implementation) and prioritized based on their feasibility to achieve the desired future conditions in WRIA 40a.

Implementation goals were identified in Appendix D (*Water Quantity Assessment*) and Appendix E (*Multi-Purpose Storage Assessment*) of the *WRIA 40a Watershed Plan* (RH2 Engineering, Inc. 2007). Goals were ranked according to their level of importance and will be implemented by the WRIA 40a Planning Unit as funds become available.

4.2 WRIA 45 Watershed Plans

The WRIA 45 Planning Unit explains in their *Phase IV – Detailed Implementation Plan* [(DIP) April 2008] that:

> *"The Wenatchee Watershed (WRIA 45) has been listed by the State Department of Ecology as one of the 16 basins in the state with critical and inadequate streamflows for fish."*

The WRIA 45 Planning Unit therefore developed an approach and ranking strategy to prioritize actions for implementation of the *WWMP* (WWPU 2006). The DIP (WWPU 2008) provides priorities and a practical schedule for implementing actions previously identified in Volume 1 of the *WWMP* (WWPU 2006), along with additional salmon recovery and water quality related actions that have evolved since the DIP was adopted. This management tool targets the

status and completion of existing and ongoing projects, and can be found in Table 3-2 of the WRIA 45 Planning Unit's *Phase IV – Detailed Implementation Plan* (WWPU 2008).

4.3 WRIA 46 Watershed Plans

The *Entiat WRIA - Detailed Implementation Plan's* (DIP) (CCCD 2006) purpose is "to outline a framework for maintaining or improving the health of the Entiat and Mad River watersheds through implementation of Entiat WRIA 46 Management Plan recommendations." Actions and strategies identified in the *Entiat WRIA 46 Management Plan* (CCCD 2004) will help correct altered conditions and improve or maintain overall watershed health, attain compliance with the Clean Water and Endangered Species Acts, and contribute to the recovery of listed species and opportunities for recreational and tribal fisheries, in accordance with the vision and goals of the EWPU.

The DIP is meant to be a reasonable approach to achieving watershed protection and enhancement in a realistic timeframe under the known physical, political, social and economic limitations. The EWPU has already implemented a number of watershed restoration actions, and has a list of ongoing and long-term projects identified in Table 8 of the *Entiat WRIA - Detailed Implementation Plan* (CCCD 2006). Table 17 of the DIP summarizes ongoing monitoring activities. These tables also outline lead/support agencies that are involved, and includes information about activities that have some degree of funding support associated with them (CCCD 2006).

4.4 WRIA 47 Watershed Plans

The Lake Chelan WRIA 47 Planning Unit assessed 1) water quantity and 2) water quality, by assessing the supply and use in the management area to develop future strategies (RH2 Engineering, Inc. and Geomatrix Consultants 2008 [RH2 and Geomatrix]). The WRIA 47 Planning Unit charter is addressing the recommended strategies detailed in the *Final Draft Planning Unit Charter* (RH2 and Geomatrix 2008).

Management and research, monitoring, and evaluation plans were developed as part of the *Lake Chelan Subbasin Plan* (Berg 2004) to be used by subbasin planners and state salmon recovery personnel to aid in the conservation and restoration of important habitat that will aid in the recovery of focal species. Restoration objectives and strategies that were identified in the plan are underway, in addition to research, monitoring and evaluation. The research, monitoring and evaluation plan consists of a variety of quantitative elements, ranging from scientific wildlife and vegetation surveys, spatial analyses of project location and acreage, to simple enumeration of land use projects/regulations commented

upon by cooperating agencies. Details about focal species restoration efforts, research, monitoring and evaluation can be found in the *Lake Chelan Subbasin Plan* (Berg 2004).

4.5 Chelan County Natural Resource Department Efforts

The Chelan County Natural Resource Department (CCNRD) administers watershed planning and salmon recovery efforts in Chelan County. Current activities include Wenatchee River Watershed (WRIA 45) planning and implementation, Squilchuck/Stemilt Watershed (WRIA 40a) planning and implementation, a countywide salmon recovery grant program through Washington Salmon Recovery Funding Board, and habitat conservation plan development under the Federal Endangered Species Act (Chelan County website). The CCNRD also supports the Upper Columbia Salmon Recovery Board (UCSRB) and staffs the Chelan County Water Conservancy Board. The CCNRD manages a variety of state, federal, and local project and planning grants that assist watershed planning and salmon recovery efforts in Chelan County. Details about CCNRD programs and funding can be found online at http://www.co.chelan.wa.us/nr/nr_main.htm.

The CCNRD's current restoration strategies and efforts primarily stem from those identified in: watershed plans and DIPs previously mentioned; the *Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan*'s (2007) implementation schedule; and various studies, such as the Wenatchee River CMZ study. The CCNRD also implements "need-based" projects as they arise (E. Fonville, personal communication, March 9, 2009), which may consist of native riparian plantings and stream buffer restoration for private land owners in collaboration with the Chelan-Douglas Land Trust (CDLT).

UCSRB Implementation Schedule

The *Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan* (UCSRB 2007) provides a regionally and federally accepted framework for implementing coordinated recovery actions, while providing a "roadmap" towards implementation of priority habitat actions. The UCSRB has successfully completed single-project-focused actions that 1) reopen tributary habitat, 2) preserve key habitat areas, and 3) protect countless fry and smolt from entrainment in irrigation diversions. One recent project success story, sponsored by the CCNRD, includes the Nason Creek Oxbow Reconnection project in the upper Wenatchee valley (located between mile post 0.83 and 1.33 on Hwy. 207). This project reconnected a half-mile-long oxbow (secondary channel) by installing two 12-foot-wide fish-friendly culverts. The reconnection restored access to 21.7 acres of off-channel refuge, rearing and over-wintering habitat for juvenile salmonids.

While these single-project-focused actions significantly contribute to recovery efforts, "there is a growing consensus among biologists, project managers and the entities providing salmon recovery funding, that the greatest current opportunities for habitat restoration projects that will yield the greatest biological benefits are found in the yet to be addressed large-scale, multi-years, multi-million dollar recovery activities" (UCSRB 2009). In a recent memo regarding funding and project coordination of salmon recovery projects in the Upper Columbia, UCSRB members state that "the priority of the UCSRB is to restore salmonid populations ... through the development of a mid-range implementation/3-year work plan and coordinated funding." The UCSRB is currently updating their comprehensive, coordinated and strategic approach to restoration to address the "large-scale, multi-year, multi-million dollar recovery activities." The implementation plan that the CCNRD works from can be found online at http://www.ucsrb.com/theplan.asp. Implementation actions pertain to: water quantity and quality, water temperature extremes, habitat diversity and quantity, obstructions, riparian/floodplain, sediment, diversions, species interactions, depleted nutrients, nutrient limitations, and ecosystem function.

Outreach and Education

The CCNRD sends out mailers (postcards) updating the community about educational workshops and workgroups, such as the Shoreline Master Program update meetings.

4.6 Comprehensive Plan Policies

At the beginning of the planning process, the County and the Cities of Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee opted to divide the County into eight study areas and prepare a plan for each area. The County took the lead role, in coordination with the cities in the development of seven sub-area plans. The City of Wenatchee took the lead role in the development of a comprehensive plan for the Wenatchee Urban Area.

4.6.1 Chelan County

The *Chelan County Comprehensive Plan* (2005) was developed in accordance with Section 36.70A.070 of the Growth Management Act to address land uses. The Plan covers the unincorporated areas outside of the city urban growth areas. Seven study areas were indentified within the county-wide plan, encompassing the following study areas: Chelan-Manson, Entiat Valley, Malaga-Stemilt-Squilchuck, Lower Wenatchee River Valley, Upper Wenatchee River Valley, Plain-Lake Wenatchee, and Stehekin (Chelan County 2005). Unincorporated areas of the County within UGA boundaries are covered by the city comprehensive plans.

A Rural Coordinating Committee, made of 12 members appointed by the Board of Commissioners to coordinate the Rural Element of the Plan, together with the Planning Commission, went through a process where they identified goals and policies applicable to specific study areas, and goals and policies applicable county-wide. The Comprehensive Plan represents the County's policy plan for growth to the year 2017 and can be found online: http://www.co.chelan.wa.us/bl/data/compplan.pdf. In particular, the Plan expresses a goal of identifying and protecting critical areas and mitigation adverse impacts that may result from reasonable use. Policies include encouraging the enhancement and restoration of fish and wildlife habitat. Projects pertaining to habitat are to be defined implemented by landholders and other involved party on a case-by-case basis.

4.6.2 City of Cashmere

The *City of Cashmere Comprehensive Land Use Plan "The Heart of Cashmere"* (January 14, 2008, Ordinance 1117) is intended to guide the needs of residents and environment throughout growth and development within and surrounding the community. Because the "community" of Cashmere extends beyond the actual city limits, it is important that this plan and the *Chelan County Comprehensive Plan* (2005) are complementary. Countywide planning policies as well as the overall policies of the GMA are intended to assure that all levels of government are communicating and working towards respective plans that are compatible and consistent. The Comprehensive Plan describes general goals and objectives that will be used to make decisions that balance the needs and desires of the residents of the Cashmere area. The Plan should clearly state the community's vision for future growth and development, as the city zoning codes, building codes and land use regulations will be established or updated.

Goals of the plan are as follows:

1. Encourage the most appropriate use of land throughout the community.
2. Lessen traffic congestion and accidents.
3. Secure safety from fire.
4. Encourage the formation of neighborhood or community units.
5. Secure an appropriate allotment of land area in new developments for all the requirements of community life.
6. Conserve and protect and restore natural beauty and other natural resources.

7. Facilitate the adequate provision of transportation.

4.6.3 City of Chelan

This *City of Chelan Comprehensive Land Use Plan* (2007) was prepared by the citizens of the Chelan Planning Area of Chelan County and the City of Chelan to address growth issues in the Chelan Planning Area. It represents their land use policy and plan for growth to the year 2017. Separate documents are also an element of this plan, and include a Comprehensive Sewer Plan, Comprehensive Water Plan, and Parks Plan. In developing the *City of Chelan Comprehensive Land Use Plan* (2007), the Citizen's Advisory Committee found that the Economic Development Element is a leading driver of the entire plan, addressing more of the thirteen goals of the Growth Management Act (GMA).

4.6.4 City of Entiat

The *City of Entiat Comprehensive Land Use Plan* (2009) provides for urban land use designations in the City and UGA, and addresses other important elements such as capital facilities (e.g. parks and recreation). The Comprehensive Plan was prepared by the citizens of Entiat to address growth issues in the Entiat Planning Area. It represents their land use policy plan for growth into the future.

The Entiat Citizens Advisory Committee developed a statement of intent that took care to list characteristics of the community and what they would like to see happen in the future. Their following statement of intent for the Planning Area states, "The intent of this Comprehensive Plan is to provide a guide for development for the citizens of the Entiat Planning Area. The plan will strive to maintain the existing quality of life that includes: culture, customs, economy, agricultural opportunities, sense of community, water quality, and recreational opportunities. This plan should provide for expansion of these opportunities and promotion of commercial waterfront development, while maintaining an adequate infrastructure to accommodate this growth. Continuous public participation is warranted, with decision-making and implementation at the local level" (City of Entiat 2009, Section 1.5).

4.6.5 City of Leavenworth

The *City of Leavenworth Comprehensive Plan* (2003) was prepared by the citizens of the Leavenworth/Upper Wenatchee River Valley Planning Area, the City of Leavenworth Planning Commission, and the Leavenworth City Council to address growth issues in the City of Leavenworth and its UGA. It represents the City's growth policies for the next 20 years. The vision of area residents is expressed in the following statement:

> *"The citizens of the planning area envision maintaining the uniqueness of the area which combines a quality "rural/small community" lifestyle with a*

diversified economic base that allows orderly growth and development while preserving the beauty of the area with open spaces and enhancing the proper management of the natural environment."

The goals and policies found in the Comprehensive Plan are deemed to be essential in maintaining a satisfactory quality of life for the planning area. A City of Leavenworth open space/recreation goal mirrors the City's vision by stating that Leavenworth will "conserve open space and encourage open space considerations in future development."

4.6.6 City of Wenatchee

The City of Wenatchee developed their *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2007) with a vision based upon the views expressed by local residents. Three subjects were considered to be the most important determinants in Wenatchee's future: 1) economic development, 2) quality of life, 3) and learning and human services. Detailed policies can be found in the *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2007).

4.7 Critical Areas Regulations

Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth and Wenatchee each have their own set of critical area regulations that dictate protection of environmentally sensitive areas, including wetlands, streams (fish and wildlife habitat conservation areas), geologically hazardous areas, frequently flooded areas, and aquifer recharge areas. All regulations use a version of Ecology's Eastern Washington Wetland Rating System. For specific protection of critical areas in shoreline jurisdiction, the Shoreline Master Program contains for the County and each City a revised set of regulations that meets the Shoreline Management Act and Shoreline Master Program Guidelines' more specific requirements and standards.

4.7.1 Chelan County

Chelan County's critical areas regulations were recently updated (2007), and are considered to be consistent with Growth Management Act "best available science" standards. No further revisions to the regulations in the near future are anticipated. Many of the issues and concerns that guided the development of the critical area regulations were discussed and addressed in the comprehensive planning process. The GMA also requires the provision for the protection of the quality and quantity of ground water used for public water supplies. The land use element is also required to review; where applicable, drainage, flooding, and storm water run-off and to provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state. Chelan County set the

following goals, with associated policies that can be found in the Comprehensive Plan.

Goal 1: Protect water quality.

Goal 2: Protect and maintain air quality.

Goal 3: Ensure that development minimizes impacts upon significant natural, historic, and cultural features and to preserve their integrity.

Goal 4: Identify and protect critical areas and provide for reasonable use of private property while mitigating adverse environmental impacts.

Goal 5: Within the upper Wenatchee River valley study area, encourage retention of the scenic character and environmental quality of the Icicle valley.

4.7.2 City of Cashmere

The *City of Cashmere Comprehensive Land Use Plan "The Heart of Cashmere"* (2008) states, "the quality of life of different communities is directly related to the quality of environmental factors, such as air and water quality...subtle and prolonged degradation of these things can undermine the community's appeal and viability." Therefore, following requirements of the Growth Management Act (GMA) and using the "best available science", the Comprehensive Plan provides reference maps, a description of the City's classification and designation of critical areas, as well as goals and policies to protect them.

The City's general goal is to "preserve and protect the quality of the area's natural features and maintain a harmonious relationship between the man-made community and the natural environment" (City of Cashmere 2008). More specific goals are as follows:

Goal: The City's wetlands will be protected to the greatest extent possible because they provide important functions that help define the quality of life in the community.

Goal: Protect fish and wildlife habitat areas as an important natural resource for the City, particularly in regard to their economic, aesthetic and quality of life values.

Goal: The City seeks to protect the public health, safety and welfare of its residents by providing protection of potable water sources, primarily through careful monitoring and control of areas demonstrated to be critical aquifers and/or which play a crucial role in recharging our groundwater supplies.

Goal: Protect the frequently flooded areas that are known to be critical parts of the natural drainage system by limiting and controlling potential alterations and/or obstructions to those areas.

Goal: The City will provide appropriate measures to either avoid or mitigate significant risks that are posed by geologic hazard areas to public and private property and to public health and safety.

The City's critical areas regulations are currently being updated.

4.7.3 City of Chelan

The *City of Chelan Comprehensive Land Use Plan* (2007) follows the recommendation of the Growth Management Act (GMA) by adopting goals and policies to "protect critical areas," that include wetlands, geologically hazardous areas, aquifer recharge areas, fish and wildlife habitat conservation areas and frequently flooded areas. The City of Chelan established critical area goals and policies that were adopted in 1998 (City of Chelan 2007) as follows:

- Goal 1: Protect water quality

Policy 1: Support the —keep it blue and other water quality education programs which inform local citizens and visitors about water quality issues and ramifications.

Policy 2: Ensure that storm water is not directly discharged into water sources without appropriate treatment that meets federal, state, and city standards.

Policy 3: Encourage the appropriate regulatory agencies to actively pursue violators that illegally discharge waste into rivers, lakes and streams.

Policy 4: Development along the shoreline shall comply with federal, state, and City guidelines to ensure minimum impact on water quality.

Policy 5: Support ongoing measures by the Lake Chelan Reclamation District, Chelan County Conservation District, area orchardists, and other related agencies and groups, as they raise awareness levels, and monitor and mitigate water quality issues related to agriculture.

Policy 6: Boat launches should incorporate wash-off stations to remove milfoil off of boats prior to entrance to the Lake. Boaters should be educated about the negative impacts of milfoil to the clarity and quality of Lake Chelan.

Policy 7: Where erosion is occurring, and can be found to not be of natural origin, measures should be allowed to amend the situation. Rationale: This helps protect lake water quality, as well as private property.

- Goal 2: Permit development to occur in known natural hazard areas only when sufficient safeguards protecting life and property can be met.

Policy 1: Discourage development in areas of natural hazard such as those susceptible to landslide, flood, avalanche, unstable soils and excessive slopes, unless appropriate safeguards are taken.

Policy 2: Provide slope protection, erosion control, soil stabilization, and fire protection when appropriate.

- Goal 3: Encourage development that takes into consideration significant natural features and protects their integrity.

Policy 1: Encourage preservation and proper maintenance of significant natural drainage ways.

Policy 2: Encourage the conservation or preservation of critical areas, such as wetlands, migratory animal routes, etc., by supporting plans that provide for public and private organizations to purchase these lands.

Policy 3: Allow for recreational development to make use of natural amenities on critical areas when the recreational use has minimal impacts.

- Goal 4: Protect and maintain air quality

Policy 1: Support the wood stove standards recently adopted by the Department of Ecology

Policy 2: Recognize the potential benefits of public water, rail, electric, alternative fuels, non-motorized and air transportation in helping maintain local air quality.

Policy 3: Ensure that new industrial development meets air quality standards and does not significantly affect adjacent property.

Policy 4: Poor air quality should not degrade the agricultural industry.

The City of Chelan's environmental regulations are found in the *Chelan Municipal Code*, Chapter 14.10, and are currently being updated. These regulations "establish special standards for the use and development of lands based on the existence of natural conditions and features including geologically hazardous areas, critical aquifer recharge areas, frequently flooded areas, fish and wildlife conservation areas and wetlands."

The standards and procedures established in Chapter 14 are intended to protect environmentally sensitive areas while accommodating the rights of property owners to the use of their property in a reasonable manner. The following is a direct excerpt from the municipal code, Chapter 14.10:

> *"These environmentally sensitive areas are of special concern to the city.... By regulating development and alterations to sensitive areas this chapter seeks to:*
>
> 1. *Protect members of the public and public and private resources and facilities from injury, loss of life, property damage or financial losses due to erosion, landslide, seismic events or steep slope failure;*
>
> 2. *Protect unique fragile and valuable elements of the environment, including canyon areas and wetlands;*
>
> 3. *Mitigate unavoidable impacts to environmentally sensitive areas by regulating alterations in and adjacent to those areas; 4) Provide city officials with the information and authority to protect sensitive areas and implement the policies of the State Environmental Policies Act, RCW 43.21C, the city of Chelan Comprehensive Plan and the Growth Management Act of 1990. (Ord. 944 § 1 (part), 1992)."*

4.7.4 City of Entiat

The City of Entiat has adopted critical area regulations in 2006, consistent with best available science and all other requirements of the GMA. The goals and policies were outlined in the *City of Entiat Comprehensive Land Use Plan* (2009) and "are intended to provide some measure of protection to the environmental elements that contribute to the quality of life in the community."

The general goal is the same as the City of Cashmere, to "preserve and protect the quality of the area's natural features and maintain a harmonious relationship between the man-made community and the natural environment" (City of Entiat 2009). The City of Entiat identified more specific goals, which again are the same as the City of Cashmere, and can be found in that section above.

4.7.5 City of Leavenworth

The City of Leavenworth initially adopted goals and policies in response to the requirements of the GMA as part of its Comprehensive Plan adopted in 1996. In 2002 and 2003 this information was updated incorporating the use of "best available science". The City completed the planning process for developing critical area regulations following an extensive citizen participation process, and will be further updating those critical areas regulations in 2009. Critical area policies found in the *City of Leavenworth Comprehensive Plan* (2003) follow the goals below:

Goal 1: Encourage land use practices that protect the integrity of the natural environment to ensure that the community has an adequate source of clean water and air and to otherwise maintain a healthy human environment.

Goal 2: Use best available science in classifying, designating, and regulating, critical areas within the City of Leavenworth.

Goal 3: Provide flexibility in regulation of land uses in critical areas, recognizing that the GMA encourages development within cities in order to limit the geographic extent of human impacts.

Goal 4: Identify and protect critical areas and provide for reasonable use of private property while mitigating adverse environmental impacts.

Goal 5: Protect water quality.

Goal 6: Protect and maintain air quality.

Goal 7: Ensure that development minimizes impacts upon significant natural, historic, and cultural features and preserves their integrity.

4.7.6 City of Wenatchee

The City Wenatchee has adopted the Resource Lands and Critical Area Development Ordinance (City of Wenatchee 2009). The Ordinance does not designate agricultural lands of long-term commercial significance but assures the continued use of farm lands for agricultural purposes. The City of Wenatchee will "protect public safety and the ecological functions of critical areas by mitigating development depending on area characteristics" (City of Wenatchee 2007). The *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2007) lists regulatory policies as follows:

Policy 1: Ensure any development in critical areas adequately mitigates potential negative impacts associated with the specific conditions.

Policy 2: Review and expand critical area designations and associated development regulations for accuracy, effectiveness, and utilization of best available science.

Policy 3: Designate fish and wildlife habitat corridors along the waterfront and in the foothills where appropriate.

Policy 4: Designate within the UGA, frequently-flooded areas in accordance with Federal Emergency Management Act (FEMA) criteria.

Policy 5: Encourage the use of clustered development and other innovative designs that aim to preserve the functions of critical areas and further public safety.

The City completed an update of its critical areas regulations in early 2009.

4.8 Stormwater Management and Planning

4.8.1 Chelan County

The storm drain system for Chelan County's roads consists primarily of roadside ditches and culvert pipes for drainage under roads and driveways. Stormwater is generally directed to roadside ditches that discharge directly into local waters. In more urbanized areas, a limited number of piped drain systems are in place. These areas include Olds Station, Sunnyslope, Peshastin, Leavenworth, and Manson. The piped systems are located where it was necessary to construct a roadway with curb, gutter and associated catch basins.

The Chelan County Public Works Department has developed a Stormwater Management Plan for the Olds Station area that is adopted by reference as part of the *Chelan County Comprehensive Plan* (2005). The Port of Chelan County is in the process of developing more storm systems in the Olds Station area. Within the County portions of the Entiat and Leavenworth UGA's, stormwater systems consist of a system of roadside drainage ditches (City of Entiat 2007 and City of Leavenworth 2001). The storm ditches within the Leavenworth UGA will need to be tight-lined into the City storm system when land is developed (City of Leavenworth 2001).

4.8.2 City of Cashmere

As described in the *City of Cashmere Comprehensive Land Use Plan "The Heart of Cashmere"* (2008), stormwater drainage facilities are available throughout most of the City. Major components of the system consist of piping, manholes, catch basins and outfalls. Extensions to the stormwater system are primarily done by land development and the cost of the extension is borne by the developer. The City of Cashmere will be evaluating the stormwater system for Ecology's Phase II, Stormwater Management Regulations compliance in the near future.

4.8.3 City of Chelan

Adopted as part of the *City of Chelan Comprehensive Land Use Plan* (2007), a limited storm drainage system in Chelan uses a combination of surface and subsurface means to collect and drain stormwater. In most cases, the subsurface drainage system is located under major streets in the present downtown area and is discharged into Lake Chelan. The City of Chelan will develop a stormwater plan to further address existing and future stormwater facilities.

4.8.4 City of Entiat

According to the City's Comprehensive Plan, the City of Entiat did not have any stormwater drainage systems until very recently (City of Entiat 2009). New subdivisions have stormwater facilities, generally consisting of grassy swales, catch basins and large detention areas, whereas earlier subdivisions used an open ditch system. The *City of Entiat Comprehensive Land Use Plan* (2009) explains that the City now requires new development to install curbs and gutters to convey stormwater. There are no current plans to implement a city-wide stormwater drainage system, aside from when new development occurs.

4.8.5 City of Leavenworth

The *City of Leavenworth Comprehensive Plan* (2003) describes the City's existing storm sewer system as a network of catch basins, inlets, pipelines, and manholes which function to collect and transport surface run-off for eventual discharge to the Wenatchee River. There are portions of paved road that do not allow drainage into the catch basins, due to improper paving of the roads. The City may undertake a joint stormwater runoff study with Chelan County and the USFS for the Ski Hill area of Leavenworth. They may also adopt an ordinance that requires oil/water separators for parking lots, commercial and multifamily structures, per Ecology's recommendations (City of Leavenworth 2003).

4.8.6 City of Wenatchee

The City of Wenatchee has developed many control measures required for stormwater management programs, since the federal National Pollutant Discharge Elimination System (NPDES) requirements went into effect in 2003. All development within the City is required to control stormwater such that it doesn't damage adjoining properties, route to City system if capacity is available, extend City infrastructure in accordance with the *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2007), and will provide water quality treatment for all construction activities. All commercial development must address water quality on site and some must be capable of detaining stormwater in flood events. The City also routinely sweeps streets to help keep debris out of the storm drain system. Most of the City of Wenatchee is connected to the stormwater collection system that discharges directly into local waters. The City of Wenatchee presented a policy in the Comprehensive Plan to establish review requirements so that all development projects do not adversely impact the rate and amount of runoff into adjacent waters or lands.

The *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2007) provides options being considered for future City of Wenatchee stormwater:

1. Low Impact Development - Explore the use of low impact development techniques in city streets, new and redevelopment so as to decrease the volume of stormwater entering the City system and surrounding waters.

2. Extend Stormwater Requirements - Require all new development and appropriate redevelopment to infiltrate stormwater on site.

3. Education - Continue efforts to inform the public about stormwater's effects on water quality, the way the City's stormwater system works, and how individual actions affect stormwater.

4.9 Public Environmental Education

4.9.1 Chelan County

The *Chelan County Comprehensive Plan* (2005) describes eight visions of the citizens of the Lower Wenatchee River Valley Study Area, including one that pertains to an "educational climate." As part of providing "an economic and educational climate that enables our citizens to find suitable employment within the valley," environmental education and respect for natural resources is highly evident throughout county and partner activities. County environmental education and stewardship is highly influenced and supported by the surrounding forest and park lands, vast natural resources and beauty, and associated managing and guiding agencies. Several of the agencies and community groups involved in local education have been described in the sections below.

The Board of County Commissioners approved an initial set of county-wide planning policies on May 26, 1992. One of the policies included pertains to public education and citizen participation (Chelan County 2005). Chelan County does provide public education and accepts citizen involvement pertaining to Comprehensive Plan information, rationale and goals, as well as changes that will take place in the County with the Plan's implementation (Chelan County 2005).

4.9.2 City of Cashmere

The City of Cashmere's Riverside Center is a gathering place for music, culture and educational activities within the City. People living in and around Cashmere also utilize City parks for swimming programs, sports leagues, school and youth programs, and community events. The City has an existing Park Plan, part of the *City of Cashmere Comprehensive Land Use Plan "The Heart of Cashmere"* (2008), that identifies that the parks should be developed to perform two different and distinctive functions: 1) provide facilities for the City's residents, therefore making Cashmere a more desirable place to live; and 2) provide

facilities for the visitors who come into the area, thereby enhancing the City's economy.

The City's Parks and Recreation goal is to, "encourage the retention of open-space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks." A policy associated with this goal links schools and natural resource education to parks.

> Policy: Cooperate with and support Cashmere School District in making school property available for public recreational use.

4.9.3 City of Chelan

The City of Chelan shows support for educational activities, such as art, aquatics, athletics, outdoor, cultural, special event, recreation, enrichment, parks, golf, adaptive, health, fitness, wellness, safety and other program areas as stated in the Parks and Recreation Comprehensive Plan 2008-14 (2007) definition of recreation. The City of Chelan's Riverwalk Park, owned and operated by the Chelan County Public Utilities District, provides a one-mile scenic river loop trail and performing arts pavilion that seasonally hosts regional musicians and performers, benefiting the recreation, education and culture of the community. City of Chelan policies that support education and natural resources can be indentified in the Parks and Recreation Comprehensive Plan (2007) policies below:

> PRP 1.2: Maximize the use of parks, schools, recreation and open space resources within the City by connecting them with a coordinated system of trails.
>
> PRP 4.2: Park, recreation and open spaces which exhibit one or more of the following characteristics shall be designated by the City to be of local or regional significance:
>
> a) Contains significant recreation or cultural opportunities or facilities, such as marinas, waterfront access, athletic fields, golf courses, Primary trails, urban wildlife habitat, community entrances, etc.;
>
> b) Contains unusual or special botanical resources;
>
> c) Contains environmentally sensitive areas that serve a significant role or provide a significant function in the natural systems within the City;
>
> d) Is associated in a significant way with an historic event, structure, or person with a significant effect upon the City, state or nation; and

e) Contains public art.

PRG 5.2: Continue to develop and foster partnerships with the Lake Chelan School District to utilize school sites to provide active recreation and cultural facilities. Explore opportunities to co-develop facilities on school property or property adjacent to schools.

4.9.4 City of Entiat

The City of Entiat will continue its public education program following its Comprehensive Land Use Plan adoption in order to inform the entire community about the goals of the plan, as well as the changes that will take place in the planning area because of the plan's implementation (City of Entiat 2009). The City believes that broad support for the plan is crucial for effective implementation. The following objectives from the Comprehensive Land Use Plan (2009) address public education related to important resource areas.

Objective LU 3.3: Identify and encourage the preservation of sites and structures with historical or archaeological significance, particularly those that might generate tourist appeal.

Objective LU 18.4: Encourage the development of an education program that promotes the value of critical areas and that promotes public and private stewardship of these lands.

Objective LU 18.13: Allow for open space and recreational use of critical areas where such use does not negatively impact the critical areas.

Objective ED 2.9: Develop informational kiosks in the waterfront district and appropriate viewing areas or historical sites.

The City of Entiat and numerous local, state and federal agencies (USFS, Ecology, Washington Conservation Corps, Entiat School District, NCW AmeriCorps, Washington State Department of Natural Resources, Entiat Community Historical Society, Greater Wenatchee Community Foundation and Chelan County PUD) are developing a plan for an outdoor learning center to be located along the Entiat River. The Learning Center will consist of a day-use facility and interpretive center located on Chelan County PUD land at the Entiat River confluence with the Columbia River to a point upstream approximately one-third of a mile (City of Entiat 2007). More detail about the Learning Center is found in Section 4.10.2 below.

4.9.5 City of Leavenworth

The *City of Leavenworth Parks and Recreation Comprehensive Plan* (1997) considers "outdoor recreation" to be the principal reason for living in Leavenworth.

Therefore the City recognizes the importance of parks and recreation services for the health, social and economic benefits of the resident population, and the enjoyment derived by visitors to the City. These services encompass programs and facilities that educate and foster stewardship within the community.

The use of parks, school facilities and natural resources for recreation purposes by residents and visitors alike has long been an established part of Leavenworth's lifestyle and business interests. Thus, two workshops were hosted during the development of the *City of Leavenworth Parks and Recreation Comprehensive Plan* (1997). Community members were asked to focus on recreation programs and service needs within the City. The need for recreation classes was rated to be the third highest priority for recreation programs within the community. In 1997, when the Parks and Recreation Comprehensive Plan was finalized, only two recreation classes (martial arts and summer arts and crafts) were offered. A considerable list of future classes of interest is provided in the plan. Historical and cultural activities for residents and visitors were also identified to be important to the community participants. The plan concluded that, "it would appear that the City of Leavenworth is the appropriate leader in developing historical and cultural assets for the benefit of the community and its residents and visitor populations as a function of recreation."

4.9.6 City of Wenatchee

The City of Wenatchee's Natural Environment element in the *Planning to Blossom 2025 Wenatchee Urban Area Comprehensive Plan* (2007) includes several policies and potential options for maximizing the implementation and effectiveness of public environmental education:

1. Encourage environmental education, learning opportunities and partnerships for shoreline and habitat opportunities

2. Continue efforts to inform the public about storm water's effects on water quality, the way the City's storm water system works, and how individual actions affect storm water.

3. Promote water conservation in buildings, appliances, landscaping, and daily life through public outreach and informational materials.

4. Work with Chelan County Noxious Weed Control Board to increase public awareness and promote volunteer clean-up action [of noxious weeds].

5. Be an active player in education and involvement programs that raise public awareness about environmental issues, advocate respect for the

environment, and demonstrate how individual and cumulative actions directly affect our surroundings.

6. Work in cooperation with public agencies, local organizations, associations, departments, and groups in creating and carrying out environmentally related programs and outreach efforts.

7. Create informational documents with green building methods and local resources to aid new development in utilizing "green" techniques.

One of the goals established in the *Wenatchee Waterfront Sub-Area Plan* (2003) is to develop an environmental education center/urban agricultural center.

4.10 Additional City Efforts

4.10.1 City of Chelan

The City of Chelan is undergoing Shoreline Restoration and Beach Enhancement planning at Don Morse Park. This project's key goals are to stabilize the shoreline, expand sandy beach areas, enhance water-based recreational opportunities, improve views and access to the Lake, increase opportunities for tourism and economic development, address existing safety and accessibility issues, and restore shoreline areas. Plan details can be found online: http://www.cityofchelan.us/parks/pdfdocs/donmorseparkmasterplanexecsummary.pdf.

The City also recently received a grant from the Washington Department of Ecology to re-vegetate with native plants a 4,300-square-foot area on the steep bank area up-lake of the Don Morse Park marina. This native planting area will improve habitat for birds, fish and other aquatic species.

4.10.2 City of Entiat

The City of Entiat has identified future shoreline parks and public access opportunities including a shoreline trail associated with the *Lake Entiat Waterfront Business District Subarea Plan* (2009b). According to the Subarea Plan, the trail in the redevelopment area is intended to connect with a trail along the shoreline at Entiat City Park, to the south of, and progress under the Entiat River Bridge to connect with the proposed Entiaqua trail. A conceptual plan for a loop trail could connect the east end of the Entiaqua trail to the north end of the waterfront trail at the Columbia Breaks Fire Interpretive Center via irrigation district right-of-way. The trail would be flanked by restored riparian areas along much of its length.

The City is working to develop the Entiat River Outdoor Learning Center located on the Entiat River near its confluence with the Columbia River. This proposal

involves the development of day-use and interpretive facilities on the River (City of Entiat 2008). Facilities are anticipated to include parking, education facilities, a swim platform, trails and paddle boat haul-out.

The above efforts of the City are consistent with the *Entiat Water Resource Inventory Area (WRIA) 46 Management Plan* (CCCD 2004), which includes a project titled "Entiaqua River Park and Outdoor Learning Center" as #9 on its list of restoration projects for the Entiat Subbasin.

The Chelan County PUD also conducted its own assessment of recreation needs as part of the Rocky Reach Dam relicensing effort. The PUD's assessment included conceptual plans for Entiat City Park, as well as the Entiaqua trail (Chelan County PUD 2004).

The Entiat Watershed, and specifically an orchard enterprise on the Entiat River, is the geographic area of a pilot study for the Habitat Farming Enterprise Program (HFEP) (GeoEngineers 2007). HFEP is a program being developed by the Initiative for Rural Innovation and Stewardship (IRIS), in cooperation with North Central Washington Resource Conservation and Development, the Entiat Watershed Planning Unit, Cascadia Conservation District, Chelan-Douglas Land Trust, Chelan County, and several other environmental interests. The HFEP pilot is evaluating the benefits and costs of compensating area farmers to grow riparian habitat and accommodate other restoration measures on their property, in lieu of growing marketable crops. The potential of the HFEP to realize significant improvement in shoreline functions is high.

4.10.3 City of Wenatchee

The City of Wenatchee continues to accomplish the goals established in the *Wenatchee Waterfront Sub-Area Plan* (2003). Restoration-related elements of the park/open space/recreation implementation opportunities include: waterfront park and shoreline enhancement and the development of an environmental education center/urban agricultural center.

4.11 Audubon Society Efforts

The North Central Washington (NCW) chapter of the Audubon Society is dedicated to furthering the knowledge and conservation of the environment of North Central Washington, our Nation, and the World (NCW Audubon website). Chapter president, Mark Oswood, expresses the goals, hopes, aspirations, and plans of the NCW Audubon Society to: promote resource decisions based on the best available data; be honest brokers in environmental conflicts; believe that sustainable economies are the only road into the future; believe in citizen science and life-long learning; act as "outside consultants" – leading field trips, holding outdoor classes, and doing "dirt work"; and watch,

count and protect birds, "one of the grandest expressions of life" (NCW Audubon website).

NCW Audubon is a frequent contributor and partner in several area events and programs that educate and foster stewardship within the community, including the annual *Leavenworth Spring Bird Fest* and the *Wenatchee River Salmon Festival.* Both of these are venues for a NCW Audubon Society birding simulation activity for kids and families, called "What's That Bird?" (M. Oswood, e-mail communication, March 7, 2009). NCW Audubon volunteers assist with outdoor education programs at these events and at events for local students, primarily held at the Barn Beach Reserve (in Leavenworth). The NCW chapter of the Audubon Society also participates in the Wenatchee River Watershed (WRIA 45) Planning effort and the Stemilt-Squilchuck Partnership. The *Wild Phlox*, a NCW Audubon Society newsletter (edited by Teri Pieper), reaches approximately 450 members across the four-county (Chelan, Douglas, Okanogan, Ferry) chapter territory, providing monthly environmental updates and opportunities for Audubon birders and environmental enthusiasts alike. More information about the NCW Audubon Society can be found online at http://www.ncwaudubon.org.

4.12 Cascadia Conservation District Efforts

Watershed Planning

The Cascadia Conservation District (CCD) (formerly the Chelan County Conservation District) is the lead entity for the Entiat (WRIA 46) watershed planning effort, and is also involved with the Wenatchee (WRIA 45) watershed planning effort, led by Chelan County. Since 1993, Entiat area landowners have been working with the CCD to develop local solutions to natural resource issues specific to the basin. The CCD coordinates quarterly Entiat Watershed Planning Unit meetings, monthly Entiat Habitat Sub-Committee meetings, and numerous water quality and quantity meetings. The CCD and its partners generate and update Entiat watershed reports, the Entiat Watershed Plan, and the Entiat Watershed Detailed Implementation Plan.

Land Owner Assistance Program

Numerous projects occur each year, with recent projects along Chumstick Creek, Colockum Creek, Mission Creek, Stemilt Creek, Yaksum Creek, and the Entiat and Wenatchee Rivers (R. Malinowski, personal communication, February 17, 2009). The CCD has assisted in diverse ways by providing: side channel reconnection, off-channel juvenile salmonid rearing habitat, installation of LWD structures and boulder structures for instream habitat complexity, native riparian plantings to stabilize streambanks and provide canopy cover, installation of livestock fencing, elimination of fish entrainment in irrigation diversions through designing and updating new fish screens, and construction of groundwater wells

to replace surface water diversions. Primarily the CCD works with private landowners to enhance riparian areas while providing fish-friendly conveyance to irrigation ditches, thereby reducing annual instream disturbance from diversion maintenance. By installing instream log cross vanes, LWD (with intact rootwads) and boulder clusters, irrigation pools are allowed to form (with fish screens), minimizing diversion impacts to fish and stream habitat. The CCD continues to assist local landowners and watersheds.

Water Metering

In an effort to encourage voluntary compliance with state metering requirements, the CCD has partnered with the Washington State Department of Ecology to provide cost-share funding to assist Chelan County diversion owners with the installation of adequate metering equipment.

Education and Outreach

- *Kids in the Creek*

  Cascadia Conservation District participates in the *Kids in the Creek* program that was developed by local volunteers. This program won First Place for 2006 Environmental Education Curriculum from the National Association of Interpretation Media. The objectives of the program show how streams and watersheds work. Students walk away with an understanding of how their actions can affect stream health, in both negative and positive ways. They learn about watersheds, stream habitat, water quality, riparian areas, and macroinvertebrates. More information about the *Kids in the Creek* program can be found online:
  http://www.bpa.gov/corporate/KR/ed/kidsinthecreek/homepage.htm

- *Streamside Property Owner's Guide*

  The CCD developed the *Streamside Property Owner's Guide* for the Entiat Watershed to provide county residents with an understanding of the critical riparian habitat along the stream. The guide includes "7 Steps to Stewardship" - a list of contacts and sources of information to assist with riparian planning and activities (R. Malinowski, personal communication, February 17, 2009).

- *Wenatchee River Salmon Festival*

  The CCD participates in the *Wenatchee River Salmon Festival*, hosted annually by the Leavenworth National Fish Hatchery and the Okanogan and Wenatchee National Forests. The festival's mission is to "provide high quality natural resource education, promote outdoor recreation, and share the cultural significance of salmon to the people of the Northwest."

Information about the Wenatchee River Salmon Festival can be found online at http://www.salmonfest.org.

For more details, contact the Cascadia Conservation District by phone (509) 664-9370 or look them up on the internet at http://www.cascadiacd.org.

4.13 Chelan-Douglas Land Trust Efforts

Land Protection

The Chelan-Douglas Land Trust (Land Trust) protects lands throughout the County, either through conservation easements or acquisition (B. Bugert, e-mail correspondence, February 13, 2009). Land is eligible for Land Trust protection based on the following qualifying criteria:

- Is it habitat for endangered, threatened or rare species?
- Does it contain exemplary natural ecosystems such as old-growth forests or migratory waterfowl staging/wintering areas?
- Does it include shoreline and riparian areas?
- Does it include wetlands, floodplains, or other lands important for the protection of water quality?
- Is it undeveloped land in close proximity to urban development?
- Does it have important recreational opportunities?
- Does it include parcels that could be connected to greenbelt corridors between privately protected or publicly held properties?
- Does it include unique local scenic viewpoints or outstanding physiographic features that help define the character of our locale and enhance our community's sense of place?
- Is it valuable for timber or agricultural production?
- Is it a heritage site of historic and or prehistoric value?
- Does it include ecosystems of educational or scientific value?
- Is the landowner amenable to the conservation goals of the land trust?

Additional Land Trust protection efforts are described below:

- *Riparian Plantings*

  The Land Trust has done work to revegetate riparian habitat along the Entiat River (WRIA 46) at their Cottonwood and Stormy Creek reserves (B. Bugert, e-mail correspondence, February 13, 2009). They are currently collaborating with Chelan County Natural Resources to do riparian plantings along Icicle Creek and potentially future projects throughout the County (B. Bugert, e-mail correspondence, February 13, 2009).

- *Lake Wenatchee and White River*

The Land Trust is working with private landowners, the U.S. Forest Service, the Washington Department of Fish and Wildlife (WDFW), and Chelan County to permanently protect the natural functions and scenic beauty of the White River watershed.

- *Entiat River Valley*

  The Land Trust is actively involved in efforts to protect fish habitat, wildlife habitat, and floodplain function along the "*Stillwater*" reach of the Entiat River. The *Stillwater* is a calm stretch of river that contains the majority of the Entiat's spawning and rearing habitat for endangered steelhead, endangered spring Chinook salmon, threatened bull trout, and fall Chinook salmon. At the urging of local residents, the Land Trust applied for and received a grant for $1.4 million from the state Salmon Recovery Funding Board to purchase nearly 300 acres (including nearly three miles of riverfront) of prime fish and wildlife habitat along the Entiat. The Land Trust is working with Entiat Valley residents to develop management plans that will protect the conservation values of these properties in perpetuity (Chelan-Douglas Land Trust website).

Education and Outreach

- *Chelan County Good Neighbor Handbook*

  To promote community stewardship, the Land Trust publishes the *Chelan County Good Neighbor Handbook* as a tool to ensure people do their part in keeping the County a special place to live. The handbook is available online at:
  http://www.cdlandtrust.org/Good%20Neighbor%20HB%20for%20web.pdf

- *Workshops*

  The Land Trust is working to make the case that land conservation is a good investment for local communities. They believe that, "we do not need to choose between a healthy economy and healthy landscapes" (Chelan-Douglas Land Trust website). As part of this effort, the Land Trust partners with several local organizations to present workshops on various topics ranging from the economy to the environment. Recent workshops cover noxious weeds, sustainable landscaping and insects.

- *Conservation Roundtable, Ag and Environment Dialog, Environmental Film Series*

  The Land Trust works closely with a wide variety of landowners, conservation groups, farmers, and resource agencies to develop innovative approaches to natural resource management. The Conservation Roundtable seeks to facilitate communication and collaboration among conservation groups. This dialog fosters understanding and collaboration among farmers, agriculture groups, and environmental groups to promote

sustainable, productive, and profitable farms in the region. The Land Trust sponsors a monthly environmental film series (Chelan-Douglas Land Trust website).

The Land Trust is able to work quickly and creatively with local citizens, helping to preserve the unique character of the region and enhance the quality of life for residents, visitors, and future generations. For more details, contact the Chelan-Douglas Land Trust by e-mail: info@cdlandtrust.org or phone: (509) 667-9708.

4.14 Chelan County Public Utility District Efforts

Habitat Conservation Plan

The Chelan County Public Utility District (PUD) is collaborating with local, state, and federal governments; tribes; and private landowners to restore and protect salmon and steelhead habitat in the mid-Columbia and its tributaries. As part of the Habitat Conservation Plan (HCP) Tributary Program, the PUD funds projects to help protect and enhance salmon and steelhead spawning, rearing and migration. These projects will help the PUD meet its HCP commitment of "no-net-impact" to migrating fish. One such project includes the acclimation and rearing of summer steelhead on Blackbird Island in Leavenworth. The PUD, as part of its mitigation responsibility for the Wenatchee River basin, will rear summer steelhead in the Blackbird Island fish pond each spring, beginning in 2009 (D. Davies, e-mail correspondence, March 9, 2009). Additional information about steelhead acclimation on Blackbird Island is found in the Trout Unlimited section below (Section 4.15).

Potential PUD projects may include bank and shoreline restoration, removal of migration barriers, enhancing stream flows, native riparian plantings, wetland restoration, constructing in-stream habitat structures, acquiring conservation easements or other means to preserve critical floodplain properties, and reconnecting relic side channels to provide rearing habitat (CCPUD website). Any individual or group can propose an HCP project through either of following two funding options. The General Salmon Habitat Program will fund projects costing $25,000 or more. The Small Projects Program is for projects costing less than $25,000 and is designed to encourage community groups working in cooperation with landowners (CCPUD website). Table 7 shows the PUD's current projects underway as part of the HCP Tributary Program.

Table 7. Chelan County PUD's HCP current project list (provided by T. Larson, CCPUD, March 11, 2009).

ROCKY REACH PLAN SPECIES ACCOUNT	Project Small/GSF	Sponsor	Total Projected Cost	Trib Contribution	Project Status
Entiat Instream Structure Engineering	GSF	Cascadia Conservation District	$59,340.00	$59,340.00	in progress
LWD/Rootwad Acquisition & Transport	Small	Cascadia Conservation District	$24,600.00	$24,600.00	in progress
Entiat Canal Log Boom Installation	Small	Cascadia Conservation District	$10,660.00	$7,160.00	in progress
Below the Bridge	GSF	Cascadia Conservation District	$398,998.00	$150,000.00	in progress
Rocky Reach Total			$94,600.00	$91,100.00	
ROCK ISLAND PLAN SPECIES ACCOUNT	Project Small/GSF	Sponsor	Total Projected Cost	Trib Contribution	Project Status
WRIA's 45/46 Riparian Restoration	Small	Cascadia Conservation District	$50,000.00	$25,000.00	in progress
Entiat PUD Canal System Conversion	GSF	Cascadia Conservation District	$631,584.00	$99,360.00	in progress
Roaring Creek Flow Enhancement	GSF	Cascadia Conservation District	$147,000.00	$25,000.00	in progress
Keystone Canyon Habitat Restoration	GSF	Cascadia Conservation District	$193,805.00	$29,100.00	in progress
Cashmere Pond Off-Channel Habitat Project	GSF	Chelan County Natural Resources	$914,076.00	$249,110.00	in progress
Rock Island Total			$1,936,465.00	$427,570.00	

The PUD has a new 43-year license for continued operation of the Rocky Reach Hydroelectric Project (issued on February 19, 2009). The new license is based on a settlement agreement submitted to the Federal Energy Regulatory Commission (FERC) on March 17, 2006, between PUD and stakeholders that includes the local communities, state and federal agencies, tribes, and environmental groups. The new license contains requirements for operating the 1,300-megawatt project that are estimated to cost the PUD approximately $425 million over the 43 years, including continuation of the HCP for salmon and steelhead, maintaining existing parks on the Rocky Reach reservoir, providing renovation of Entiat Park, and enhancements to Lincoln Rock and Daroga State Parks. In addition, the new license has provisions to ensure safe passage of bull trout and lamprey past the dam, research on possible hatchery facilities to supplement the white sturgeon population, an evaluation of resident fish for future recreational fishing, funding for habitat restoration projects on federal and state wildlife lands, and a variety of other actions. (The above information is directly from the CCPUD website).

FERC Licensing

Aside from HCP projects, the PUD is working on three additional efforts as part of the requirements for their FERC relicensing (T. Larson, e-mail communication, March 11, 2009), including the:

1. Dryden off-channel enhancement project (side channel in the Wenatchee River),

2. Chelan River projects: Reach 4 and tailrace habitat enhancement, Low level outlet, and Pump Station, and the

3. Lake Chelan tributary barriers removal and restoration.

For more information about the above projects, contact Jeff Osborn at jeff.osborn@chelanpud.org

Expanding on the above, the PUD has restored a historic Wenatchee River side-channel as off-channel refuge and rearing habitat for salmonids. Located near Dryden, the groundwater-fed channel was enhanced (into pool/riffle habitat with large woody debris) and now provides spawning and rearing habitat. Monitoring reports have identified juvenile Chinook and Coho salmon and steelhead rearing, and adult Coho salmon spawning in the enhanced channel (J. Osborn, personal communication, March 17, 2009). Continued monitoring of the site will include electrofishing and snorkel surveys and the collection of temperature data (J. Osborn, personal communication, March 17, 2009).

The PUD has begun an extensive recovery effort that includes year-round discharge at the Chelan Dam and stream restoration along the Chelan River's lowest reach (Reach 4), near the dam's powerhouse (in the town of Chelan Falls). Year-round flow (minimum 80cfs) will be restored to the Chelan River via a new low-level outlet structure, allowing continuous flow, even when the lake level is below the 1087-foot Chelan Dam elevation (J. Osborn, personal communication, March 17, 2009). With this low-level outlet structure, flow will be provided to the river down to the lakes lowest elevation of 1079 feet (J. Osborn, personal communication, March 17, 2009).

The Reach 4 enhancement includes construction of a new side channel, along the river's right bank. LWD and gravels will be added instream to provide fish refugia and spawning areas, and develop pool/riffle habitats ideal for refuge during the spring high flows (4,000-6,000 cfs) and overwintering habitat for juvenile salmonids. A pump station will also be constructed to pump water from the tailrace upstream into this new side channel, in addition to the guaranteed minimum 80 cfs year-round flow, to provide additional spawning and rearing habitat (J. Osborn, personal communication, March 17, 2009). Native vegetative cover along the new side channel will be improved, adding habitat complexity and contributing to LWD and residual fish recruitment. Additionally, approximately 1.75 acres of new spawning habitat for Chinook salmon and steelhead has been created in the tailrace. Appropriate sized gravel was placed instream during the summer of 2008, and were used heavily by salmon during the fall spawning period. Monitoring and evaluation of this restoration project and future opportunities will continue. Restoration attention could be focused on the section of the Chelan River downstream of City limits in the 3.9 miles (6.3 km) of steep, rocky gorge downstream of the Chelan Dam.

The PUD has identified various migration barriers (depth, velocity, gradient) for Westslope cutthroat to Lake Chelan tributary streams in the Lucerne basin. Site reconnaissance and site-specific restoration plans are currently being developed

for removing these remote alluvial barriers and restoring upstream passage for adult spring spawning cutthroat trout. The PUD plans to start on-the-ground restoration in 2011, addressing two tributaries per year over a five-year period.

Other Projects

The Chelan Wildlife Area currently consists of approximately 32,540 acres of WDFW-owned and -managed lands (WDFW website). Primarily in eastern Chelan County, subunits of the Wildlife Area include the Chelan Butte, Entiat, Swakane and White River subunits. The PUD provided WDFW with funding to purchase 20,397 acres within the Chelan Butte, Entiat, and Swakane subunits (J. Osborn, personal communication, March 17, 2009). These lands have been impacted by past land uses; therefore, the PUD will be restoring 1,400 acres of the Wildlife Area as shrub steppe habitat for the bighorn sheep, mule deer, upland game birds, and numerous other wildlife species that inhabit the area (J. Osborn, personal communication, March 17, 2009). These restored lands may also be utilized for recreation by the community.

The PUD also develops and maintains a number of parks within the County. Several of these parks include boat launches, short-term boat moorage, parking, extensive day use facilities, overnight camping, picnic shelters, restrooms, showers, shoreline trails, tennis courts, playground equipment, and swimming areas. More information about Chelan County PUD habitat and restoration projects can be found online at http://www.chelanpud.org/habitat-restoration-protection.html.

Education and Outreach

The PUD offers public tours of the Rocky Reach Hydroelectric Project that begin at the Rocky Reach Visitor Center. These tours include detail about the PUD's fish recovery efforts throughout the Columbia River basin in addition to the dams fish bypass system, assorted hatchery projects and restoration/mitigation projects.

4.15 Trout Unlimited Efforts

The mission of the Washington Council of Trout Unlimited and the Icicle Chapter is to, ""CONSERVE, PROTECT AND RESTORE" cold water fisheries, their watersheds and ecosystems, as a means of maintaining our quality of life!" Trout Unlimited has been on the forefront of fisheries restoration work at the local, state and national levels. Their website explains that they remain committed to applying "the very best information and thinking available" to conservation work and have developed cutting-edge tools to help direct efforts toward those fish populations most in need of protection or restoration.

Trout Unlimited's Icicle chapter, with backing from the City of Leavenworth, is attempting to restore a fish pond on Blackbird Island to make it suitable for raising 53,000 steelhead per year in cooperation with the Chelan County PUD. Trout Unlimited acquired water rights which will allow constant stream flow into the pond from the Wenatchee River via inlet/outlet structures installed in October of 2008. The goal is to acclimate (imprint) steelhead, beginning in March 2009, on Wenatchee River water in hopes of having returning adults and potentially a Wenatchee River steelhead fishery in years to come. The steelhead are scheduled to be volitionally released beginning in May 2009 (D. Davies, e-mail correspondence, March 9, 2009). The pond will be stocked with cutthroat trout and will open to children for recreational fishing in the summer months after the all steelhead have emigrated. Additional information can be found online at http://icicletrout.org.

4.16 United States Fish and Wildlife Service Efforts

Restoration

The USFWS has been involved in numerous restoration projects and activities in Chelan County. Currently the USFWS is involved in the implementation of habitat restoration projects associated with the Entiat and Wenatchee Watershed Planning Units, Integrated Status and Effectiveness Monitoring Project (ISEMP), CCNRD, CCD, and the Yakama Nation. The USFWS actively participates on several interdisciplinary teams that work towards Entiat and Wenatchee watershed restoration efforts including: the Upper Columbia Regional Technical Team (RTT), Upper Columbia Salmon Recovery Board, the Mid-Columbia HCP Tributary Sub-Committee and the Priest Rapids Coordinating Committee's Habitat Sub-Committee. The USFWS also provides funding for restoration activities through the Western Native Trout Initiative, the National Fish Passage Program (NFPP), Partners for Fish and Wildlife and the Fisheries Restoration and Irrigation Mitigation Program. More information about the USFWS involvement in these programs can be found online at http://www.fws.gov/pacific/Fisheries/sp_habcon/index.html.

The USFWS acts as an active partner in several stream and riparian restoration efforts along the lower 26 river miles of the Entiat River. In Chelan County, the USFWS is the lead agency on three extensive projects in the Entiat and Wenatchee basins. These projects are summarized below.

- *Entiat River Restoration*
  Currently in design phase, the USFWS's Entiat National Fish Hatchery (NFH) is updating hatchery facilities and undertaking a stream enhancement project on the adjacent Entiat River (located at approximately RM 7). The project hopes to improve juvenile rearing habitat (especially during high flow events), increase instream LWD retention, increase stream

habitat complexity and off-channel refugia, and improve floodplain connectivity. The hatchery water intake system will be redesigned and will encompass a fish-friendly screen to prevent fish entrapment. There will also be a new public fishing pond (for Kids Fishing Day events) built to facilitate recreation and learning opportunities within the Entiat basin (R. Parrish, personal communication, February 25, 2009).

- *Icicle Creek Restoration*

In 2006, the BOR and the USFWS convened a Project Alternative and Solution Study (PASS) to sequentially evaluate habitat restoration and water intake for the Leavenworth NFH. Goals for this project are to: improve fish passage and stream habitat; improve management and conservation efforts for water use by the irrigation district, Leavenworth NFH and Sleeping Lady Resort; and increase fish survival and spawning success in Icicle Creek. A group of policy and technical representatives from the USFWS, BOR, other federal and state resource agencies, the Yakama Nation, and the Wild Fish Conservancy were all invited to contribute staff to a technical team. Beginning in October 2006, the technical team collaborated and developed a preferred alternative design for the new Leavenworth NFH water intake system, which was approved for implementation by the USFWS and the BOR in November 2007. Final approval for the project is still pending due to the required completion of NEPA, various permits, and related actions. The BOR has set-aside several million dollars for implementation of this alternative and it is estimated that construction of a new water intake system will begin in 2009-2010.

In February 2008, the PASS effort shifted focus towards habitat restoration within the historic channel of Icicle Creek (adjacent to Leavenworth NFH). Restoration will include the construction of roughened fish passage channel and restoration of a normative flow regime. Additional habitat improvements may include LWD placement and native riparian plantings. The BOR has budgeted funds for PASS meetings, facilitation, engineering design, and related efforts during FY 2009 in support of the technical team's goal of finalizing plans for the restoration project as soon as possible. Once the project plan is finalized and approved, the USFWS will re-initiate and complete consultation on implementation of the plan and Leavenworth NFH operations, in addition to completing NEPA compliance procedures prior to initiating construction of this project. (The above information was provided via e-mail communication with Jim Craig, USFWS Mid-Columbia FRO, March 10, 2009).

- *Chumstick Passage Barrier Removal*

The USFWS and the CCNRD are working with local land owners to remove 17 fish passage barriers along Chumstick Creek. Approximately 20 miles of

instream habitat will be restored to steelhead, spring Chinook and reintroduced Coho salmon with the removal of barriers on Chumstick Creek (including the North Road). This project is possible with funding from Bonneville Power Administration (BPA) and the National Fish Passage Program (NFPP). (The above information was provided via e-mail communication with Jim Craig, USFWS Mid-Columbia FRO, March 10, 2009).

Education and Outreach

The USFWS's Mid-Columbia FRO is also a lead and partner in several education and outreach programs throughout the County. They inform the public about local restoration efforts, while providing environmental education to the community. The FRO, in cooperation with other agencies, sends out an annual newsletter informing the Entiat community about local watershed projects. The USFWS is involved in several educational events at both the Entiat and Leavenworth NFHs including: National Fishing Week events, Salmon in the Classroom, Wanapum Archeology Days, in addition to field and classroom events and those listed below.

- *Kids in the Creek*
  The USFWS partners with the CCD on this program, described in detail in CCD section above.

- *Wenatchee River Salmon Festival*
  The USFWS is one of the lead entities that host the *Wenatchee River Salmon Festival* each year at the Leavenworth National Fish Hatchery. The CCD is one of the festival sponsors. Detail about the festival can be found in section 4.8 above.

For more information about the USFWS's programs and/or reports, contact the Mid-Columbia Fisheries Resource Office (FRO) in Leavenworth at (509) 548-7573 or look online at http://www.fws.gov/midcolumbiariverfro.

4.17 United States Forest Service Efforts

Restoration

The USFS is responsible for vegetation/fuel and road management and is an active participant in watershed-level restoration efforts throughout Chelan County. The Leavenworth Ranger District may assist in watershed planning efforts in addition to the research and monitoring programs for fish and wildlife species of the watershed, including participation in the ISEMP. Within the Entiat basin, the USFS provides technical assistance to lead entities involved in in-stream and riparian restoration projects (P. Archibald, personal communication, February 26, 2009).

Education and Outreach

The USFS is implementing its *Respect the River* program that educates recreational users about riparian protection, managing and restoring riparian vegetation, reducing stream bank erosion, and improving floodplain water storage (Chelan County Conservation District 2006).

4.19 Yakama Nation Efforts

Yakama Nation projects throughout the mid- and upper-Columbia's ceded lands follow the tribes mission, "to preserve, protect, enhance, and restore culturally important fish populations and their habitats throughout the Zone of Influence of the Yakama Nation and to protect the rights of Yakama Nation members to utilize these resources as reserved for them in the Treaty of 1855." The Entiat and Wenatchee basins are areas in Chelan County that the Yakama Nation hopes to "demonstrate the fishery benefits of integrated land and water management practices" (Yakama Nation website). Currently the Yakama Nation is involved in an instream habitat enhancement project along the lower Entiat River's keystone reach (B. Rogers, e-mail correspondence, February 19, 2009).

The Yakama Nation's Mid-Columbia Field Station (located in Peshastin) has lead restoration efforts that have successful returned extirpated Coho salmon to the Wenatchee basin. Restoration efforts are focused on upper Wenatchee River tributaries, with rearing at the Leavenworth NFH and naturalized acclimation ponds along Nason Creek. The Yakama Nation also participates in numerous salmon recovery and watershed planning efforts, in addition to the research and monitoring programs for fish species of the watershed, including participation in the ISEMP.

Please see the following website for more information about the Yakama Nation Fisheries program: http://host119.yakama.com

5. List of Additional Projects and Programs to Achieve Local Restoration Goals

5.1 City of Cashmere

Additional restoration opportunities, not previously mentioned in WRIA and other watershed planning efforts, were identified in the *Analysis Report* (TWC and J&S 2009) as follows:

Riverside Park: Wenatchee River spring and fall discharges of 20,000 cfs or greater threaten the existing streamside canopy cover, vegetation and dike stability. Left and right bank reduction of shoreline armoring, addition of LWD, river meandering and revegetation could stabilize the stream bank and create off-channel salmonid spawning and juvenile rearing areas. Nature interpretive signs can be posted to entice the birding and naturalist communities to utilize this park. Special restoration attention to the left bank could decrease noise from U.S. Highway 2, improving the overall park and City aesthetic.

Chelan County Historical Museum and Pioneer Village: Similar Wenatchee River armor reduction, stream bank stabilization and revegetation, as mentioned above, can continue downstream of the Riverside Park to the end of Riverfront Drive (right bank) and the Chelan County Historical Museum and Pioneer Village (left bank). The Chelan County Historical Museum and Pioneer Village has wonderful restoration potential providing opportunities for public involvement and education.

Mission Creek: Seasonal floods cause considerable property damage, bank erosion and sediment loss throughout the creek. Reduce armoring and improve native vegetative cover to add habitat complexity and contribute to large woody debris recruitment. Creation of off-channel areas may minimize flooding and provide salmonid spawning and juvenile rearing areas. A combination of native revegetation and bioengineering techniques could be provided to secure the bank from excessive erosion.

General: At an October 2008 public meeting, a number of attendees commented that several sections of the Wenatchee River and Mission Creek contain debris (old tractors, large metal pieces, household appliances etc...) that could be removed to improve stream and fish habitat, and City aesthetics.

5.2 City of Chelan

Additional restoration opportunities, not previously mentioned in WRIA and other watershed planning efforts, were identified in the *Analysis Report* (TWC and J&S 2009) as follows:

Riverwalk Park: Coordinate with the PUD to reduce shoreline armoring, improve streambank stabilization, remove non-native plantings, and add native vegetation and LWD.

City of Chelan Parks (Don Morse and Lakeside Parks): Reduce shoreline armoring, create a shoreline buffer that includes non-native vegetation, and improve shoreline stabilization. Don Morse Park is currently in the design process for updated facilities, including a substantial restoration component.

General: Many residential shoreline properties throughout the City's Lake Chelan shoreline have the potential for improvement of ecological functions through: 1) reduction or modification of shoreline armoring, 2) reduction of overwater cover and in-water structures (grated pier decking, pier size reduction, pile size and quantity reduction, moorage cover removal), 3) improvements to nearshore native vegetative cover, and/or 4) reductions in impervious surface coverage. A combination of native revegetation and bioengineering techniques could be provided to secure the shoreline from excessive erosion. Where opportunities for on-site mitigation and restoration are not available, projects could explore and consider opportunities for enhancing any of the water-conveyance swales that enter Lake Chelan and drain areas developed for orchard, vineyard, or other uses. Enhancements of these corridors would improve wildlife habitat and increase the ability of these vegetated pathways to filter and treat pollutants originating from upslope uses.

5.3 City of Entiat

Additional restoration opportunities, not previously mentioned in WRIA and other watershed planning efforts, were identified in the *Analysis Report* (TWC and J&S 2009) as follows:

Waterfront Master Plan: Implementation of the City's Waterfront Master Plan (2009c) is expected to result in substantial improvements to shoreline function. The City has worked to balance environmental restoration of the Columbia River waterfront with development of uses that are water-oriented and provide economic return to the community.

Entiat City Park/Silico Saska Park: Create a shoreline buffer, improve shoreline stabilization, remove non-native plantings and add native vegetation. Nature interpretive signs can be posted to entice the birding and naturalist communities to utilize this park.

General: Residential shoreline properties on the Columbia River have the potential for improvement of ecological functions through: 1) reduction or modification of shoreline armoring, 2) reduction of overwater cover and in-water structures (grated pier decking, pier size reduction, pile size and quantity reduction, moorage cover removal), 3) improvements to nearshore native vegetative cover, and/or 4) reductions in impervious surface coverage. A combination of native revegetation and bioengineering techniques could be provided to secure the shoreline from excessive erosion.

5.4 City of Leavenworth

An additional restoration opportunity, not previously mentioned in WRIA and other watershed planning efforts were identified in the *Analysis Report* (TWC and J&S 2009) as follows:

Blackbird Island: The City should continue to remain involved in stream bank stabilization and native vegetation establishment efforts. According to the City, the southwest tip of Blackbird Island has eroded 40 feet in 10 years. This site may be a good candidate for shoreline stabilization using bioengineering techniques. A combination of native revegetation and bioengineering techniques could be provided to secure the streambank from excessive erosion, such as was caused by the November 2006 high water event. Design of any stabilization would need to consider the high velocities in the mainstem Wenatchee River and safety issues related to high use of this section of river by non-motorized boaters and recreationists. Interpretive signs could also be updated to provide relevant information about the Wenatchee River, its biological value, and it's potential.

5.5 City of Wenatchee

Additional restoration opportunities, not previously mentioned in WRIA and other watershed planning efforts, were identified in the *Analysis Report* (TWC and J&S 2009) as follows:

Wenatchee Parks (Riverfront and Confluence State Parks): Reduction of shoreline armoring, removal of non-native vegetation, native revegetation, shoreline stabilization, and the addition of interpretive nature and/or historical signs. Enhance and maintain the habitat along the south Confluence State Park wetland area.

General: Reduce shoreline armoring, improve shoreline stabilization, and remove non-native plantings. A combination of native revegetation and bioengineering techniques could be provided to secure the shoreline from excessive erosion.

6. Proposed Implementation Targets and Monitoring Methods

As previously noted, the shoreline areas in Chelan County occupy industrial, commercial, agricultural, multi- and single-family residences, and public recreation/open space areas. Therefore, efforts should be made to improve and retain shoreline ecological function through the promotion of restoration and healthy practices at all levels, from large-scale industrial users to single-family

property owners. Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth and Wenatchee already have very active environment-focused communities with a strong restoration and education focus. Continued improvement of shoreline ecological functions along the many shorelines requires a comprehensive watershed approach, which combines all planning and implementation efforts.

The following table outlines possible schedules and funding sources for implementation of a variety of efforts that could improve shoreline ecological function, and are described in previous sections of this report.

Table 8. Implementation Schedule and Funding for Restoration Projects, Programs and Plans.

Restoration Project/Program	Schedule	Funding Source or Commitment
4.1 WRIA 40a/b Participation	WRIA 40a Watershed Plan: 1) Development of Phase 4 - DIP is ongoing 2) Implementation of goals for water quality and quantity improvements are ongoing	1) The WRIA 40a DIP is currently being developed, with opportunities and feasibility to be evaluated. 2) Water quality and quantity implementation goals were ranked according to their level of importance (in Appendix D and E respectively of the WRIA 40a Watershed Plan) and will be implemented as funds become available.
4.2 WRIA 45 Participation	WRIA 45 DIP: 1) Implementation is ongoing	1) Implementation goals identified in the WRIA 45 DIP are being completed in addition to salmon recovery and water quality actions that have evolved since the DIP was adopted. Funding entities have been identified in the DIP and will be addressed as funds become available.
4.3 WRIA 46 Participation	WRIA 46 DIP: 1) Implementation is ongoing	1) Implementation goals and ongoing/long-term projects identified in Table 8 of the WRIA 46 DIP in progress. Funding entities have been identified in the DIP and will be addressed as funds become available.
4.4 WRIA 47 Participation	1) WRIA 47 Final Draft Unit Charter: ongoing 2) Lake Chelan Subbasin Plan: implementation is ongoing	1) Water quantity and quality tasks have been completed, but further recommendations have been made for additional investigation. These recommendations may be implemented as funds are available. 2) Restoration opportunities identified in the plan are underway in addition to ongoing research, monitoring and evaluation. Responsible entities and anticipated funding sources have

Restoration Project/Program	Schedule	Funding Source or Commitment
		been identified in the plan. Many of these entities include: USFS, CCPUD, DNR, WDFW or the Lake Chelan Sportsman's Association.
4.5 Chelan County Department of Natural Resources	Ongoing	Continue with implementation of actions as guided by the UCSRB Implementation Plan, the Wenatchee River CMZ study and watershed plans and DIP's (listed above) as funding and grant money is available.
4.6 Comprehensive Plan Policies	1) Chelan County (amended 2005) 2) City of Cashmere (amended 2008) 3) City of Chelan (amended 2007) 4) City of Entiat (amended 2007) 5) City of Leavenworth (amended 2003) 6) City of Wenatchee (amended 2008)	The county and cities make substantial staff time commitments in the course of project and program reviews to determine consistency and compliance with the recently updated comprehensive plans.
4.7 Critical Areas Regulations	1) Chelan County (amended 2005) 2) City of Cashmere (amended 2008) 3) City of Chelan (amended 2007) 4) City of Entiat (amended 2007) 5) City of Leavenworth (amended 2003) 6) City of Wenatchee (amended 2008)	The county and cities make substantial staff time commitments in the course of project and program reviews to determine consistency and compliance with the recently updated critical areas regulations.
4.8 Stormwater Management and Planning	Ongoing	Drainage systems will be updated as new development occurs. The County/Cities make substantial staff time commitments in the course of multi-agency drainage studies, management and planning efforts.
4.9 Public Education	Ongoing	Education is identified as essential to the region in several park/recreation and comprehensive plans. County/City staff time and materials are provided in developing and planning for public education and outreach opportunities.
4.10 City Efforts	Restoration and Education/Outreach projects: Ongoing - as funds and opportunities allow	Staff time, materials and assorted funds support these efforts, in addition to the project specific partners and grant/funding arrangements. Examples follow: City of Entiat The Entiat River Outdoor Learning

Restoration Project/Program	Schedule	Funding Source or Commitment
		Center is a multi-jurisdictional effort that is funded through in-kind resources from the participants, including the City, and it is also expected that funding will be secured through state grant programs and CCPUD re-licensing funds. City of Wenatchee The Wenatchee Waterfront Sub-Area Plan is primarily funded by the City, CCPUD and private land owners.
4.11 Audubon Society Efforts	Ongoing	NCW Audubon will continue to contribute and partner in planning efforts and education/outreach opportunities as funding and volunteer time allows.
4.12 Cascadia Conservation District Efforts	Ongoing	The CCD will continue to lead, contribute and partner in planning efforts, project implementation, and education/outreach opportunities as state and grant funding allows.
4.13 Chelan-Douglas Land Trust Efforts	Ongoing	The Land Trust will continue to lead land protection efforts and contribute and partner in planning efforts, project implementation, and education/outreach opportunities as state and grant funding allows.
4.14 Chelan County Public Utilities District Efforts	Ongoing	CCPUD is committed to achieving goals and opportunities identified in the HCP tributary program in addition to projects required as part of their FERC relicensing. CCPUD will continue to support community education and park/recreation opportunities.
4.15 Trout Unlimited Efforts	Ongoing	Trout Unlimited will continue to lead and partner in fish protection and conservation efforts throughout the region as funding and volunteerism allows.
4.16 United States Fish and Wildlife Service Efforts	Ongoing	The USFWS will continue to lead and partner in restoration, conservation and education/outreach opportunities throughout the region. Project specific funding sources may vary over time.
4.17 United States Forest Service Efforts	Ongoing – limited projects	Staff time, materials and assorted funds may be available to support restoration, research, monitoring and education/outreach opportunities and partnerships.
4.18 Yakama Nation Efforts	Ongoing	Staff time, materials and assorted funds may be available to support watershed planning, restoration, research, and monitoring opportunities and partnerships. The Yakama Nation may

Restoration Project/Program	Schedule	Funding Source or Commitment
		act as a project specific lead or partner and may provide varying grant/funding sources over time.

County and City planning staff will track all land use and development activity, including exemptions, within their respective shoreline jurisdictions, and will incorporate actions and programs of other departments as well. Reports will be assembled by each jurisdiction that provides basic project information, including location, permit type issued, project description, impacts, mitigation (if any), and monitoring outcomes as appropriate. Examples of data categories might include square feet of non-native vegetation removed, square feet of native vegetation planted or maintained, reductions in chemical usage to maintain turf, linear feet of eroding stream bank stabilized through plantings, linear feet of shoreline armoring removed or modified levees, changes to square footage of over-water cover, or number of fish passage barriers corrected.

The report would also recommend or describe relevant updates to WRIA, County and City goals and implementation plans, and outline current and ongoing implementation of various programs and restoration actions (by local government or other groups) that relate to watershed health.

The staff reports will be assembled to coincide with Comprehensive Plan updates and will be used, in light of the goals and objectives of the Shoreline Master Program, to determine whether implementation of the SMPs is meeting the basic goal of no net loss of ecological functions relative to the baseline condition established in the *Analysis Report* (TWC and J&S 2009). In the long term, each local government should be able to demonstrate a net improvement in their respective shoreline environments.

Based on the results of these assessments, each local government may make recommendations for changes to its SMP.

7. Restoration Priorities

This restoration plan, a phase of the Shoreline Master Program update process (consistent with WAC 173-26-201(2)(f)), includes "goals, policies and actions for restoration of impaired shoreline ecological functions." Restoration opportunities have been "designed to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the master program." This Restoration Plan demonstrates how specific potential projects match and meet regional or County/City-wide goals and objectives of the region,

watershed planning entities, and environmental organizations that contribute or could potentially contribute to improved ecological functions of the shoreline. Prioritization of specific projects and project types, implementation strategies, and schedules will be based on information found in watershed or basin plans.

The process of prioritizing actions that are geared toward restoration of the County/City shoreline areas involves balancing ecological goals with a variety of site-specific constraints. Briefly restated, the County/City environmental protection and restoration goals include 1) protecting watershed processes, water quality and quantity; 2) protecting open/recreational space and the habitats for fish and wildlife; and 3) contributing to ESA listed spring Chinook and steelhead conservation and recovery efforts. Constraints that are specific to Chelan County and the Cites of Cashmere, Chelan, Entiat, Leavenworth and Wenatchee include 1) the community's diverse past and present land uses and desires (that includes livestock grazing, orchards, and logging), 2) rivers and streams that have been confined by roads or that have altered flow regimes from the construction of dams and/or irrigation diversions, and 3) the highly developed and armored shorelines along Lake Chelan in the City of Chelan and the Columbia/Wenatchee Rivers near the City of Wenatchee. While much of the County lands offer good ecological functions (generally the upper basins and forest/wild lands of each drainage), opportunities have been recognized to further enhance ecological functions, conservation and education of these shorelands. Goals and constraints were used or will be used in the various watershed plans and implementation plans to develop shoreline restoration actions and a ranking prioritization of projects, programs, or sub-basins specific to each WRIA.

Although restoration project/program scheduling has been suggested and summarized in each watershed and entity planning effort identified in Chapters 3 and 4, the actual order of implementation may not always correspond with the priority level assigned to that project/program. This discrepancy is caused by a variety of obstacles that interfere with efforts to implement projects in the exact order of their perceived priority. Some projects, such as those associated with riparian planting, are *relatively* inexpensive and easy to permit and should be implemented over the short and intermediate term despite the perception of lower priority than projects involving extensive shoreline restoration or large-scale capital improvement projects. Projects with available funding will be initiated immediately for the worthwhile benefits they provide and to preserve a sense of momentum while permitting, design, site access authorization, and funding for the larger, more complicated, and more expensive projects are under way.

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9. List of Acronyms and Abbreviations

BLM ..... U.S. Bureau of Land Management

BOCC..... Board of County Commissioners

BOR..... Bureau of Reclamation

CCCD ..... Chelan County Conservation District

CCD ..... Cascadia Conservation District

CCNRD ..... Chelan County Natural Resource Department

CCPUD..... Chelan County Public Utilities District

CDLT ..... Chelan Douglas Land Trust

cfs ..... cubic feet per second

CMZ..... channel migration zone

DIP ..... Detailed Implementation Plan

DPS ..... Distinct Population Segment

ESA ..... Endangered Species Act

ESU ..... Evolutionarily Significant Unit

EWPU ..... Entiat Watershed Planning Unit

FEMA ..... Federal Emergency Management Agency

FERC..... Federal Energy Regulatory Commission

FRO..... Fisheries Resource Office

FWHCA ..... Fish and Wildlife Habitat Conservation Area

GIS ..... Geographic information systems

HFEP..... Habitat Farming Enterprise Program

IRIS ..... Initiative for Rural Innovation and Stewardship

ISEMP ..... Integrated Status and Effectiveness Monitoring Project

LWD ..... Large Woody Debris

NEPA ..... National Environmental Policy Act

NFH ..... National Fish Hatchery

NOAA Fisheries ..... National Marine Fisheries Service

NPDES ..... National Pollutant Discharge Elimination System

NPS ..... National Park Service

NRCS ..... Natural Resources Conservation Service

OHW/M ..... ordinary high water/mark

PUD ..... Public Utility District

RCW ..... Revised Code of Washington

SMA ..... Shoreline Management Act

SMP ..... Shoreline Master Program

UCRTT ..... Upper Columbia Regional Technical Team

UCSRB ..... Upper Columbia Salmon Recovery Board

UGA ..... Urban Growth Area

USFS ..... United States Forest Service

USFWS ..... U.S. Fish and Wildlife Service

WAC ..... Washington Administrative Code

WDFW ..... Washington Department of Fish and Wildlife

WDNR ..... Washington Department of Natural Resources

WRIA ..... Watershed Resource Inventory Area

WWMP ..... Wenatchee Watershed Management Plan

WWPU ..... Wenatchee Watershed Planning Unit

Appendix D
Vision Workshop Summary

Chelan County
Grant No. G0800231

Chelan County
Shoreline
Master
Program

COMMUNITY VISION WORKSHOP SUMMARY
for Shorelines in Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth and Wenatchee

Project: Comprehensive Shoreline Master Program Update
Task 7: Summarize Community Visioning Process

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1. INTRODUCTION

1.1 Background and Purpose

Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee have collectively initiated a Shoreline Master Program (SMP) update in accordance with the Washington State Shoreline Management Act and Shoreline Master Program Guidelines. The update process includes an inventory; environmental analysis and characterization; shoreline policies, environment designations, and use regulations; cumulative impacts and uses analysis; shoreline restoration plan; and a formal local adoption process. The SMP will apply to shorelines of the state, generally including lakes greater than 20 acres and streams with a mean annual flow greater than 20 cubic feet per second (cfs), together with shorelands within 200 feet of the ordinary high water mark and associated wetlands (RCW 90.58.030).

In May 2008, a Public Involvement Plan (PIP) was developed to guide community outreach efforts throughout the five project phases anticipated to conclude by summer 2010: awareness raising, visioning, SMP shoreline management recommendations, draft SMP policies and regulations, and SMP public approval process. During that time, the County and partner Cities will engage all shoreline users and those interested in the SMP process.

In October and November 2008, the County and partner Cities conducted the SMP Community Vision Workshop series to capture citizen questions, concerns, goals and aspirations regarding county and city shorelines. The nine interactive meetings represented the first round of community outreach focused on three key topic areas: public access and recreation, shoreline use and development, and environmental protection. Citizen input gathered at these meetings will help the project team develop shoreline goals, policies and regulations. Subsequent meetings will cover shoreline analysis, shoreline management recommendations, and draft policies and regulations. At least 195 citizens attended overall (some people did not sign in, so the total combined attendance is higher), with an average of 21 participants per meeting. The results of the workshops together with other public input (e.g., letters, e-mails and comment cards) will help guide the County and Cities' SMP update process through 2010.

Vision Workshop Attendance

Meeting Focus Area	Meeting Date	Meeting Location	Postcards Mailed	Participants Who Signed In
City of Chelan and UGA	October 21	Chelan City Hall	2,000	36
City of Wenatchee and UGA	October 22	Wenatchee Community Center	10,022	10
City of Cashmere and UGA / Lower Wenatchee Watershed (County)	October 23	Cashmere Riverside Center	5,166	28
Upper Wenatchee Watershed / Lake Wenatchee (County)	October 25	Lake Wenatchee Recreation Club	3,292	39
City of Leavenworth and UGA	October 27	Leavenworth City Hall	1,243	27
City of Entiat and UGA	October 28	Entiat Grange Hall	463	13
Stemilt-Squilchuck Watershed (County)	October 29	Malaga Fire Hall	1,507	10
Chelan Watershed (County)	October 30	Chelan Fire Hall	3,894	25
Entiat Watershed / Columbia River above Wenatchee (County)	November 5	Entiat Grange Hall	778	7
TOTALS			**28,315**	**195**

1.2 Format

All nine workshops followed the same general format: a welcome and staff introductions, brief project update, question and answer session, break-out groups, and recap of key themes. At each meeting, Chelan County SMP project manager Erin Fonville or the local City planning staff welcomed meeting participants, thanked them for their involvement, and introduced County and consultant project team members. Ms. Fonville or the local City planning staff reviewed the SMP update requirements, and summarized how the visioning process and public comments all help produce a countywide plan that acknowledges each City's and the County's individual character, geography and land use related goals. ICF Jones & Stokes consultant Meg O'Leary explained that the purpose of the workshop series was to gather community feedback on the three key topic areas in order to help the project team develop shoreline goals, policies and regulations. She reviewed the meeting format and encouraged participants to submit their comments via a comment card, letter or email.

The Watershed Company consultant project manager Amy Summe led the question and answer session at most meetings. The 15- to 20-minute session was followed by break-out group discussions structured around three key topic areas: public access and recreation, shoreline use and development, and environmental protection. Station facilitators led 20-minute group discussions for each topic area and asked participants to respond to a list of questions (see Appendix C for the questionnaire). The break-out group structure varied depending on the number of attendees. At two workshops, participants remained seated and the facilitators rotated; at all other meetings each group remained with the same facilitator and discussed all three topics together.

The meeting facilitators included the following staff:

- Chelan County: Erin Fonville, SMP Project Manager, Department of Natural Resources; Mike Kaputa, Director, Department of Natural Resources; Lilith Yanagimachi, Planner II, Department of Community Development.
- City of Cashmere: Mark Botello, Planning/Building Director
- City of Chelan: Craig Gildroy, Planning Director; Agnes Kowacz, Assistant Planner; and Rob Jordan, Building Inspector, Code Enforcement Officer
- City of Entiat: Susan Driver, City Planner
- City of Leavenworth: Connie Krueger, AICP, Community Development Director and Nicole Hill, Permit Coordinator
- City of Wenatchee: Brian Frampton, Associate Planner
- Consultants: Amy Summe, Consultant Team Project Manager, The Watershed Company; Suzanne Tomassi, Wetland/Wildlife Biologist, The Watershed Company; Meg O'Leary, Public Involvement Lead, ICF Jones & Stokes; Lisa Grueter, AICP, Senior Planner, ICF Jones & Stokes

See Appendix A for detailed workshop comments.

1.3 Materials

Participants were asked to sign in upon their arrival, then given a meeting agenda, project brochure and comment card. Maps were displayed at each of the break-out group stations, depicting waterbodies, proposed shoreline jurisdictions, parks and open space lands, and County and City boundaries and Urban Growth Areas (UGAs). Two displays showed the countywide shoreline jurisdictions and project timeline. See Appendix B for workshop displays and maps, and Appendix C for the workshop brochure and comment card.

1.4 Notification

1.4.1 Email Distribution

On September 24, 2008, the County emailed the workshop schedule to the SMP Advisory Committee and interested parties email distribution lists.

1.4.2 Posters

On October 13, 2008, color posters (11"x17") were delivered to the partner Cities for posting in various community locations, including city halls, post offices, grocery stores, and other high-pedestrian traffic areas. Posters were also placed throughout Chelan County.

- *Entiat & Columbia River Area:* Cooper's Store (Ardenvoir), Public access point on Entiat River near the mouth, Entiat Grocery Store, Entiat U.S. Post Office, and BJ's Shell Gas Station.
- *Lake Chelan Area:* Lake Chelan Reclamation District, Reed's Marine, Red Apple Market (Manson), Manson U.S. Post Office, Old Mille Park Boat Launch and Picnic Area (4 posters), Lake Chelan Shores Community Center, Lady of the Lake, Subway & Gas, Pat & Mike's Texaco, and 25 Mile Creek State Park Boat Launch (2 posters).
- *Lake Wenatchee Area:* Cole's Corner Gas Station, Parkside Market, Midway Market, Lake Wenatchee State Park, Midway Grocery, Cove Resort, and Just Plain Grocery.
- *Malaga Area:* Squilchuck Market, Malaga Market, and Malaga U.S. Post Office.
- *Wenatchee Valley Area:* Tom, Dick & Harry's (Monitor), Dryden U.S. Post Office, Dryden Grocery & Hardware, BJ's Shell Gas Station at Big Y, Peshastin U.S. Post Office, and Monitor U.S. Post Office.

1.4.3 Media

On October 15, 2008, the County emailed the workshop schedule to the following news sources: Cherry Creek Radio Stations, KOHO Radio, Wenatchee World, Cashmere Valley Record, Lake Chelan Mirror, Leavenworth Echo, and the Wenatchee Public Library.

1.4.4 Direct Mail

On October 14, 2008, postcard workshop announcements (Appendix C) were mailed to 28,315 addresses countywide. Postcards were mailed to every Chelan County property owner. The City of Chelan included a flyer in their monthly utility bill.

1.4.5 Web Sites

- Chelan County Public Utility District (PUD) posted workshops dates in their monthly "PUD News Line" (September 23, 2008 edition) at www.chelanpud.org/5822.html
- Chelan County posted workshop dates on their Web site www.co.chelan.wa.us/nr/nr_shoreline_master_program.html
- An invite to the October 25, 2008 Lake Wenatchee workshop was posted on the Lake Wenatchee Info Web site www.lakewenatcheeinfo.com

2. KEY THEMES

The purpose of the workshops was to identify participants' questions, concerns and goals regarding their community shorelines. The workshops were structured to explore existing conditions, ideas for improvements, and plans for future development and shoreline use. The following key themes emerged during the workshop break-out sessions. See Appendix A for detailed workshop comments.

2.1 Overall Key Themes

The following ten key themes arose consistently during break-out discussions at many of the County and City workshops.

- People are drawn to the natural beauty of the area. They recognize its importance environmentally and economically, and the need for a balance of shoreline uses.
- Countywide need for signage and well defined public access points.
- Many are concerned about the water quality of local ponds, creeks, streams, rivers and lakes and recommend improved water quality testing and monitoring, stormwater management and erosion control.
- Many are concerned about noise impacts from motorized vehicles on County rivers and lakes.
- Improve management of new development and density through zoning, and enhance pedestrian and bicycle connectivity.
- Keep new development in areas where existing development is located.
- Establish and maintain view corridors and scenic view roadway turnouts.
- Identify publicly owned land that could be adapted for new public access (e.g., street ends and rights-of-ways).
- Initiate and support ongoing efforts for cleanup and removal of litter, debris and junk metal in the water and along our shorelines.
- We have many parks and trails. Expand existing facilities before building new. Ensure existing public access, landscape and natural character are maintained.

2.2 Public Access and Recreation

Participants were asked how they currently use community shorelines, how easy it is to access those areas, which areas need new or improved public access, and what they imagined their community's shorelines will look like in the future. Participants

regularly use shoreline areas for walking, biking, fishing, rafting, kayaking, boating, tubing, jet skiing, swimming, bird watching, wildlife viewing, beach combing, scenic viewpoints, educational purposes, and even gold panning. Some feel that public access is inadequate because of private ownership, and difficult to find due to lack of clearly defined access points. Others feel their communities have fairly good public shoreline access. Participants recommend the County and partner Cities consider clear signage; more public docks, marinas and boat launches; more trails and access for non-motorized uses; improved amenities (restrooms, parking and dumpsters) at access points; and dog friendly areas. Some recommend an inventory of publicly owned land that could be converted for public access. Participants pointed out the conflicts between permitted private uses adjacent to public land and suggest prioritizing public access opportunities based on use and the potential impacts to private land.

2.2.1 City of Cashmere and UGA / Lower Wenatchee Watershed

- Public areas are difficult to access – need well defined access points. People create their own path and cause safety problems and river bank degradation.
- More access for fishing, boat launches and picnics (e.g., Mission Creek, Wenatchee River and Rodeo Hole)
- Identify existing sites for new public access and parking (e.g., mulch center)
- More highway turnoffs for scenic view points
- Confirm commitment of Railroad for involvement in shoreline protection, management, stewardship

2.2.2 City of Chelan and UGA

- Strong desire for public access to 3 Fingers (consider City purchase of land)
- More public access for a variety of uses
- Identify and protect non-motorized use areas – concerns about pollution, air quality, health, safety
- Identify street ends and vacant right-of-ways for public access
- Better signage and maintenance of unmarked public access
- Establish trails along lake and down river
- Create transitions between water and land uses
- Conflicts between permitted private uses adjacent to public land
- Prioritize public access opportunities based on use and impact on private land
- Fear of losing lake views – stagger building heights
- Parking and public transportation to and from access points

- Consider waterfront restaurant

2.2.3 Lake Chelan Watershed

- The more public access, the better – especially in summertime
- Concern that more parks equals more boats, and therefore more wildlife damage
- Micro parks, public docks, boat launches and beach access
- Non-boater access for walking, hiking, biking, horseback riding and dog owners
- Need to maintain view corridors
- Access needed on both sides of Lake Chelan
- Trail along the gorge, all the way to Chelan Falls
- Preserve, identify and clearly sign all street ends and rights-of-way for public access
- Don't force private owners to provide [public access]
- Consider purchase of private property for additional public parks

2.2.4 City of Entiat and UGA

- Public access is a priority for Entiat! Need more public access rather than private or exclusive uses.
- Balance habitat and development
- Signage for existing public access
- Trail and mini-parks along waterfront with multiple access points for commercial
- Entiat park with access to swimming beach and pedestrian bridge to islands
- Full-service public marinas – fueling, pump out, restroom, waterfront restaurant
- Connect waterfront via community loop trail
- Concerns about congestion problem at single boat launch

2.2.5 Entiat Watershed / Columbia River above Wenatchee

- Inadequate public access
- Lots of access to forest lands, so there is not necessarily inadequate access locally – just not much "urban" access, more backcountry
- Need uses that promote local economic vitality

- Inventory scenic vistas and turnout points (especially above Rocky Reach)
- Identify public ownership areas, then determine more public access points
- Inventory recently purchased land trust properties
- Need public access along Entiat River and Columbia River – lots of private ownership currently
- Signage needed for public access points – with no clear access, people make their own pathway across private property without permission
- Boat launch on Chelan County side of Columbia River
- Fishing access along Entiat River

2.2.6 City of Leavenworth and UGA

- Clear signage for public access
- Preservation of scale is important
- Public access to golf course year round for walking, cross-country skiing
- Keep public access at well site for non-commercial rafting or limit numbers
- Require LEED building design on shorelines
- Scale buildings and set them back in areas directly adjacent to park areas – require buffering
- Continuous pedestrian and bicycle paths, outside of right-of-way
- Trail system along entire shoreline – development restriction
- Purchase additional property in commercial zone
- Need East Leavenworth boat launch
- Need flexibility (e.g., fisherman's access) – if not in use, flexibility for [use of] private properties
- Riparian vegetation is important for atmosphere and environment
- Blackbird Island vegetation management for safety, balance
- Tax incentives to allow public access
- Private land access – concerns about land owner liability
- Model Europe – all shorelines accessible, even on private property (managed with signage, fences)

2.2.7 Stemilt-Squilchuck Watershed

- There will be growth in next 20 years – need to plan appropriately
- Current parks are under-served

- District has shut off access due to vandalism
- Free public boat launch with parking and garbage cans
- Better boat access to Wenatchee River and Lake Wenatchee
- Access north of dam, south of Wenatchee
- Concerns about erosion at boat launch areas
- Consider County land purchase for launch and park in Malaga
- Improve areas where access actually occurs, otherwise people make their own
- Don't want to force public access

2.2.8 City of Wenatchee and UGA

- Balance of appropriate use in the right place
- Minimize environmental impacts
- Expand existing facilities rather than building new sites and facilities
- Feel good about waterfront access today – want to keep it – part of Wenatchee charm
- More kayak, paddle boat and tuber access
- No new beaches, especially in natural areas – small beach access okay for kids
- Could use more lighting near 5th Street

2.2.9 Upper Wenatchee Watershed

- No comments gathered at the workshop for this topic area.

2.3 Shoreline Use and Development

Participants responded to questions about the scope and scale of their community's shoreline uses (e.g., what is there too much or too little of?), what type of development they would like to see, and the most suitable locations for future development. In general, participants feel it is important to create more public access for a variety of uses, establish and maintain view corridors, improve management of new development and density through zoning, address trash and litter along shorelines, improve pedestrian and bicycle connectivity, and control the noise and environmental and impacts of motorized crafts on the County's lakes and rivers.

2.3.1 City of Cashmere and UGA / Lower Wenatchee Watershed

- More habitat, open space and recreation
- Designated public access for fishing

- Better public access for non-fishermen at Rodeo Hall and Sleepy Hollow
- River trail between Wenatchee and Leavenworth for biking and walking
- Add parking and restrooms in high use areas
- Consider waterfront hotel, restaurant – City benefit, take advantage of scenery
- Like to see fewer business and commercial uses on waterfront (e.g., concrete plant, warehouses)
- No need for high intensity development
- Existing Wenatchee River boat launches are inadequate
- Inappropriate use of Wenatchee River bridges –causes parking problems
- Inappropriate launch area at Mission Creek near Wenatchee and at Jarvis – spawning salmon
- Preserve floodplains
- Clean up car junkyards on Riverfront Drive and along Mission Creek
- Water crafts and jet skis on Lake Wenatchee are noisy and destroy banks
- Concern about impacts to water quality from overuse of pesticides and road salt (Blewett Pass)

2.3.2 City of Chelan and UGA

- Need consistent year round water level in Lake Chelan
- Lake Chelan is our primary asset. Don't restrict our economy. Need more year round moorage and public access. Tourism big part.
- Concern about shoreline and marina congestion
- Concern about boat refueling – water quality (i.e. fuels spills from no automatic shut-offs) and swimmer safety
- Lessen standards for docks to allow for existing dock maintenance. Some docks are falling apart.
- Design review and City plan needed to maintain cohesive character
- Density requirements on shoreline – we only have so much space
- Concern about height blocking views – just under 50 feet
- Too much condo and home development
- Current standards make it difficult for private owners to make dock repairs
- Concern about large woody debris – improperly placed, aesthetics, navigation
- Add camping areas

- Proposed trails conflict with existing parking
- More habitat for fish – concern about impacts of shoreline noise and activity
- More and more garbage floating on lake – clean it up

2.3.3 Lake Chelan Watershed

- Enough residential, business, agriculture and irrigation
- More commercial outside urban area (gas refueling stations, restaurants, retail, etc.)
- More non-motorized use and development – kayak, canoes, bike, pedestrian pathways
- More boat rental and dock spaces
- Dog friendly access
- Buoy line for swimmers
- Safe pedestrian walkway along water with connectivity to downtown shops
- Better, more affordable access uplake (besides Lady of the Lake) for non boat owners – a shuttle?
- Need view corridors
- Improve signage for public access
- Open up street ends or combine to make single large park
- Concerns about residential development
- Concerns about water quality, aesthetics – appalling development, particularly on steep slopes
- Concerns about loud water crafts, fast boats, wakes, gas tanks, marinas and increased septic
- Removal of junk cars around lakes above Manson

2.3.4 City of Entiat and UGA

- Establish retail and restaurant businesses
- We have enough residential
- Concerns about jet ski noise and enforcement of Entiat River "No Wake" zone
- No high intensity, manufacturing, detrimental waste-producing uses (e.g., livestock, junk yards)

2.3.5 Entiat Watershed / Columbia River above Wenatchee

- More commercial within Entiat city limits and along shoreline

- Waterfront hotel
- Concerns about too much residential
- Concerns about additional access and usage impacting Entiat River
- Concerns about conflicting fishing and water craft uses
- Marina may help reduce private dock construction
- Pocket parks
- Community pool or aquatic center

2.3.6 City of Leavenworth and UGA

- We like our existing shoreline uses
- Houses 25 feet from river – seems too close – other areas have larger buffers
- Would be nice to have a waterfront restaurant
- No high intensity uses!
- Pedestrian connection from Blackbird Island to golf course
- Better park system maintenance

2.3.7 Stemilt-Squilchuck Watershed

- County needs to review Malaga Vision Plan and Stemilt-Squilchuck Community Vision Plan – many of your shoreline questions are answered
- No multifamily units – design rural riverfront, small lot, single family
- No more waterfront homes
- Concern about litter and squatters along shoreline
- Lake Entiat (on Entiat side) is suitable for high intensity development
- Orondo suitable for high intensity recreation, support facilities (e.g., fueling)
- Development that enhances fishing and builds fish habitat
- Protect existing agriculture

2.3.8 City of Wenatchee and UGA

- Plenty of parks and trails currently – make sure public access, natural character and landscape are maintained
- Interpretive signage at confluence and wetlands areas
- Public access across Highway 2
- Odabashian Bridge extension of loop trail

- Pedestrian/bicycle connectivity from downtown to water across railroad and in all directions in northern UGA
- No high-intensity development except marina and education center
- Don't want to see hotels near parks – waterfront parks require mixed use
- Consider waterfront restaurant
- Don't want motorized crafts
- Limited additional water-oriented commercial – kayak rental, fishing guides
- Want to see small marina, docks – don't want permanent slips
- Lacking open space for recreation
- Concerns about value of waterfront property
- Scenic view protection

2.3.9 Upper Wenatchee Watershed

- Too much removal of riparian vegetation along shorelines by landowners
- Too many Beach/Community Clubs along Lake Wenatchee
- Too much impervious surfaces impacting runoff
- Maintain opens spaces and parks – possibly add a dog park
- Not enough restroom facilities
- Concerns about future multi-family and commercial uses and development outside of shorelines
- Noise pollution from jet skis, boats, music from boats
- Light pollution
- No safe, contained boat refueling areas – educate public about safe refueling

2.4 Environmental Protection

Participants were asked which community natural areas should be protected and the best approach for preservation. They identified degraded shoreline areas that should be restored and discussed who should be responsible for restoration efforts. Many expressed concern about the water quality of local ponds, creeks, streams, rivers and lakes and recommend improved water quality testing and monitoring, stormwater management, and erosion control. Some pointed out the need for better management of refueling stations and the need for reductions in pesticide and chemical spray use. Others noted the loss of views, view corridors, and public access due to increased private development. Most agreed that public

education—especially of children—plays an important role in environmental stewardship, preservation and restoration.

2.4.1 City of Cashmere and UGA / Lower Wenatchee Watershed

- Preserve Wenatchee River waterfront, Lake Jarvis, salmon spawning grounds near Jarvis Station, Mission Creek, Sand Creek, Peshastin Creek, Brender Creek, and Mill Pond
- Encourage preservation through interpretive signs and public outreach
- Coordinate volunteer, community-based clean up with service clubs and schools
- Create landowner incentives instead of regulations
- Establish better mechanisms for enforcement of environmental regulations
- Clean up dump areas, debris and garbage in and around waterbodies
- Dikes near recycling center get degraded because rafters scramble to water
- Restore dike where it has been eroded by people seeking river access

2.4.2 City of Chelan and UGA

- Alarmed about loss of lake view, access points, corridor preserves, noise pollution and water quality
- Any area that is currently public should remain public (e.g., Park Street)
- Need water quality study and more water quality regulations and monitoring
- Require water testing near marinas and high impact use areas (e.g., refueling stations)
- Create automatic shut-offs for boat refueling
- Limit buoys at public access points
- Too many marinas
- Concerns about milfoil in Lake Chelan
- Concerns about lake level for Lake Chelan
- Coordinate parking with public access
- Educate and encourage private businesses to upgrade their facilities

2.4.3 Lake Chelan Watershed

- Already afforded degree of environmental protection – programs already in place – we have enough
- Continue to be protected under existing [regulations], but don't add more

- Columbia River docks and banks – concerned about private use, not protection
- Concern about access on Upper Stehekin Valley Road
- Improve stormwater management
- Concern about sediment and pollutant runoff to lake and river
- Erosion protection in developed area is the County's responsibility
- Concern about Chelan valley runoff from fires
- Concern about clearing and grading around lake
- Concern about woody debris
- More local control
- Would like to see top 30 miles [of lake] remain natural, as is – concern about private holdings there and would prefer to have it remain public

2.4.4 City of Entiat and UGA

- Columbia River areas need to be enhanced and restored to natural condition (e.g., re-vegetation)
- Entiat waterfront plan – building theme or style should tie together
- Need volunteer involvement – Tree Board
- New hotel to bring more tourists and invite new residents
- Incorporate viewpoints and small parks like PUD
- Concerns about increased beaver population
- City should be responsible for restoration in cooperation with PUD

2.4.5 Entiat Watershed / Columbia River above Wenatchee

- County should review Entiat watershed plan – includes list of areas for preservation
- Preserve area from PUD substation northward, near Earthquake Point, where cliffs come to Columbia River – heavily used by waterfowl
- PUD could surplus land for conversion to public access (e.g., southern tip of Earthquake Point)
- Preserve environmentally sensitive area in front of proposed marina
- Preserve springs and streams at mouth of Columbia River
- Inventory land that could become wildlife habitat
- Concern about beaver damage to trees

- County should be responsible for restoration

2.4.6 City of Leavenworth and UGA

- Blackbird Island – habitat restoration on north side and erosion protection on south side
- Concerns about erosion along river banks due to access and use
- Avoid over-development of Chumstick Creek

2.4.7 Stemilt-Squilchuck Watershed

- Control off-road vehicles – tearing up meadows and low lying areas, going near water and causing siltation in the Stemilt Basin and on Birch Mountain
- Address erosion along Columbia River
- Address littering problem in water and along shoreline
- Inventory state or public lands – protect and preserve those areas
- Offer rewards and incentives
- Why do we need a reward to do the right thing?
- Consider local fundraisers, local business donations and Adopt-a-Stream/Reservoir/Lake
- Involve the kids
- Incentives for private owners to preserve?
- Trees blow over and cause erosion – need native vegetation
- County should review WRIA 40a plan
- Improved roads make it easier to get in and impact natural areas
- County needs to advertise positive restoration activities completed or in progress

2.4.8 City of Wenatchee and UGA

- Protect unique areas, but balance other areas for appropriate uses
- Replanting north of confluence area (e.g., drought tolerant plants)
- Preserve Horse Lake Road, south bank of Wenatchee, for possible future park
- Ensure adequate, aesthetic lighting but shielding so it doesn't impact neighborhoods
- Public education – involve the kids
- Coordinate volunteer restoration efforts

- Is City helping the homeless?
- City should improve irrigation near 5th Street – could become a view point
- Restoration is not just a responsibility, it's a privilege

2.4.9 Upper Wenatchee Watershed

- Preserve north and south shore drinking water sources – public health concern
- Preserve White River, Fish Lake wetlands, Lake Wenatchee's north shore, and smaller lakes (e.g., Hidden Lake)
- Investigate opportunities to preserve private property
- Enjoy and appreciate current mix of public, private – variety of access and uses
- Limit future commercial and high density use
- Better education would lead to less need for regulation
- Volunteer restoration programs for kids would help build appreciation and stewardship
- Restoration efforts could be supported by Chelan-Douglas Land Trust through Conservation Easements
- Concerns about land clearing and impacts to shorelines and streams
- Maintain native vegetation as much as possible
- Concern about spraying along roads near water

3. SHORELINE MANAGEMENT RECOMMENDATIONS

Public Comment Matrix and Recommendations

This section sorts vision workshop public comments by meeting location and key SMP topic – shoreline use, public access, and environmental protection. A general summary of how the comments are likely to be addressed in SMP provisions is included.

Vision Workshop Meeting Location / Coverage Area						
Lake Wenatchee / Upper Wenatchee Watershed, Malaga / Stemilt-Squilchuck-Colockum Watershed, City of Entiat / Entiat Watershed, City of Chelan / Chelan Watershed	**City of Cashmere / City, UGA, and Lower Wenatchee Watershed**	**City of Chelan / City and UGA**	**City of Entiat / City and UGA**	**City of Leavenworth / City and UGA**	**City of Wenatchee / City and UGA**	**Recommendations / Portion of Shoreline Master Program where Topic will be Addressed**
Shoreline Use: The SMA requires that "uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the states' shorelines..." "Preferred" uses include single family residences, ports, shoreline recreational uses, water dependent industrial and commercial developments and other developments that provide public access opportunities. To the maximum extent possible, the shorelines should be reserved for "water-oriented" uses, including "water-dependent", "water-related" and "water-enjoyment" uses. The Act affords special consideration to **Shorelines of Statewide Significance** that have greater than regional importance. Preferred uses for Shorelines of Statewide Significance, in order of priority, are to "recognize and protect the state wide interest over local interest; preserve the natural character of the shoreline; result in long term over short term benefit; protect the resources and ecology of the shoreline; increase public access to publicly owned shoreline areas; and increase recreational opportunities for the public in the shoreline area." (http://www.ecy.wa.gov/programs/sea/sma/st_guide/intro.html)						
• Areas suitable for high intensity development – Lake Entiat on Entiat side of Columbia River • Orondo for high intensity recreation and support facilities, e.g., fueling [note: in Douglas County] • Protect existing agriculture • Enough agriculture and irrigation • Agriculture zone on water is no longer available • Need marina infrastructure • Problems with lake erosion at steep bluff in Manson – could be good site for shops, other waterfront development • Waterfront hotel • Need more commercial within Entiat city limits and along shoreline • Not enough commercial • For CUPs, consider requiring some kind of water access, marina, e.g., at waterfront restaurant • Lack of restaurants – outside urban area • More commercial (gas refueling stations, retail) outside urban area • Need restaurant on shoreline • There is going to be too much residential in Entiat watershed • No multifamily units, so design as rural river front – small lot, single family • No more waterfront homes • Small lot residential okay if can meet engineering/architecture [standards] • Concerns about residential	• No need for high intensity development • Agriculture – concern about use of pesticides • Restaurants, resorts – make nice development that takes advantage of scenery • Might be good to have a waterfront hotel or restaurant – benefit the City • No economic, commercial uses on waterfront • Wenatchee River already developed – put resorts in developed areas • Need more commercial within Entiat city limits and along shoreline • Add commercial • There is going to be too much residential • Protect Upper Mission Creek, Sand Creek, Mill Pond, Brender Creek, Peshastin, Wenatchee riverfront • Limit development in those areas or specific types, e.g., cabin vs. subdivisions	• Transitions between water and land uses • Concern about lack of car and boat trailer parking • Need to address scale (e.g., marina) • Can we get zoning on the lake? Co-locate jet skis, marinas, fueling? • House boats – need to regulate like mansions in county • Too much condo and home development • Concern about river – land use regulations • Need parking and public transportation to access points	• No high intensity uses along Entiat • Balance habitat and development • Marinas – public with full services like fueling, pump out, restroom, waterfront restaurant • Less multi-storey buildings • Future condos – need City plan to protect character – avoid out of scale with adjacent low intensity uses – wedding cake look • Need density requirements on shoreline • Waterfront restaurant • Hotel is first step to bringing houses and tourists • Need more retail, restaurants, businesses • No manufacturing • No detrimental use, waste producing, e.g., stock, junk yards • Residential is adequate	• No high intensity uses! • Avoid over development of Chumstick Creek • Would be nice to have restaurant on waterfront • Require Leadership in Energy and Environmental Design (LEED) rated building design on shorelines • Scale buildings and set them back in areas directly adjacent to park areas – require buffering • Preservation of scale is important – keep scale	• Need waterfront restaurants • Don't want bunch of hotels near parks – waterfront parks require mixed use • Waterfront last place for development • Ensure adequate, aesthetic lighting but shielding so it doesn't impact neighborhoods • Maintain natural character/landscape • Maintain natural shoreline – want balance	Shoreline use provisions will be addressed in all portions of the SMP, but are most directly found in sections with an asterisk: SMP Contents a. Review and revise goals* b. Conduct inventory & analysis c. Determine environment designations* d. Analyze cumulative impacts e. Develop restoration plan f. Amend permit provisions* g. General policies and regulations h. Modification policies and regulations i. Use policies and regulations* j. Public and agency involvement More intensive use environments can be applied in Cities and UGAs, e.g. commercial and similar, particularly water-oriented uses. Where allowed, these will be consistent with local comprehensive plans. Waterfront restaurants can be addressed as a water-enjoyment use in appropriate use environments. Agricultural uses are allowed consistent with SMA and the

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development, e.g., across from 25 Mile Creek • Enough residential and business • Restrooms between Wenatchee and City of Chelan • Community pool or aquatic center • Need uses that promote local economic vitality						SMP guidelines. Residential at different densities will be allowed – but consistent with the local comprehensive plans. Recreation uses and support facilities, e.g. restrooms and parking, will be addressed in use policies and regulations. Building height is anticipated to be limited to SMA standards, unless there is an overriding public interest.
Public Access: "the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally." (http://www.ecy.wa.gov/programs/sea/sma/st_guide/intro.html)						
• Shut down Black Lake due to vandalism • Don't want to force public access • Near Alcoa – good area for public access, viewpoints • Lack of good launches south of Rock Island – really steep • Need launch with parking, garbage cans and public access • Require improvement of immediate launch to avoid erosion • No public access north of Rock Island Dam to just south of Wenatchee on the west side of the Columbia River. • Want free public access • Consider purchase property for launch and park in Malaga in partnership with County. • Focus where access occurs, otherwise people make their own • Ravens Wing – get easement for public access • Railroad crossing issues – safety • Need better boat access to Wenatchee River and Lake Wenatchee • Get County public works maps of street ends right of way for public access • Preserve, identify and sign all street ends right of way for public access • Need view corridors • Need more sandy beaches • No vehicle turnoff/viewpoint between	• Not enough formal designated spaces for access • Need clear, obvious public access • Area down river – not an official boat launch, need to make it safer • Protect private property • Highway turnoffs for views • Entire Wenatchee River as view corridor • More access for fishing, views, picnics, boating • More maintained access with amenities – dumpster, porta potties • Difficult to access – only six points of public access between Dryden and Wenatchee • People making own access causes safety problems and dike/bank degradation • Formalize mulch center site as access • Mission Creek – needs access • Cashmere dike access • Too little access, e.g., Mission Creek • Rodeo Hole – more public access • Avoid land locked public land – Three Lakes, Malaga is private, no public access • Need highway turnouts • Contained dog park • Historical perspective - interpretive signs and public outreach • Additional access and usage	• Prioritize public access opportunities based on use and impact on private land • 3 Fingers Park public access • Want to be able to walk/access lake physically, frequently • Public access/land strictly for public, no private uses • Define public beach access available at low lake level • Improve public lands for accessible public access • Beach areas for children • Non-motorized boat access • Waterfront park dog access areas • Conflicts between permitted private uses on/adjacent to public land • Improve kayak haul out areas • Develop street ends/vacant right-of-ways • Access map for cyclists • Not happy with shorelines – need access – tourism is big part • Alarmed about loss of lake view, access points and corridor preserves • Preserve area west of lakeside as swim lane • Fear we will lose views of lake with fences and buildings • Staggered building heights • Public access/land should be usable, sanctioned – add signage • Camping accessible from parks	• PUBLIC ACCESS IS A PRIORITY FOR ENTIAT! • Trail along waterfront with multiple access points for commercial • Mini parks along waterfront north of existing city park • Public facilities, no exclusive uses • Entiat park with access to swimming beach, pedestrian bridge to islands • Parking, under bridge, does City/PUD have plan? Prior plans unfinished. • Another park on Entiat – canoe, kayak, docks, swimming, water is clean • How about a rustic park by kiosk near the mouth of the Entiat River? • City storage yard – dump wood chips – road/turn around – improve public access • See old PUD park plan – can PUD do more? • Congestion problem at single boat launch • No signage/identification of existing legal public access • No other public access, 20 miles up and down Entiat river • Current access not good, especially when water is down – one dock • Lake view disappearing due to	• Clear signage • Year round golf course access • Purchase additional property in commercial zone • Blackbird reserve to Blackbird Island – any connections punch through 13th • Commercial floaters on Icicle interrupting privacy of private land owners • Need flexibility, fisherman's access, some overgrown – if not in use, flexibility for private properties • Model Europe – all shorelines accessible, trail with fence • Public visual access – make park entries visible • With development, consider views, access • Keep public access at well site for non-commercial rafting or limit numbers • Tax incentives to allow public access • Private land access – liability concern, protect land owners • Want more trails • Trail system along entire shoreline – development restriction • East Leavenworth boat launch • Continuous pedestrian/bicycle paths, outside of right-of-way	• Open, easily accessible, natural • More kayak/paddle type access • No new beaches, especially in natural areas • Small beaches okay, e.g., for child access • Need balance – appropriate use in the right place • Minimize environmental impacts • Expand existing facilities rather than building new sites (e.g., boat launches) • When parks designed – consider safety and civility, e.g., tree placement • Could use more lighting near 5th Street • Need access near railroad south – there are access roads but owned by BNSF • Maintain pedestrian bridge for safety • Active access areas away from natural areas • Kayak/tube haul out, Wenatchee River • Make sure access is maintained • Want to maintain loop trail and parks • Want to retain park for all, not just folks that live nearby Interpretive signage in	Public access provisions will be addressed in all relevant portions of the SMP, particularly those with an asterisk: SMP Contents a. Review and revise goals* b. Conduct inventory & analysis* c. Determine environment designations d. Analyze cumulative impacts e. Develop restoration plan f. Amend permit provisions g. General policies and regulations* h. Modification policies and regulations* i. Use policies and regulations* j. Public and agency involvement Public access standards will be developed. Public access is likely to be required with most new shoreline uses, except for single-family residential, particularly when a shoreline trail plan is in effect. Exceptions will be noted, and may include when access would interfere with a use (e.g. water-dependent industrial) or create hazards to life or property. View protection would be addressed through building heights (see Shoreline Use

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Chelan and Manson • Access needed both sides of lake • Public access uplake of 25 Mile Creek • Pocket parks • Non-boating access for hiking, biking, horseback riding • Antilon Lake – need hiking opportunities • Micro parks – bike, pedestrian access • More parks equals more boats, more wildlife damage • Identify existing public access sites – street ends, right of way • Kayak areas – non motorized water trails/pathways • Hiking, walking along water • Buoy line for swimmers • Dog friendly access • Need incentives and regulations for view corridor • Need public access along Entiat River and Columbia River • With no clear public access, people make their own pathway across private property without permission • County needs to identify public property and easements along Entiat River, then determine opportunities for more public access • Signage needed for public access points • Need boat launch on Chelan County side of Columbia River • Petition PUD for public area on waterfront near Earthquake Point • Lots of access to forest lands, so there is not necessarily inadequate access locally – just not much "urban" access, more backcountry • Inventory scenic vistas and turnout points (especially above Rocky Reach) • Would like trail from 25 Mile Creek state park to Box [canyon or creek?] • Need a trail along the gorge, all the way to Chelan Falls • Safe pedestrian walkway along water with connectivity to downtown shops • Control off-road vehicles • Concern about Howe Sound dock falling down	stresses the river • Fishing and water craft are conflicting uses • Tubing groups – volume of people on water – environmental issue. Limit use. • Want biking/walking trail connecting Cashmere, Dryden, Peshastin, Leavenworth, Wenatchee • Need formal designated kayak/float launch, other than Recreation Center • Boat launches at Lake Wenatchee, existing is inadequate • Want Rose Lake – "no wake" lake	with reasonable facilities • City should develop existing opportunities and purchase additional park land • All public lands maintained for non-motorized boating/swimming • Better signage/maintenance of unmarked access • All uses in short supply, but limited land – use land wisely, find coordinated plan • More trails along lake and down river • Need more use for non-motorized activities • No wake zone in lower 2 miles of Lake • Pedestrian bridge to Leavenworth Road • Add bike lane connections to bridges and Highway 2 • Motorized transportation should be encouraged • Lessen standards for docks to allow for existing dock maintenance. Some docks are falling apart. • Difficult for private owners to make repairs • Not allowed to resurface my dock except if using recycled wood • Narrow channel for travel lanes to buoys • Hold line on boat launches and marinas – too many buoys • New private marinas or dock development – set aside open space • Boats equal sound, gas, smell	vegetation • Want viewpoints – signage about wildlife and Entiat • At new access points, need parking with landscaping, benches, etc. • Need lighting, restrooms • No private/exclusive uses • Inappropriate – jet skis, noise • Need to enforce no wake zone at Entiat River – difficult to enforce • Bike and walking trails • Connect waterfront via community loop trail • Want a marina – public and private		confluence/wetlands areas • Lacking open/recreation space • Horse Lake Road – south bank of Wenatchee, possible future park area, flat • Irrigation near 5th Street – could be a view point • Need view points • Need marina • Don't want motorized crafts – want kayaks, canoes at waterfront park • Want small marina, docks – don't want permanent slips • Want a boathouse to store kayaks, etc. • Connectivity – pedestrian/bicycle – from downtown areas to water across railroad • Want bicycle trails in all directions in northern UGA • Richard Odabashian Bridge – extension of loop trail	above) and shoreline setbacks. Dock, marina, and other in-water structures and activities will be addressed in the SMP. To the extent possible standards will be coordinated with those of other agencies to streamline the process, and the standards will recognize the need to maintain structures for safety.

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• Columbia River docks and banks – concerned about private use, not protection • Need more public docks and boat launches • Too many private marinas, too many parked boats, affect public enjoyment • Need more boat rental and dock spaces • Find balance between wildlife and proposed marina • Lady of the Lake causes waves						
Environmental Protection: The SMA is intended to protect shoreline natural resources, including "...the land and its vegetation and wildlife, and the water of the state and their aquatic life..." against adverse effects. All allowed uses are required to mitigate adverse environmental impacts to the maximum extent feasible and preserve the natural character and aesthetics of the shoreline. (http://www.ecy.wa.gov/programs/sea/sma/st_guide/intro.html)						
• Inventory state or public lands – protect and preserve those areas • Identify county-owned shoreline property not used for agriculture or residential and purchase it. Create park. • Develop habitat that enhances fishing • Concern about erosion along Columbia River • Concern about access on Upper Stehekin Valley Road • Everyone should be responsible for restoration. • Lake Chelan already 3/4 protected – enough protection • Should continue to be protected under existing [regulations], but don't add more protections • Would like to see shoreline study stay as is – natural – particularly top 30 miles [of lake] – concerns that there are private holdings there, but would prefer to have it remain public • Address littering problem in water and along shoreline • Lower end of Squilchuck, junk scattered in area • Garbage on Columbia River – pressure land owners to clean up • Junk cars around Mason Lakes • Don't want large woody debris • Want waterline to be attractive, no brush • Concern about gas tanks, marinas • Concerns about water quality, aesthetics – appalling development,	• Look into Chelan Falls land inventory • More trees for eagle perches, habitat • Salmon spawning grounds near Jarvis Station • Protect Upper Mission Creek, Sand Creek, Mill Pond, Brender Creek, Peshastin, Wenatchee riverfront • Landowner incentives instead of regulations, e.g., Conservation Reserve Program (CRP) lands • Service clubs and volunteerism, volunteer clean up days • Need educational program to help protect natural areas • Concern about what [substance] railroad uses for weed control, fire control • Clean up car junkyards on Riverfront Drive and Mission Creek • Would like garbage, metal debris removed • Enforce removal of trash – less expensive trash removal • Enforcement issues – need to be better mechanism • Be careful how planted buffer and landscaping is done • Dikes near recycling center get degraded because rafters climb/scramble to water • Noxious weed control • Mission Creek – milfoil	• Preserve existing conditions as much as possible • Lake is the biggest asset • Need more habitat for fish – concern about [shoreline] sound and activity • Too much large woody debris as mitigation given lake elevation. Improperly placed. Aesthetics and navigation. • During low water levels, old portions of concrete are visible – remove unnatural materials • Increase landscaping, besides grass • Non-motorized – water quality, noise • Water sources, input into Lake Chelan that affects water quality – minimize impacts with landscaping and maintenance; Big polluters – ducks and geese on water and grass. • Need to monitor benzene sources – motor boats, etc. • Safe guards – water quality, garbage • Water quality concerns – drinking water, milfoil • Butte area – limits on development, protect water quality • Milfoil problem just starting – avoid spread • Non-motorized – water quality, noise • Water sources, input into Lake Chelan that affects water quality –	• Want Entiat to be natural • Need volunteer involvement – Tree Board • City should be responsible for restoration via plans and cooperation with PUD • What can be done with railroad bed and island? If railroad ties are pulled out, what is liability with creosote, etc.? • Columbia River areas need to be enhanced/restored to natural condition – revegetation	• Riparian vegetation is important for atmosphere and environment • Revisit buffers on east [side of Icicle Creek] • Do not allow construction in repetitive flood areas • Can vegetation be thinned to avoid blocking views if mitigated elsewhere? • Beaches important – getting smaller, need to restore vegetation • Erosion – what could be done legally to preserve beaches or public areas? • Houses 25 feet from river – seems too close – other areas have larger buffers	• Restoration not just responsibility but privilege • In replanting areas, have work parties • Plaque or recognition for helping with restoration • Need education – have kids fall in love with the area • Protect unique areas, but balance other areas for appropriate uses • Protect some distance upstream of confluence/Wenatchee River • Want native plants in shoreline landscapes • Need drought tolerant replanting north of confluence	Environment provisions will be addressed in all portions of the SMP but are most directly found in sections with an asterisk: SMP Contents a. Review and revise goals* b. Conduct inventory & analysis* c. Determine environment designations* d. Analyze cumulative impacts* e. Develop restoration plan* f. Amend permit provisions* g. General policies and regulations* h. Modification policies and regulations* i. Use policies and regulations j. Public and agency involvement Environment provisions will incorporate local government critical areas regulations, as amended per GMA best available science requirements. Environment provisions are likely to incorporate by reference State water quality standards and local stormwater management plans. Restoration plans can address management of erosion, and clean up of waste through voluntary and regulatory means. While much of the Restoration Plan component of the SMP

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particularly steep slopes • Some eroded banks – responsibility depends on ownership • Storm drain overflow pulling sediment into lake, causing erosion (South Harris Avenue in Manson) • All sediment and pollutants going into lake • Clearing and grading around lake • Visual impacts of erosion – need flexibility to repair, fill waterward of ordinary high water mark	• Portions of dike where it has been eroded • Minimize impacts from highway runoff • Protection of floodplains • Avoid salt on roads, use sand • Water crafts on Lake Wenatchee – jet skis – noisy, destroys river edges	minimize impacts with landscaping and maintenance; Big polluters – ducks and geese on water and grass. • Need to monitor benzene sources – motor boats, etc. • Safe guards – water quality, garbage • Water quality concerns – drinking water, milfoil • Butte area – limits on development, protect water quality • Milfoil problem just starting – avoid spread • 3 Fingers – remove fill and restore to pre-existing conditions, prevent development				update will reference the needs and programs identified by the watershed and sub-basin plans, many of the additional items identified by workshop attendees can also be incorporated.

APPENDIX A: WORKSHOP COMMENTS, COMMENT CARDS, LETTERS AND EMAILS

A.1 Workshop Comments

The following represents citizen comments gathered during the workshop question and answer session and break-out group discussions. Comments were taken directly from station flip charts (minor edits were made for grammar and clarity). The notes were intended to capture—to the extent possible in an interactive workshop setting—key issues and the overall tone of each group's discussion. The comments will better inform the project team of community questions, perceptions, concerns and priorities related to current and future shoreline access, use and development.

A.1.1 City of Chelan and UGA

October 21, 2008
Chelan City Hall – 135 E Johnson Avenue
6:00 to 8:00 pm
36 participants

Question and Answer Session

Q How many new docks and boat lifts now and in future?

A Granite Ridge, Good Fellow, Caravel in process now, about 200 slips SMP doesn't address buoys, City doesn't have inventory

Q What about on Morse Park?

A Approx 160 slips, council wants to revisit design

Q Is there a map or list of public access sites? Near 3 Fingers?

A Have preliminary inventory and maps. Are working on street ends inventory.

Q Is map of future public access part of process?

A Can identify potential sites. City would need to go through public process. Have City plans for access.

Q Is there going to be vision statement?

A Will use input towards goals, policies and regulations. There will be much public input and decision-maker review. Then will go to [the Washington State Department of] Ecology. City wants to form a local steering committee.

Q Local SMP to be updated?

A Yes. Local SMP that becomes part of state SMP. Will need to integrate state requirements and local input. 3 goals: protect shoreline ecology; encourage water dependent uses; public access. Need to balance goals.

Q What is done to monitor water quality?

A Chelan Hills Div. monitoring. County's Lake Chelan Water Quality Committee. Lake Chelan WRIA not yet developed. SMP will address stormwater/water quality but more focus on development.

Q Will there be more comment opportunity at draft plan stage?

A Yes, more meetings to come. See County web site for details.

Q Surprised at lake level last 2 years/seasons. PUD did lower. Didn't hear about it.

A We encourage participants to sign-in on sheet for future contact. Pass word on to your neighbors.

Q Will we be addressing floating businesses?

A City currently does not allow in UGA. Can be a topic for SMP.

Q Is PUD part of process?

A PUD subject to federal rules. PUD contacted, and involved in County SMP advisory committee.

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Parks should remain as is
    - 3 Fingers public access
    - 3 Fingers – park
    - 3 Fingers

- Fear we will lose views of lake with fences and buildings
- Staggered building heights
- Want to be able to walk/access lake physically, frequently
- Public access/land strictly for public, no private uses
- Define public access to beaches – formed at low lake level
- Public access/land should be usable, sanctioned – add signage
- Need parking and public transportation to access points
- Improve all public lands for accessible public access –eliminate rip-rap
- Beach areas for children – non motorized boat access
- Dog access areas – all congregating at USFS – need dedicated space
- No wake zone in lower 2 miles of Lake
- Encourage trails along lake and down river
- More types of upland activities in parks – interpretive signs, Frisbee golf
- Transitions between water and land uses
- Better signage/maintenance of unmarked access
- Waterfront restaurant
- Chelan gorge
- Not much area left within city
- Maintain parks as existing
- Class 3 stream near Chelan Butte Road

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.)

- Boating, swimming, kayaking, beach combing, paddle boarding
- USFS site is popular
- Sailing, rowing, kayak, swimming, skiing, walking, motorboats, jet skis, biking
- Woody debris at lakeside limits access and use
- Dedicated/protected space for non motorized uses – pollution, air quality, health, safety
- Motorized transportation should be encouraged [at public access points]
- Can't swim at Campbell's
- Triathlon training – protected long swim areas

- Low impact tourism
- Swimming, boating, walking, biking, living, kayaking
- Don Morse to lakeside trail proposal
- Dog access
- It's working

3. How do you feel about your level of waterfront access, both visual and physical?

- Not enough
- Good
- [Don't want] loss of existing parks or park opportunities
- Not enough, need more
- Diminishing
- Possible expansion (e.g., Darnell's, 3 Fingers)
- Partnerships with private parties
- Dog park on waterfront with poop scoop
- Variety of park types/areas for different uses/users
- Major local vs. visitor issues
- Conflicts between permitted private uses on/adjacent to public land
- Slippery slope governing/regulations – private property development rights
- City needs to get behind the trail to implement
- New SMP needs to enable development
- Still maintain access to existing docks
- Kayak/bicycle groups want to develop a comprehensive plan
- Terrible in September with low lake

4. Are there areas that need public access (that currently don't have any)?

- Buy 3 Fingers for park
- PUD beach by water/terrace lakeside
- Improve kayak haul out areas
- Parking
- Develop street ends/vacant right-of-ways to take pressure off major parks

- Map for cyclists to access parks and bike racks
- City should develop existing opportunities and purchase additional park land
- Camping accessible from parks with reasonable facilities – for lower income visitors (e.g., Teanaway)
- Prioritize public access opportunities based on use and impact on private land
- Increase landscaping, besides grass
- USFS ranger station – better physical access to water from lawn area – steps over rip-rap

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

    - Need year round moorage
    - Need year round water in Lake Chelan
    - Need density requirements on shoreline – we only have so much space
    - Narrow channel for travel lanes to buoys
    - Concern about parking – where will people leave cars and boat trailers?
    - If use goes in [along shoreline] – need to provide parking
    - Need open space
    - Have parks – Plan has acres/population standard
    - Twisted Pearl – water based business. Concerned about noise. City doesn't allow.
    - Need to address scale (e.g., marina)
    - Lake is primary asset. Don't restrict economy. Need more moorage. Need less pressure on public facilities.
    - What will be standards for new docks vs. maintenance?
    - Lessen standards for docks to allow for existing dock maintenance. Some docks are falling apart.
    - Too much large woody debris as mitigation given lake elevation. Improperly placed. Aesthetics and navigation.
    - More public access
    - More habitat
    - If more access, then will have more boats, especially in marinas in summer

- Hold line on boat launches and marinas – too many buoys
- New private marinas or dock development – set aside open space
- Proportional access – could buy access somewhere else
- Boats equal sound, gas, smell
- Would like camping areas – less expensive
- Less multi-storey buildings
- There are no areas for additional high intensity development
- Streamlined permitting, equitable rules. Cost – account for project size, type.
- Distinction between public and private parks. Shortage [of public spaces] and will get worse.
- What about liability for public/private shoreline access? Concern someone would harm themselves.
- Taxes increase on private owners, yet dealing with tourists
- Harder for private owners to make repairs
- Not allowed to resurface my dock except if using recycled wood
- Sailchelan.com – agencies dealing with mitigation
- All uses in short supply, but limited land – use land wisely, find coordinated plan
- Particularly balance in UGA
- Real density of marinas/jet ski areas – need it but there's concern if we extend more
- Can we get zoning on the lake? Co-locate jet skis, marinas, fueling?
- Would it affect water quality?
- Need quiet part of lake to swim
- Although dense in corridors – not well used –jet ski and marina areas could be better configured
- Don't have design review, e.g., Lake House
- Commercial [should] look like commercial, and houses like houses
- Identify districts
- Concern about height blocking views – just under 50 feet
- Future condos – need City plan to protect character – avoid out of scale with adjacent low intensity uses – wedding cake look

- Corridors of marinas, rental, refueling – safety and water quality – avoid swimming in this area
- Need more separation of uses
- How will regulations be coordinated – City? PUD?
- Consider zoning

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

- Water and shoreline congestion – 88 jet skis are too much
- House boats – need to regulate like mansions in county
- Too much condo and home development
- Controversy over trail from Don Morse Park/Water Street
- Proposed trails conflict with existing parking
- Treat different beach/access areas differently based on condition, e.g., appropriate sites for camp fires
- Possible conflicts with uses and drinking water withdrawals
- Prohibit beach alternation, e.g., digging
- USFS parking near lake
- More and more garbage floating on lake – clean it up
- Docks falling apart – safety – will come out where marina is developed, take out in interim
- Fill down lake – ship and shore drive-in near lake
- Avoid blocking view
- Big box condo has blocked views
- What is realistic UGA boundary to protect shoreline?
- Not happy with shorelines – need access – tourism is big part
- Not making more land – focus on public uses

3. Aside from public access and recreational uses, what other developments would you like to see on the shoreline? Where?

- Need more habitat for fish – concern about [shoreline] sound and activity
- Need more use for non-motorized activities
- Want to see PUD property near Mill Bay – add marina, take traffic out of city

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

    - Commerce around lake within Chelan – quality of lake
    - Alarmed about loss of lake view, access points and corridor preserves
    - Any area that is currently public should remain public, e.g., Park Street
    - Limit buoys at public access points
    - Coordinate parking with public access
    - River walk park – don't allow boat buoys along river
    - Preserve existing conditions as much as possible
    - Water quality concerns – drinking water, milfoil
    - Butte area – limits on development, protect water quality
    - Lake is the biggest asset

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Encourage and educate private businesses to upgrade their facilities
    - Grants
    - Need water quality study
    - Shoreline requirements that are based on present water quality
    - Stormwater runoff
    - Limit fertilizers
    - Require water testing near marinas and high impact use areas, refueling stations
    - Too many marinas – why are these being permitted?
    - Large demand for boat slips
    - Needs to be more regulations on water quality and monitoring
    - Maintain from lakeside westward
    - Greatest asset is the lake itself
    - Noise pollution and safety
    - Automatic shut-offs for boat refueling
    - Promote electrical boats

- Water quality
- Public health
- Geese and ducks affect water quality – look into how City of Seattle handles it

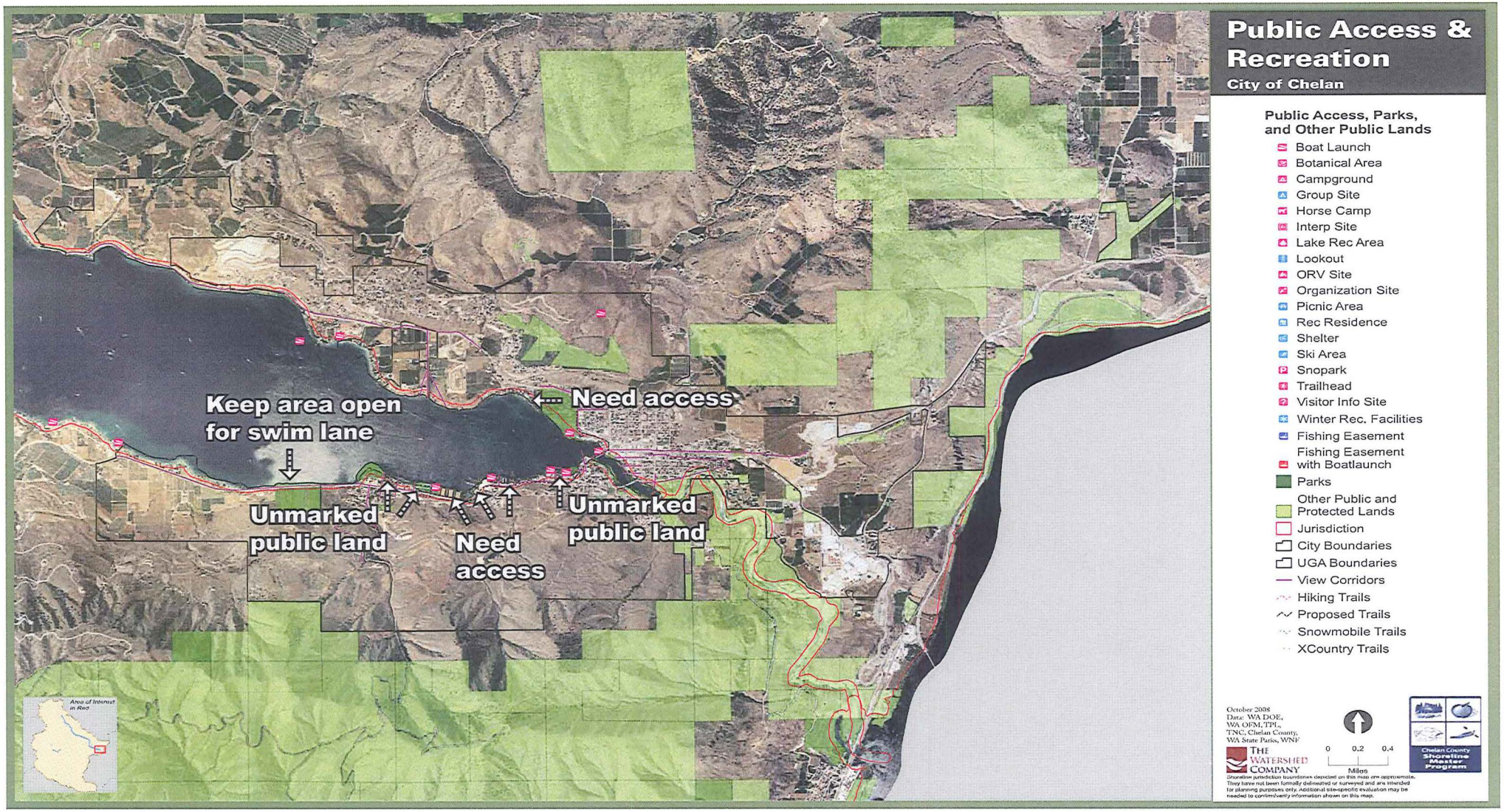
3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

- Chemicals, spray
- Federal rule on chemicals? Check case
- Milfoil problem just starting – avoid spread
- Are there unlimited withdrawals? Discharge waterfront park, pipe at USFS
- Don Morse Park – beach restoration, City has master plan
- All public road ends need to be restored and identified – return to natural state
- Connection to public trails
- Not enough views – losing views because of condos
- Parking, access to swimming
- All public lands maintained for non-motorized boating/swimming
- Motorized transportation should be encouraged
- Access not marked at street ends
- Preserve area west of lakeside as swim lane
- Non-motorized – water quality, noise
- Balance
- Recognize undevelopable areas up lake
- 3 Fingers – remove fill and restore to pre-existing conditions, prevent development
- Sand bar, pond that forms, milfoil grows
- Discharge pipe at USFS
- Storm water discharge and lake water quality
- Don't allow 2 cycle motors (boats and jet skis) to protect water quality
- Noise pollution
- Hydro planes
- Enforcement of milfoil introduction
- Lady of the Lake – pier falling into water

- Bottom of lake – milfoil amount has tripled
- 3 Fingers
- Water sources, input into Lake Chelan that affects water quality – minimize impacts with landscaping and maintenance; Big polluters – ducks and geese on water and grass.
- Need to monitor benzene sources – motor boats, etc.
- How is water quality enforced?
- Concern about PUD lake level
- Concern about river – land use regulations
- Safe guards – water quality, garbage

4. When you imagine the future shoreline, what will it look like in terms of environmental condition?

- Better than existing
- Places with rip-rap – look at possibilities to restore and enhance
- During low water levels, old portions of concrete are visible – remove unnatural materials
- Large woody debris – concern and need for clean up


Public Access & Recreation
City of Chelan
Public Access, Parks, and Other Public Lands
Boat Launch
Botanical Area
Campground
Group Site
Horse Camp
Interp Site
Lake Rec Area
Lookout
ORV Site
Organization Site
Picnic Area
Rec Residence
Shelter
Ski Area
Snopark
Trailhead
Visitor Info Site
Winter Rec. Facilities
Fishing Easement
Fishing Easement with Boatlaunch
Parks
Other Public and Protected Lands
Jurisdiction
City Boundaries
UGA Boundaries
View Corridors
Hiking Trails
Proposed Trails
Snowmobile Trails
XCountry Trails
Keep area open for swim lane
Need access
Unmarked public land
Need access
Unmarked public land
Area of Interest in Red
October 2008
Data: WA DOE, WA OFM, TPL, TNC, Chelan County, WA State Parks, WNF
The Watershed Company
0 0.2 0.4
Miles
Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.
Chelan County Shoreline Master Program

A.1.2 City of Wenatchee and UGA

October 22, 2008
Wenatchee Community Center – 504 S Chelan Avenue
6:00 to 8:00 pm
10 Participants

Question and Answer Session

Q What are the three topics we're discussing tonight?

A Shoreline use, public access, environmental protection. Match SMP principles and balance uses.

Q What is in the shoreline jurisdiction?

A 200' landward of ordinary high water mark, associated wetlands and floodways.

Q Last SMP developed in 1975?

A Yes. In 2003 Ecology prepared new shoreline guidelines. It's a 2 to 3 year process [to prepare the SMP update].

Q What is the current policy for grazing cattle?

A In general, existing uses like grazing can continue. If changing a use, then rules apply. The City doesn't allow grazing within city limits. May need to replant if damaging. Most of city waterfront is public. County would need to respond regarding critical areas.

Q Does the SMP address native bees and non-native pollinators?

A SMP doesn't address this. County SMP does support agriculture.

Q Once new SMP is in place, can it be amended?

A Yes. There is an amendment process. Also, periodic evaluation is required. There will be some monitoring requirements on ecological functions.

Q How will no-net-loss of ecological function work?

A Still developing criteria, e.g., riparian vegetation, setbacks, etc.

Q Are we looking at percent standard for public access?

A There are no prescribed standards. Subject to local input.

Q How is SMP funded?

A State grant from Department of Ecology [awarded] to County

Q Can we use volunteers to determine baseline environmental conditions?

A Would need to set standards to ensure methods are scientific, appropriate.

Q There are local scientists that can address native pollinators. There are no criteria [regarding native pollinators] currently.

A SMP can address locally based criteria. Can use available information to set monitoring protocols. SMP focuses on 200 foot jurisdiction, and broader issues.

Q How do we get the City's input? How does this process plug into City plans?

A City has provided adopted plans to consultant team, including the Waterfront Subarea Plan. Many parks exist within the shoreline jurisdiction. Most redevelopment areas are not in the shoreline jurisdiction. Waterfront plan identifies 5 land use areas. See the 2007 Comprehensive Plan. The Waterfront plan has diagrams. Some development has occurred. Will incorporate the current Waterfront plan for consistency.

Q Use of shoreline for education – can this be part of SMP?

A Yes. Have only developed an inventory at this point. Will be preparing analysis and draft policies and regulations. Education is part of public access.

Q Is there an outline of how (and what percent of) land will develop?

A Suggest review of Waterfront plan.

Q Will City have its own SMP?

A Yes. Part of regional effort. Each city will have their own chapter, outlining local issues.

Q Are there similar meetings on the other side of river?

A Douglas County is nearly finished with their SMP. Okanogan is a little ahead. Yakima has submitted their plan. Chelan County is an early adopter in order to obtain funding, otherwise SMP due in 2013.

Q What is the adoption process?

A After local adoption, the SMP will be sent to Ecology. Ecology has time to review, comment, adopt.

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Open, easily accessible, natural
    - Inclusive
    - Marina
    - More kayak/paddle type access
    - No new beaches, especially in natural areas
    - Small beaches okay, e.g., for child access
    - Need balance – appropriate use in the right place
    - Minimize environmental impacts
    - Expand existing facilities rather than building new sites (e.g., boat launches)

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.)

    - Biking, swimming, running, bird watching, boat access

3. How do you feel about your level of waterfront access, both visual and physical?

    - Feel good about waterfront access today – want to keep it
    - Good!
    - Part of Wenatchee charm
    - Quiet, people walking or biking, feels safe
    - Waterfront plan promotes retention of parks
    - When parks designed – consider safety and civility, e.g., tree placement
    - Could use more lighting near 5th Street
    - Does City solicit help for cleanup?
    - Cleanliness part of design process – City uses inmate workers for maintenance

4. Are there areas that need public access (that currently don't have any)?

- Area near confluence, private or public? Some properties near park are owned by PUD, other are private property
- Any more trails? Unlikely to expand near wetlands.
- Near railroad south – there are access roads but owned by Burlington Northern Santa Fe (BNSF) – residents have continual access
- Need to maintain pedestrian bridge for safety – City is studying
- Senator George Sellar Bridge – adding public access – cantilevered on one side – no north sidewalk – may not be able to access both sides in short term
- Active access areas away from natural areas
- Kayak/tube haul out, Wenatchee River

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

    - Want copies of park and recreation maps (County will consider providing hard copies or CD at print shop; web links available on line)
    - Have zero public access across Highway 2
    - Stemilt – may do some restoration in 200 foot area
    - Area south of bridge – lot owned by BNSF. Some provide ownership south. PUD may control.
    - Will still be maintaining parks?
    - There are no restaurants on water – need some
    - Lacking open/recreation space
    - Make sure access is maintained
    - Want a marina
    - Waterfront restaurant
    - Maintain natural character/landscape
    - Plenty of parks/trails currently

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

    - Concern about value of waterfront property – City has some concessionaries. Will see some restaurants near Convention Center.
    - Skate area will become mixed use. City close to completing sale. Area can go to 90 foot under regulations.

- Don't want motorized crafts – want kayaks, canoes at waterfront park
- Currently nothing on shoreline is inappropriate

3. Aside from public access and recreational uses, what other developments would you like to see on the shoreline? Where?

- Want to maintain loop trail and parks
- New development will need to provide parking
- Parking will likely be located 200 foot away to avoid additional permit costs
- New condos have underground parking – still expensive
- Want to retain park for all to use, not just folks that live nearby – there are lots on PUD property
- Want to see small marina, docks – don't want permanent slips
- City is in permitting for dock – river too swift for marina
- Will boathouse be developed? Part of pedestrian overlay.
- Want a boathouse to store kayaks, etc.
- View protection
- Go to statues of coyotes – area for views, Walla Walla Park
- City moving in December 2008. Current public works property for sale. Are there height restrictions?
- Limited additional water oriented commercial – kayak rental, fishing guides
- Interpretive signage in confluence/wetlands areas
- Connectivity – pedestrian/bicycle – from downtown areas to water across railroad

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

- No, except water oriented marina and education center
- What is high intensity development? Industrial, higher building heights

5. When you imagine the future shoreline, what will it look like in terms of shoreline use and development?

- Hard to envision anything in 20 years, other than industrial north of Wenatchee

- Want bicycle trails in all directions in northern UGA
- Richard Odabashian Bridge – extension of loop trail
- Don't want bunch of hotels near parks – waterfront parks require mixed use
- Confluence – will it be touched? No. State park owned for wildlife and recreation.
- Other areas north bank of Wenatchee – high bank, less likely to develop in city/UGA
- Limited and regulated
- Shoreline sacred
- Waterfront last place for development

6. What do you like best about your community waterfront now?

    - Open and available – lots of parks
    - Clean, well maintained

7. What concerns you most about your community waterfront now?

    - Land south of the Senator George Sellar bridge

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

    - Near 5th Street, part of foothills
    - Horse Lake Road – south bank of Wenatchee, possible future park area, flat
    - Confluence area
    - Protect unique areas, but balance other areas for appropriate uses
    - Protect some distance upstream of confluence/Wenatchee River

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Need education – have kids fall in love with the area
    - Volunteer for shoreline, e.g., Chelan-Douglas Land Trust
    - Regulations

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

- Areas for restoration – south side of bike trail (see map)
- Is City helping homeless? City has community planner focused on programs.
- Need replanting north of confluence – drought tolerant plants – 2 irrigation pumps grand-fathered
- Bureau of Land Management (BLM) has restoration experts in town
- Irrigation near 5th Street – City should improve, could be a view point. Does PUD have access? Yes, near tourist beach. Would need to screen in "off hours". Kids accessing/jumping.
- Who should do restoration? Not just responsibility but privilege – would like private involvement
- Development should mitigate?
- In replanting areas, have work parties
- Plaque or recognition for helping with restoration
- Involve the kids
- South of Senator George Sellar bridge (see map)
- Railroad public access

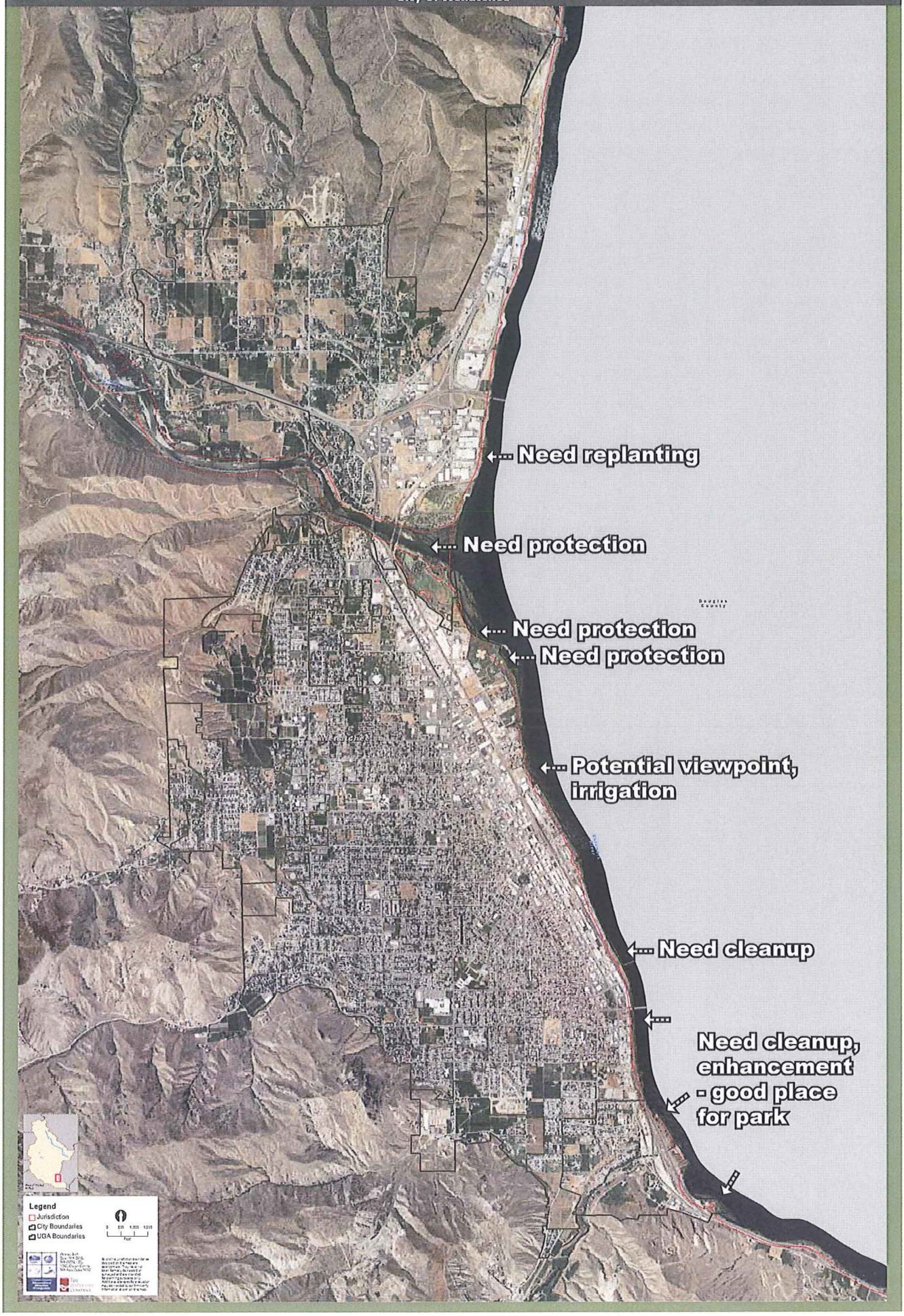
4. When you imagine the future shoreline, what will it look like in terms of environmental condition?

- No worse than it is today and better
- Showcase native flora and fauna
- Areas for lighting in public access areas and trails
- Ensure adequate, aesthetic lighting but shielding so it doesn't impact neighborhoods
- Term "environmental" – may be better to say "habitat" or other word
- Maintain natural shoreline
- Want balance
- Want native plants in shoreline landscapes

Environmental Protection

City of Wenatchee

DRAFT



A.1.3 City of Cashmere and UGA / Lower Wenatchee Watershed

October 23, 2008
Cashmere Riverside Center – 201 Riverside Drive
6:00 to 8:00 pm
28 participants

Question and Answer Session

Q What time of year is 20 cubic feet per second (cfs) measured?

A It's taken from average annual flow rates. 10 years of data and model to calibrate.

Q Is the City/County dealing with Mission Creek?

A Yes, in Cashmere, shorelines include Mission Creek and the Wenatchee River. Several more streams and lakes in Basin, Countywide there are about 130 waterbodies considered in SMP update.

Q What is definition of wetland? Mill Pond?

A Ecology defines it by soil type, amount and location of water, vegetation. Look at soils and NWI inventory. Wetlands in floodplain and within 200 feet.

Q Who is responsible for dikes?

A Constructed in 1930s and 1940s, deeded to Cashmere when highway was aligned.

Q Are dikes open to public access?

A Yes, when the dike is located on public property.

Q If water body doesn't qualify for shoreline jurisdiction, may still have wetlands, riparian?

A SMP focuses on jurisdictional streams, lakes – and associated wetlands.

Q Who is responsible for cleaning water bodies, e.g., car parts, etc.

A Not City responsibility. Would notify WDFW. Ecology handles water quality.

Q Is trash part of river?

A Not City jurisdiction. City or County calls agencies. Responsibility not clear. Happy to have volunteers. Part of SMP will address restoration opportunities.

Q Will shoreline rules become more restrictive?

A It is early in the process. It is possible. Need to be consistent with other agency rules/regulations. Will be considering Ecology guidelines.

Q Any involvement of railroad, highway department?

A WSDOT representative is on SMP Advisory Committee. Will look at adding Railroad representatives.

Q Are there major changes since 1975 SMP?

A Current SMP omits several uses which means more process. Plan to identify uses and rules. Want to provide more certainty about allowed uses, e.g., boat lifts in Lake Chelan and pier regulations.

Q Are rules set up by Ecology or legislature?

A Ecology rules implement state law. Rules not adopted by legislature. Rules are located in the WAC [Washington Administrative Code].

Q Is the 200 foot designation a buffer?

A It's a zone, subject to SMP. Not necessarily a buffer or set back.

Q Is restoration scheduled?

A There are 3 watershed plans. SMP will incorporate these projects. Watershed subcommittees have developed projects.

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Access for public use not always well defined. Obvious at park. Not a safe area for swimming. Need a defined use. Discourage sending children down. Safety is an issue.
    - Not enough formal designated spaces for access
    - Need clear, obvious public access
    - Area down river – not an official boat launch, need to make it safer
    - Where are city limits? Near Mission Creek or bridge?

- Peshastin – groomed, clean, landscaped access
- Point on Wenatchee River – Dryden Dam, Peshastin
- Protect private property
- Everyone understands ownership and access rights
- Railroad commitment for involvement in shoreline – protection, management, stewardship
- Better developed, marked access with amenities – dumpster, porta potties
- More trees for eagle perches, habitat
- Highway turnoffs for views
- River trail between cities
- Entire Wenatchee River as view corridor
- More access for fishing, views, picnics, boating
- More maintained access with amenities
- Would like garbage, metal debris removed

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.)

- Walking, biking, swimming, bird watching, tubing, fishing, rafting, kayaking, gold panning
- Wenatchee River – fishing, kayaking, wildlife, scenic views

3. How do you feel about your level of waterfront access, both visual and physical?

- Sleepy Hollow and Rodeo – use for enjoying water
- Access problems at Sleepy Hollow bridge during summer
- Want less trash – keep river accesses clean
- Concern about what [substance] railroad uses for weed control, fire control
- Mission Creek – debris and garbage
- Contact City about dirt falling off dike, erosion
- Pressure WFDW to allow fishing
- Add trails in lower area – there are trails in upper area
- In 1958 PUD acquired accesses

- Difficult to access – only six points of public access between Dryden and Wenatchee
- People making own access causes safety problems and dike/bank degradation

4. Are there areas that need public access (that currently don't have any)?

- Official access at Mission Creek/Wenatchee River launch area
- Formalize mulch center site as access – parking available
- Mission Creek – needs access
- Cashmere dike access
- Too little access, e.g., Mission Creek
- Rodeo Hole – more public access

SHORELINE USE AND DEVELOPMENT

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

- Need public access for fishing – Rodeo hole – so many kayakers, but need fishing permit
- Need access for non-fishing
- Game department purchased for fishing – rafters have taken over, haven't followed permits
- Would like to limit rafters
- Lake Wenatchee, huge line of boats – owe to limited fishing
- Add restrooms in high use areas
- Need greater habitat, open space and recreation – priorities
- Like to see less business and less commercial, e.g., concrete plant, warehouses
- Will set backs be different for city or County?
- Path on dike, but deed extended to middle of river – can't use top of dike
- Agriculture – use of pesticides

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

- Every Wenatchee River bridge is used for public access – inappropriate public access, parking problems (kids at Sleepy Hollow)

- House next to dike – can see rafters, hundreds go by. Rafters walk on dike, knock off dirt and vegetation into yard – no respect
- Inappropriate use near Blewett Pass/Highway 97 near Peshastin Creek – would like to move road out of flood plain
- Protection of floodplains
- Avoid salt on roads, use sand
- Mission Creek near Wenatchee – launch area seems inappropriate
- Car junkyards on Riverfront Drive and Mission Creek – need clean up
- Jarvis launch inappropriate – salmon spawning
- Railroad too close to water
- Not happy if [public] access 10 feet from house – area where photographers go – want privacy
- Problems with anticipated gold panners
- Is log jam removal for safety? Yes, removal of debris and garbage for safety
- Jet skis on Columbia River and Lake Wenatchee – don't want on Wenatchee
- Water crafts on Lake Wenatchee – jet skis – noisy, destroys river edges
- Tubing groups – volume of people on water – is this an environmental issue? Other areas are limited.

3. Aside from public access and recreational uses, what other developments would you like to see on the shoreline? Where?

- Leavenworth to Wenatchee trail for biking/walking
- Need formal designated kayak/float launch, other than Recreation Center
- Better access for non-fishing users at Rodeo Hall/Sleepy Hollow
- Boat launches at Lake Wenatchee, existing is inadequate
- Liked Cougar Inn on Lake Wenatchee – now private home – miss it
- Restaurants, resorts – make nice development that takes advantage of scenery
- Might be good to have a waterfront hotel or restaurant – benefit the City
- Golf course might be detrimental
- Want trails
- Have one on Love Lane Bed & Breakfast
- Avoid land locked public land –Three Lakes, Malaga is private, no public access

- Want Rose Lake – "no wake" lake
- Fishermen access opposite side
- Want trail connecting Cashmere, Dryden, Peshastin, Leavenworth, Wenatchee – probably some resistance – safety, orchardists, pets
- Want designated fishing access
- Parking – is it enough? Sleepy Hollow Bridge
- Need highway turnouts
- Contained dog park

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

- No economic, commercial uses on waterfront
- No need for high intensity development
- Wenatchee River already developed – put resorts in developed areas

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

- Salmon spawning grounds near Jarvis Station
- Resuscitate Lake Jarvis – west side of Aplets Way Bridge
- Mission Creek (near 800 Mission Creek Road)
- Wenatchee River waterfront east of boat launch – more riparian planting on slopes
- Sleepy Hollow – trash and more parking
- Upper Mission Creek and Sand Creek
- Limited amounts of public access
- Mill Pond, Brender Creek
- Below bridge and Peshastin
- Brender Creek between River, Evergreen Drive and No Name Creek (Mill Pond area)
- Mission Creek
- Wenatchee Riverfront – from mulching center to end of city limits

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Trash bins at Rodeo Hole
    - Historical perspective - interpretive signs and public outreach
    - Limit development in those areas or specific types, e.g., cabin vs. subdivisions
    - Landowner incentives instead of regulations, e.g., Conservation Reserve Program (CRP) lands
    - Volunteerism as a backup – can't rely solely on [City/County]
    - No dumping along river
    - Enforcement issues – need to be better mechanism
    - Service clubs and volunteerism, volunteer clean up days
    - Using high school students to help – community service
    - Existing City regulations to protect areas
    - Public outreach and community-based clean up opportunities
    - Adopt a stretch of river – projects and groups
    - Be careful how planted buffer and landscaping is done
    - Need educational program to help protect
    - Enforce removal of trash – less expensive trash removal

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

    - Dikes near recycling center get degraded because rafters climb/scramble to water
    - Juvenile lake, west of Aplets Way
    - Log storage area near Ingalls Creek (a tributary to Peshastin Creek) near Valley-Hi.
    - Blewett Pass, sharp curves, road cut banks
    - Noxious weed control
    - Junction of Sand Creek and Mission Creek
    - Large metal in river
    - Railroad land
    - Think water quality is pretty good
    - Mission Creek – milfoil

- Mess at top of Mission Creek – dump area
- Portions of dike where it has been eroded
- Rafting companies
- Log jams placed near Monitor Park, before Sleepy Hollow bridge

4. When you imagine the future shoreline, what will it look like in terms of environmental condition?

- No garbage in rivers
- Landowner coordination – orchard or homes
- Lack of public access
- Trail system great idea
- Return of land in natural area – state to public land
- Minimize impacts from highway runoff
- Would look at lot like it does now
- More trees
- Dredged

A.1.4 Upper Wenatchee Watershed

The meeting format for this workshop was different from the other eight, with the purpose being a joint meeting to discuss the County's efforts to evaluate water quality in Lake Wenatchee and the SMP workshop. County staff began meeting at 9:30 a.m. with the water quality portion of the meeting. The purpose was to update participants on the status of the work taking place in Lake Wenatchee with a presentation from the consultant that is conducting a baseline survey of the lake. The consultant will be developing a monitoring plan over the next couple of months. At 11:15 a.m., the Shoreline Master Program Workshop portion of the workshop began with a 20-minute question and answer session. Participants were invited to visit one of the three stations (Public Access and Recreation; Shoreline Use and Development; and Environmental Protection) and respond to the topic-specific questions. Approximately 80 percent of the participants chose to provide input at the Shoreline Use and Development station. The remainder of the group provided comments at the Environmental Protection station. No participants provided comments at the Public Access and Recreation station. The County posted the workshop questions on the LakeWenatcheeinfo.com Web site and encouraged participants to submit additional input online if interested.

October 25, 2008
Lake Wenatchee Recreation Club – 14400 Chiwawa Loop Road
11:00 am to 12:30 pm
39 participants

Break-Out Group Discussion

SHORELINE USE AND DEVELOPMENT

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

    - Too much removal of riparian vegetation along shorelines by landowners (e.g. tree cutting).
    - Too many Beach/Community Clubs along Lake (both formal & informal)
    - Too much impervious surfaces impacting runoff – clearing and grubbing
    - Maintain open spaces and parks – possibly add a dog park to area
    - Access is both a +/-, parking is an issue
    - Not enough restrooms or facilities

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

    - Concerns about future multi-family and commercial uses
    - Noise pollution (e.g. jet skis, boats, music from boats)
    - Concerns about development outside of shorelines
    - Light pollution
    - Boat refueling – there are no places where it's contained and safe. Educate on ways to do it yourself safely

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

    - South shore water source – drinking water from creek (public health concern) – several on north shore
    - Spraying along roads near water (County)
    - Clearing Issues (homeowners insurance) – could be helped through education (e.g., how much is okay?)
    - White River
    - Smaller lakes (e.g. Hidden Lake)
    - Fish Lake – wetlands
    - Lake Wenatchee – north shore west of YMCA camp – existing shore is in good condition, owned by UW?
    - Private Property preservation – opportunities through Chelan-Douglas Land Trust (CDLT)
    - Forest Service property on north shore Lake Wenatchee – keep as much of existing natural condition as possible and preserve

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - CDLT through Conservation Easements
    - Education – mailings, newspapers, radio, websites, better education on regulations
    - Better education would lead to less need for regulation

- Important to provide information and education early enough in the process
- Awareness of impacts to neighbors.

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

   - Land clearing outside of shoreline impacts shorelines and streams
   - Some individual landowners
   - Noxious weeds
   - Riparian areas

4. When you imagine the future shoreline, what will it look like in terms of environmental condition?

   - Maintain native vegetation as much as possible
   - Enjoy and appreciate the current mix of public and private, variety of access (campgrounds and nice homes), variety of economics, YMCA, Campfire, etc.
   - Limit future use: commercial and high density
   - Volunteer Programs for kids to do some work would help build appreciation/stewardship

A.1.5 City of Leavenworth and UGA

October 27, 2008
Leavenworth City Hall – 700 Highway 2
6:00 to 8:00 pm
27 participants

Question and Answer Session

Q Will there be a contractor working on the channel migration zones (CMZ)?

A CMZ study for Wenatchee is complete. Can use available information. May identify potential data gap.

Q Any new federal guidelines to consider?

A State SMP guidelines and laws mostly apply. Will consider relevant federal laws for consistency. City will address critical areas.

Q What time of year was 20 cfs determined?

A We have used USGS report/data. 20 cfs (cubic feet per second) is mean annual flow based on regression model. Includes wet and dry years, 1970s to 1980s. Rolled in other available data. USGS best available info. County is investigating several waterbodies to confirm.

Q A lot of proposed jurisdictions are on federal lands. How will this impact the study?

A Private development on federal lands would be subject to the SMP. Fairly rare.

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Clear signage
    - Access to golf course year round
    - Continuous pedestrian/bicycle paths, outside of right-of-way
    - Purchase additional property in commercial zone
    - East Leavenworth boat launch
    - Blackbird reserve to Blackbird Island – any connections punch through 13th

- Float, use of river
- Commercial floaters on Icicle interrupting privacy of private land owners
- Need flexibility, fisherman's access, some overgrown – if not in use, flexibility for private properties
- Model Europe – all shorelines accessible, trail with fence

2. How do you feel about your level of waterfront access, both visual and physical?

- Do not allow construction in repetitive flood areas
- Require Leadership in Energy and Environmental Design (LEED) rated building design on shorelines
- Trail system along entire shoreline – development restriction
- Scale buildings and set them back in areas directly adjacent to park areas – require buffering
- Public visual access – make park entries visible
- Viewpoints – Leavenworth good heights
- Commercial street – could create views
- Good views from golf course
- With development, consider views, access
- Preservation of scale is important – keep scale
- Best view from Blackbird Island
- Riparian vegetation is important for atmosphere and environment

3. Are there areas that need public access (that currently don't have any)?

- Pedestrian bridge to Leavenworth Road
- Keep public access at well site for non-commercial rafting or limit numbers
- Provide public access into F&W property on East Leavenworth Road – Fish Hatchery
- Add bike lane connections to bridges and Highway 2
- More managed access
- Blackbird Island vegetation management for safety, balance
- Can vegetation be thinned to avoid blocking views if mitigated elsewhere?
- If managed, is there an area for wildlife

- Only golf course – used by golfers or skiers in winter – make accessible to walkers
- Add trails
- Scotland – no such thing as trespassing – land open for walking/hiking, but must respect owners' land, keep gates closed, etc.
- Consider fisherman's access
- Houses on river bend – have to allow public access
- Beaches important – getting smaller, need to restore vegetation
- Valley trail, Leavenworth to Wenatchee
- Tax incentives to allow public access
- Private land access – liability concern, protect land owners

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

    - Like what we have
    - Better park system maintenance
    - Continue trail on golf course (winter and summer)
    - Will SMP include buffers? Revisit buffers on east [side of Icicle Creek]
    - Houses 25 feet from river – seems too close – other areas have larger buffers
    - Much shoreline is public and won't change
    - Would be nice to have restaurant on waterfront
    - Want pedestrian connection from Blackbird Island to golf course
    - Barn Beach – favorite
    - KOA campground is a favorite – can wade when water is low – no public access across
    - Want to see more trails

2. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

    - No high intensity uses!

Environmental Protection

1. Does your community have natural areas that you feel should be preserved or protected?

    - PUD park – keep natural
    - Clean up well site, promote non-motorized access
    - Blackbird Island – habitat restoration on north side, protect south side from erosion
    - Erosion – what could be done legally to preserve beaches or public areas?
    - Chumstick Creek – Byron Village
    - Avoid over development of Chumstick Creek

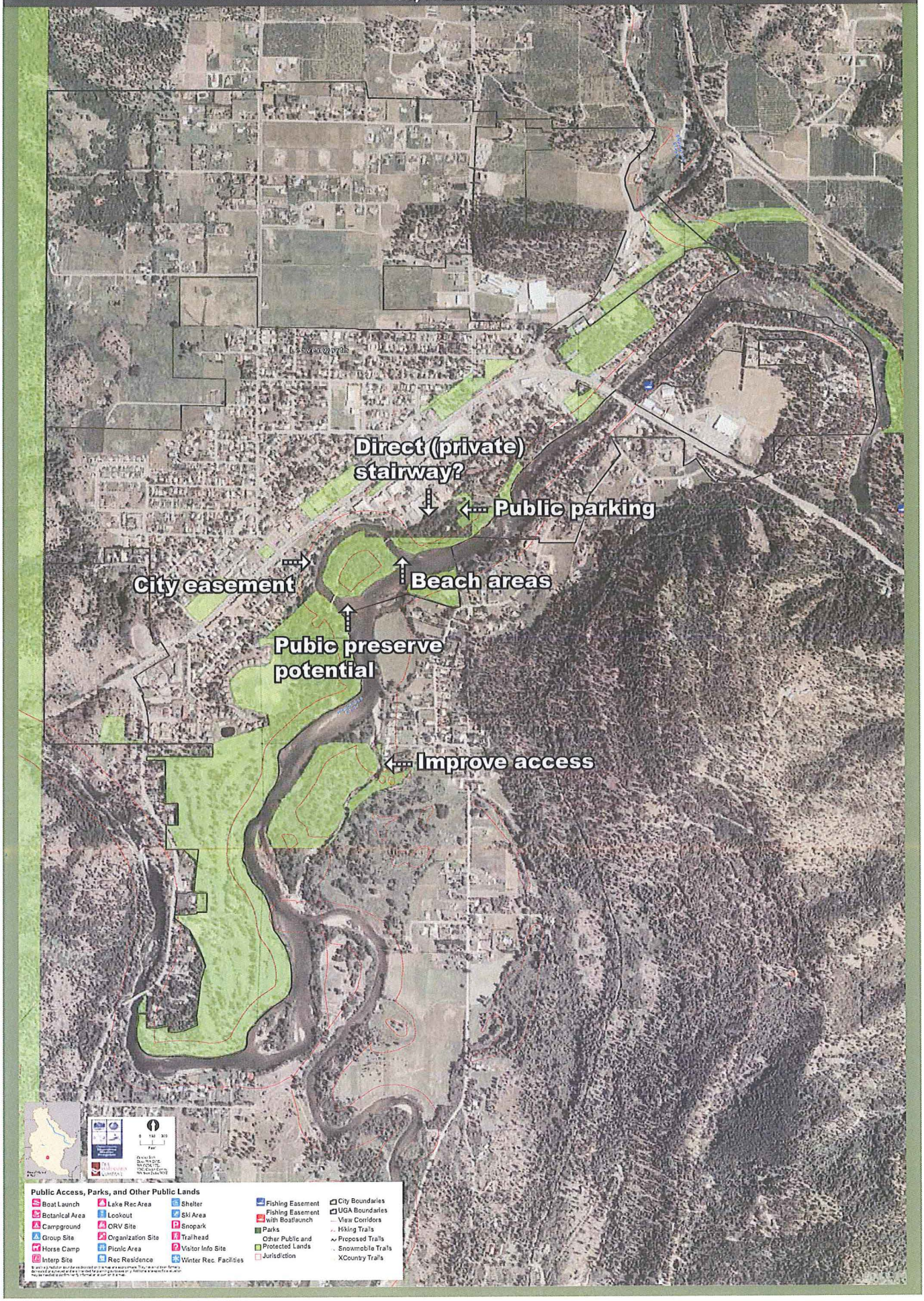
2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Best protection reasonable, regulations w/purchase
    - Patrick Walker, Chelan-Douglas Land Trust
    - Run ditches year round, produce energy
    - Mini golf area additional development – is there an erosion concern?

Public Access & Recreation

City of Leavenworth

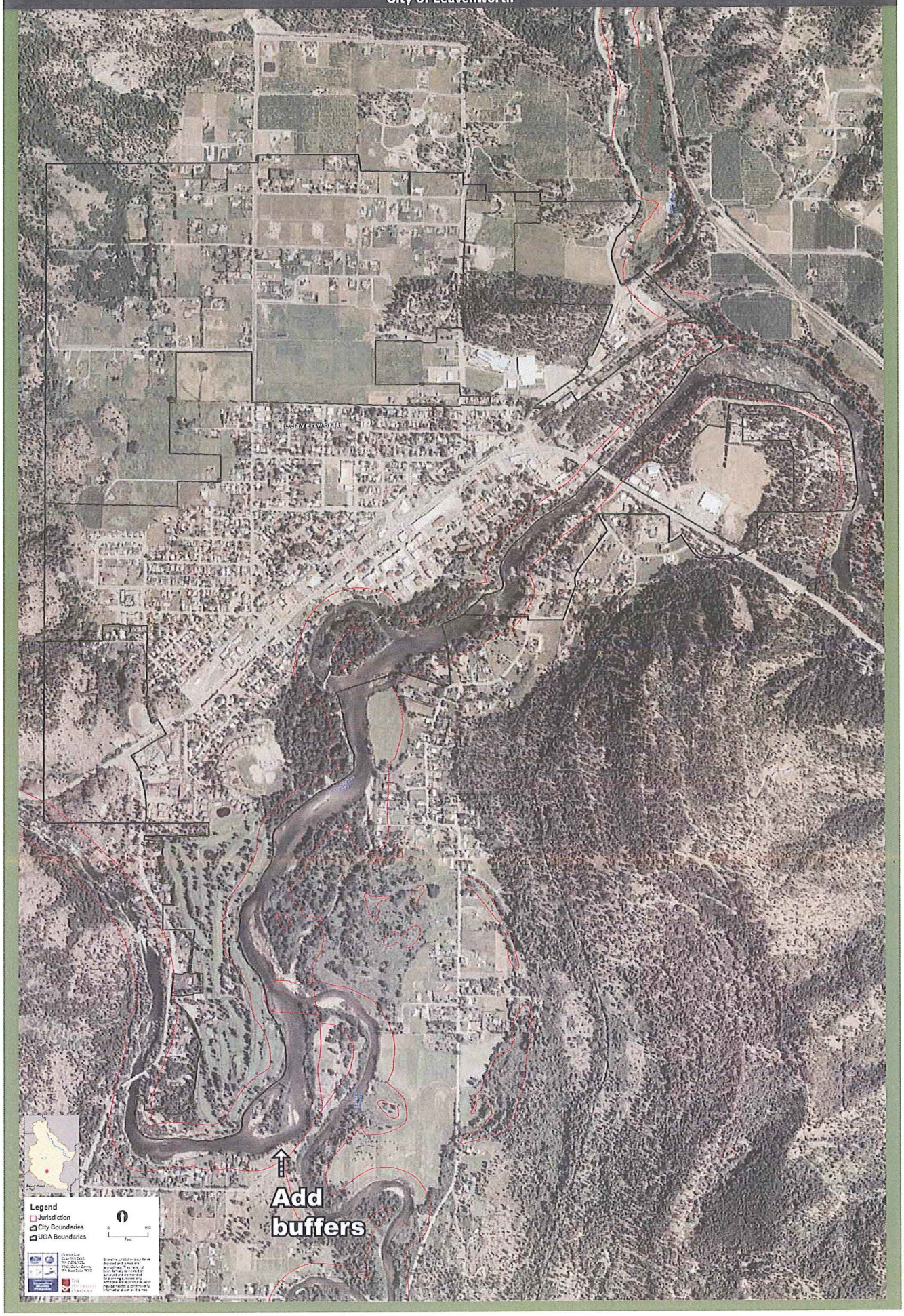
DRAFT



Shoreline Use & Development

City of Leavenworth

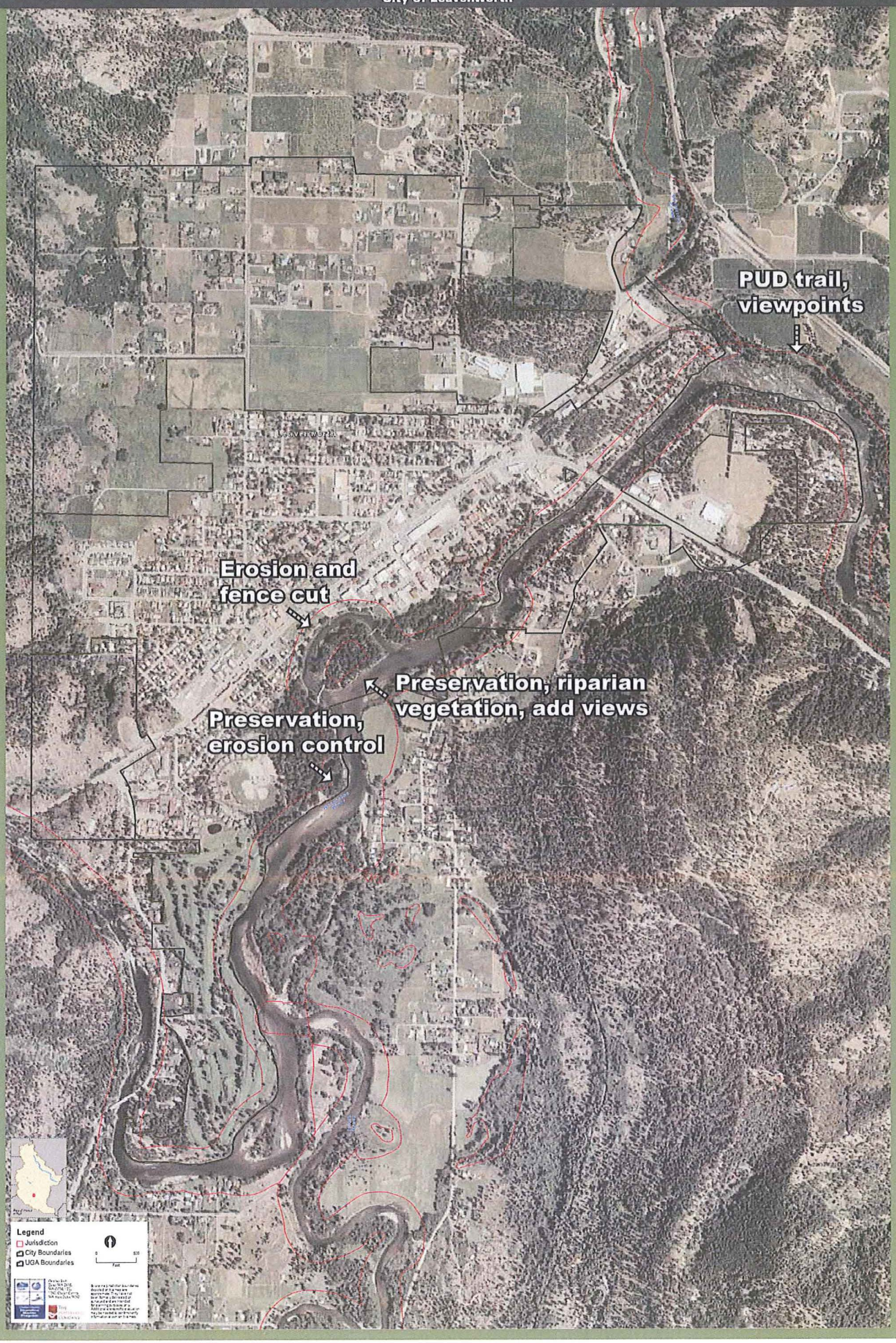
DRAFT



Environmental Protection

City of Leavenworth

DRAFT



A.1.6 City of Entiat and UGA

October 28, 2008
Entiat Grange Hall – 14108 Kinzel Road
6:00 to 8:00 pm
13 participants

Question and Answer Session

Q Does PUD have a role in SMP update?

A PUD doesn't have jurisdiction; cities and County have jurisdiction. PUD is a stakeholder and has some regulations associated with SMP. PUD has review/permit responsibilities for waterfront. All reservoirs under PUD, e.g., marina, dock – need multiple permits, including City shoreline permit and other agency permits

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Trail along waterfront with multiple access points for commercial
    - Mini parks along waterfront north of existing city park
    - Public facilities, no exclusive uses
    - Entiat park with access to swimming beach, pedestrian bridge to islands
    - Marinas – public with full services like fueling, pump out, restroom, waterfront restaurant
    - Want a marina – public and private
    - Bike and walking trails
    - Connect waterfront via community loop trail
    - Main concern – Entiat
    - Parking, under bridge, does City/PUD have plan? Prior plans unfinished.
    - Another park on Entiat – canoe, kayak, docks, swimming, water is clean
    - Want Entiat to be natural
    - How about a rustic park by kiosk near the mouth of the Entiat River?
    - Was once used for ice skating

- City storage yard – dump wood chips – road/turn around – improve public access
- See old PUD park plan – can PUD do more?
- Dock will be redone with re-licensing
- How is WDFW involved in process? Permit conditions?
- Balance habitat and development

2. How do you feel about your level of waterfront access, both visual and physical?

- Pretty lousy, except at park
- Congestion problem at single boat launch
- Waterfront plan will help remedy areas north of park
- Limited access
- No signage/identification of existing legal public access (up Entiat River watershed)
- No other public access, 20 miles up and down Entiat river
- Current access not good, especially when water is down – one dock
- Lake view disappearing due to vegetation

3. Are there areas that need public access (that currently don't have any)?

- PUBLIC ACCESS IS A PRIORITY FOR ENTIAT!
- Complement each other, design priority
- Want viewpoints – signage about wildlife and Entiat
- Restore near museum/old highway – do as part of park area
- At new access points, need parking with landscaping, benches, etc.
- Restrooms needed – Columbia and Entiat Rivers
- Loop trail with parking
- Need lighting
- Materials to prevent vandals
- Security/enforcement can be costly

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

- There will be
- There's not much of anything
- Residential adequate
- Missing retail/restaurant businesses and public access
- Have all four uses, including agriculture
- Don't have enough businesses – have land but no business
- Have enough residential – in plan projecting 300 to 400
- Inappropriate – jet skis, noise
- Need to enforce no wake zone at Entiat River – difficult to enforce
- Sand bar – people come when water level is low for place to play
- Next to railroad – more business may be good – industrial convert to business

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

- Would like to move railroad tracks – barrier
- No manufacturing
- No detrimental use, waste producing, e.g., stock, junk yards
- No private/exclusive uses

3. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

- Yes, waterfront plan boundaries
- No high intensity uses along Entiat, just parking to support access to trailheads

4. When you imagine the future shoreline, what will it look like in terms of shoreline use and development?

- See waterfront plan and parks plans, including Antiaqua on Entiat River
- The possibilities!
- Make sure SMP doesn't preclude City from implementing its waterfront vision

5. What concerns you most about your community waterfront now?

- Lack of access, use, development

- Non restrictive use benefits public
- [Entiat has had] 50 years of isolation

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

    - Columbia River areas need to be enhanced/restored to natural condition – revegetation
    - Entiat not currently natural
    - Favorite place – swimming hole
    - City park and dock area
    - Tie together with trail at mouth of Entiat River
    - Pateros – good example outside of Entiat – PUD park
    - Walla Walla Park in Wenatchee [good example]
    - Chelan Falls
    - Chelan park on river
    - Waterfront plan – need theme or style to tie together
    - Need amphitheater
    - So many meetings – when will PUD park happen? Once license signed, then permits – infrastructure expensive.
    - Too late to protect more – new development

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Through implementation of waterfront and park plans
    - Need volunteer involvement – Tree Board
    - City developing regulations to implement waterfront plan
    - PUD plans have shown amphitheater
    - Money not stretching far – need grants
    - Hotel is first step to bringing houses and tourists
    - Like vegetation planted for mitigation
    - Document what's been planted
    - Can they be relocated?

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

    - All currently degraded
    - What can be done with railroad bed and island? PUD owns it? Leave natural area, but add pedestrian access.
    - If railroad ties are pulled out, what is liability with creosote, etc.?
    - Railroad – restore, trade off for marina
    - Can vegetation be managed – need mitigation
    - Where is shoreline jurisdiction in the water body?
    - Who governs old railroad bed?
    - If dock extends, need to lease land?
    - PUD has to follow federal guidelines, deeds
    - Can we clarify ownership and permit process? User guide?
    - When can citizens comment on PUD rules? Need to know what the rules are. Notification if rules are changing.
    - Surprised that we need permits for buoys – need permanent buoys, less impact than temporary. Require open space in new development.
    - Incorporate viewpoints, small parks like Wenatchee PUD
    - Replace top soil
    - Need embankment
    - Beautification
    - Who's responsible? Developers follow rules, not volunteer
    - Develop recommendations and funding – work with WDFW
    - Entiat – problems with beavers – plant willow and then it's gone
    - City should be responsible for restoration via plans and cooperation with PUD

Public Access & Recreation

City of Entiat

A.1.7 Stemilt-Squilchuck Watershed

October 29, 2008
Malaga Fire Hall – 3760 West Malaga Road
6:00 to 8:00 pm
10 participants

Question and Answer Session

Q How will we address docks? Columbia River is different than other water bodies.

A There will be different regulations, depending on use and purpose.

Q Does SMP go to federal agencies for review?

A No, the SMP is a state and local partnership. The U.S. Army Corps of Engineers has its own jurisdiction.

Q If no wetlands today, but due to beaver activity one forms, will SMP apply?

A Critical Areas Ordinance will apply. County uses NWI mapping. Would take a while to form wetland.

Q Is there time limit?

A Depends if wetland meets 3 criteria: vegetation, soils, hydrology. May require a report to delineate.

Q Who decides what to do with beavers?

A Multiple agencies, potentially. Most likely State WDFW, DNR.

Q Would reservoirs need permits to work on banks?

A SMP not designed to limit irrigation districts maintaining facilities.

Q Is the SMP focused on Chelan County or are other jurisdictions/counties involved?

A All counties are required to prepare an SMP. Each plan varies depending on local conditions and vision. All SMPs must meet state guidelines.

Q Is SMP creating loopholes for development?

A SMP will have use environments to identify appropriate use

Q Bank erosion on Columbia River becoming a problem. Encourage County to obtain funding for restoration. Lack of roots/bonding due to boating.

A SMP will address restoration. Incorporate watershed planning. County working on programmatic permit. SMP has exemption for restoration.

Q Does Ecology have funds for restoration?

A Not aware of any. SMP could be used to apply for other funding sources such as SRFB (Salmon Recovery Funding Board).

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - SMP doesn't change ownership, but will identify possible need or locations
    - District has shut off access due to vandalism
    - Would like to shut down Black Lake due to vandalism
    - Don't want to force public access
    - Who assumes liability?
    - Squilchuck doesn't meet CFS [cubic feet per second] – investigating Colockum
    - Sometimes new development has requirement to provide public access – consider safety
    - Near Alcoa – good area for public access, viewpoints
    - Lack of good launches south of Rock Island – really steep
    - Not crazy about some jet skiers
    - Need launch with parking, garbage cans and public access – Idaho public garbage is free, not so much junk
    - Require improvement of immediate launch to avoid erosion

2. How do you feel about your level of waterfront access, both visual and physical?

    - Current parks under-served
    - No public access north of Rock Island Dam to just south of Wenatchee on the west side of the Columbia River.
    - Walla Walla Park – good example of keeping green

- Want free public access – we don't go to confluence because of $5 fee
- Below Frosty Hanson – does Grant County PUD have jurisdiction?
- Nice launch below dam, but not accessible any longer – from dam up, there's nothing
- There will be growth in next 20 years – need to plan appropriately
- There's a lot of undeveloped industrial property
- Consider purchase property for launch and park in Malaga in partnership with County
- Focus where access occurs, otherwise people make their own
- Ravens Wing – get easement for public access
- Railroad crossing issues – safety
- Need better boat access to Wenatchee River and Lake Wenatchee

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

   - See Malaga Vision Plan
   - No multifamily units, so design as rural river front – small lot, single family
   - Favorite places – Hydro Park – no congestion
   - Hydro Park – erosion is a problem due to boat wakes, etc.
   - Tarpsican Road launch – dog access, swimming
   - Squilchuck – fishing

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

   - Litter, homeless people

3. What other developments would you like to see on the shoreline? Where?

   - Development that enhances fishing – build habitat
   - No more waterfront homes
   - Protect existing agriculture

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

- Areas suitable for high intensity development – Lake Entiat on Entiat side of Columbia River
- Orondo for high intensity recreation and support facilities, e.g., fueling

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

    - All reservoirs have to meet Ecology dam safety – may not have vegetation
    - Is there a conflict between dam safety and shoreline rules?
    - Trees blow over then cause erosion – need native vegetation
    - See WRIA 40a plan
    - Control off-road vehicles – tearing up meadows and low lying areas, going near water and causing siltation in the Stemilt Basin and on Birch Mountain Need real consequences for crime/vandalism along public property
    - Need to address littering problem in water and along shoreline
    - Inventory of state or public lands – protect and preserve those areas
    - Assessor has ownership map in GIS

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Offer rewards and incentives, e.g., game offers points to turn in poachers
    - Why do we need a reward to do the right thing?
    - County owns some property. Identify shoreline property not used for agriculture or residential and purchase it. Put in a park. May add value.
    - Local fundraisers?
    - Make it a partnership
    - Does Alcoa have property available for sale?
    - How about Adopt-a-Stream/Reservoir/Lake? Like the Wenatchee Valley Fly Fisherman, Spring Hill Reservoir
    - Incentives for private owners to preserve? It works.
    - Have improved roads, but makes it easier to get in and impact natural areas

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

- Erosion along Columbia River
- Lower end of Squilchuck, junk scattered in area
- Garbage on Columbia River – pressure land owners to clean up
- Who should be responsible? Everyone.
- Make a joint effort – County doesn't have the money to do it alone
- Need land owner involvement
- County Natural Resource Department (NRD) has money for restoration projects
- Need volunteers
- Have a Clean Up Day
- Involve interested groups, e.g., bicyclists
- Local business could help – donations
- Bring kids out
- County needs to advertise positive restoration activities completed or in progress
- Take inmate work crew to help clean up areas
- 2-week event to get community help
- AmeriCorps could help coordinate volunteers

A.1.8 Lake Chelan Watershed

October 30, 2008
Chelan Fire Hall – 232 East Wapato Avenue
6:00 to 8:00 pm
25 participants

Question and Answer Session

Q How different from City workshop – area of coverage

A City workshop covered City and UGA, this workshop covers the Chelan watershed area outside of the City and its UGA.

Q State approval?

A Yes, State (Ecology) will approve the plan and certain permits (Conditional Use and Variance). Project funded by a grant from Washington Department of Ecology

Q Dock, seawall?

A Yes, SMP will continue to govern these activities, add consistency with other agencies

Q New rules?

A Yes, RCW requirements

Q State rules flexible?

A Some are; others not. Set a baseline with this plan.

Q Effect of rules, current and new?

A New rules still to be developed, some requirements will increase because of State requirements. Major objective is to streamline permitting process, increase consistency with other agency requirements, and reduce ambiguity. Existing SMP will be compared to new rules and results shared with public.

Q State, federal and county coordination?

A Yes, the goal is to clean up and simplify process, increase consistency.

Q Existing structures?

A Existing structures and uses may continue as before. Modifications (other than standard repair and maintenance) and new structures/uses need review new rules. Those exempt continue as exempt.

Q Septic systems?

A Covered in two areas – watershed/water quality and SMP.

Q Set back, existing and new?

A Not changing. Buffers established in County critical areas regulations apply.

Q Building permits, contamination of the lake?

A Looking at uses which affect water quality

Q 20 feet per second?

A Based on mean annual flow as projected by USGS study.

Q 100 to 200 foot buffers?

A The 200-foot shoreline jurisdiction is similar to a zoning overlay. Used to identify areas where shoreline rules apply. Shoreline jurisdiction is not a buffer in itself.

Q Access? Along water edge? Parks?

A Right of way. Project team is reviewing.

Q Boat lifts?

A Under current process, permitted as a Conditional Use Permit (CUP). Want to add boatlifts to SMP to specify lower level of review.

Q When new vs. old – vesting?

A [Vesting occurs] after determination of complete permit application.

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Dog friendly access
    - More public access the better

- Micro parks – bike, pedestrian access
- Not every park needs vehicle parking
- Questions about private property
- Public benefit – for community
- Multifamily developments are required to provide access, but who maintains and ensures? Burden shouldn't be on owner/developer. County should be required to maintain.
- Need another state park(s)
- Need more public docks and boat launches
- For CUPs, consider requiring some kind of water access, marina, e.g., at waterfront restaurant
- Worried that money goes to state staff rather than for land purchases for public access
- Need more state parks
- No more state parks
- Get County public works maps of street ends right of way that should be public access
- Preserve, identify and sign all street ends right of way for public access – adjacent property owners chase off users
- Kelly's Resort visitors trespass on private property
- Where does private ownership end and PUD/DNR ownership begin?
- More parks equals more boats, more wildlife damage
- Would like trail from 25 Mile Creek state park to Box [canyon or creek?]

2. How do you feel about your level of waterfront access, both visual and physical?

- Not enough access in summertime
- More high rises blocking views, e.g., Lakehouse, Campbell's
- Need view corridors – Coeur d'Alene, Idaho is a good example
- Need more sandy beaches – lawns are soggy, goose poop
- Beaches lost with PUD control
- Visual impacts of erosion – need flexibility to repair, fill waterward of ordinary high water mark
- Excellent

- No vehicle pull off to view lake between Chelan and Manson – need viewpoint signage

3. Are there areas that need public access (that currently don't have any)?

- Every place needs more
- Don't force private owners to provide [public access]
- Possible purchase of private property to add parks
- Community waterfront areas work well - guidelines for hillside developments
- Need a trail along the gorge, all the way to Chelan Falls
- Access needed both sides of lake
- Public access uplake of 25 Mile Creek
- Non-boating access for hiking, biking, horseback riding
- Antilon Lake – need hiking opportunities
- Identify existing public access sites – street ends, right of way, etc.
- More parks for non-boat users
- More boat access (docks, buoys) uplake from 25 Mile Creek

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

- Enough residential and business
- Not enough commercial
- Need to get barge access on Lake Chelan
- Enough agriculture and irrigation
- Agriculture zone on water is no longer available
- Small lot residential okay if can meet engineering/architecture [standards]
- Lack of restaurants – outside urban area
- More commercial (gas refueling stations, retail, etc.) outside urban area
- Need restaurant on shoreline
- Limited public access
- More residential – large parcels to be developed

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

   - Loud water crafts
   - Too many fast boats – wakes
   - Gas tanks, marinas
   - More septic
   - No, [shoreline uses] overprotected – uses are okay
   - Above Kelly's Resort – vacant now, proposed for residential, marina and boat slips – natural and beautiful as is, proposed for homes
   - Concerns about residential development, e.g., across from 25 Mile Creek
   - Concerns about water quality, aesthetics – appalling development, particularly steep slopes
   - Twisted Pearl – boat rented for parties
   - Too many private marinas, too many parked boats, affect public enjoyment
   - Junk cars around Mason Lakes
   - Hydro races
   - Howe Sound dock falling down
   - Lady of the Lake causes waves

3. What other developments would you like to see on the shoreline? Where?

   - Kayak areas – non motorized water trails/pathways
   - Destination boating stops
   - Parks, commercial areas, restaurant
   - Hiking, walking along water
   - Restaurants plus other water related uses like Campbell's
   - Need more boat rental and dock spaces
   - Dog friendly access
   - Need access, right of way
   - More non-motorized use and development – kayak, bike, etc.
   - Buoy line for swimmers – requires education
   - Hiking, biking trail
   - Commercial, e.g., White Rock, British Columbia

- Open up street ends or combine to make single large park
- Safe pedestrian walkway along water with connectivity to downtown shops
- Better access uplake (besides Lady of the Lake) for non-boat owners – maybe a shuttle
- Designated dog park access via Marymoor
- Sandy beaches, shallow water access (without walls at lakeside)
- More developed parks at Wapato, Dry and Roses Lake
- Trails along Chelan Gorge
- Problems with lake erosion at steep bluff in Manson – could be good site for shops, other waterfront development
- Need view corridors – need incentives and regulations for view corridor
- Improve signage for public access/street ends
- Fields Point Landing – now blocked for launching
- Like to walk beaches when water is low

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

    - Flexibility – CUPs for commercial, water oriented uses – possibility for change-taker

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

    - Lake Chelan already 3/4 protected – enough protection
    - Columbia River docks and banks – concerned about private use, not protection
    - No concerned about it
    - Some [areas] are ugly, but green up – should have to replant west of Manson
    - I don't care, it doesn't bother me
    - [Preservation] has locked up so much of the state
    - Already afforded degree of protection – programs already in place
    - Concern about access on Upper Stehekin Valley Road

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

    - Should continue to be protected under existing [regulations], but don't add more protections
    - Historical wetlands already degraded
    - Storm water management
    - Govern/ruled that development does not affect lake quality
    - Too much – a lot better 30 to 40 years ago

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

    - Some eroded banks – responsibility depends on ownership
    - Want flexibility to encroach slope – beach building
    - Whoever is at fault pays, but if area-wide and County/state wants it corrected, they should take care of it
    - Storm drain overflow pulling sediment into lake, causing erosion (South Harris Avenue in Manson)
    - All sediment and pollutants going into lake
    - Downtown Manson near fire station – old swimming hole, not the new park
    - Area across from Fields Point and 25 Mile Creek
    - County ruined shoreline by improving highway – County should restore
    - Erosion protection in developed area is the County's responsibility
    - Water reclamation and treatment in Manson
    - Storm water treatment – no follow through
    - Chelan Valley runoff from fires (lake wide)
    - Mitigation banking – fee in lieu
    - Residential development across from Kelly's Resort – let them be, build a road
    - Clearing and grading around lake

4. When you imagine the future shoreline, what will it look like in terms of environmental condition?

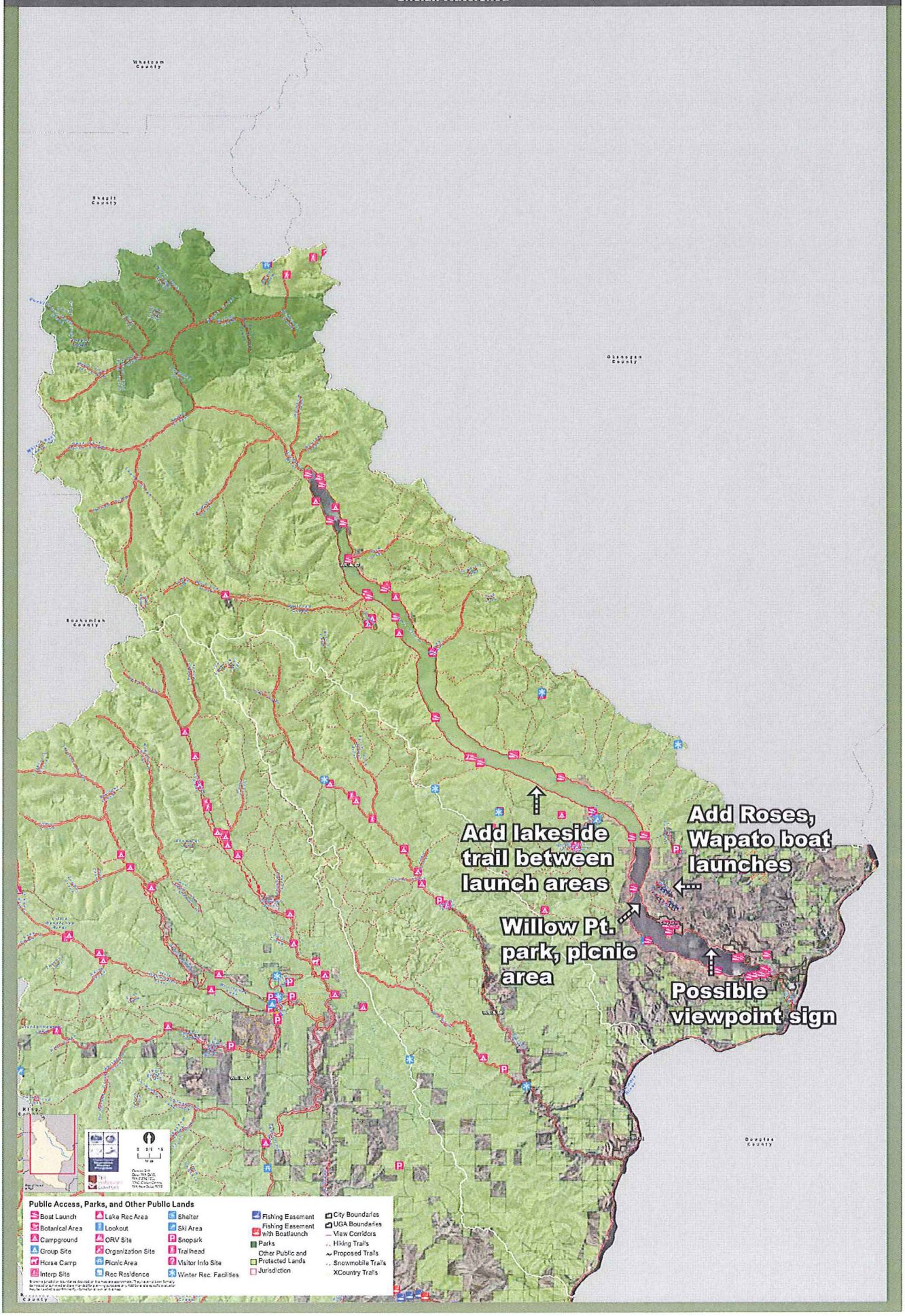
    - Problem with WDFW boat – putting in large woody debris, trying to bring in fish that don't belong – why?
    - Don't want large woody debris sticking out

- Want waterline to be attractive, no brush
- Columbia River – would like to see milfoil program
- Put regulation into County hands
- Want to know why dock regulations and mitigation exist
- No large woody debris historically
- More local control
- Would like to see shoreline study stay as is – natural – particularly top 30 miles [of lake] – concerns that there are private holdings there, but would prefer to have it remain public

Public Access & Recreation

Chelan Watershed

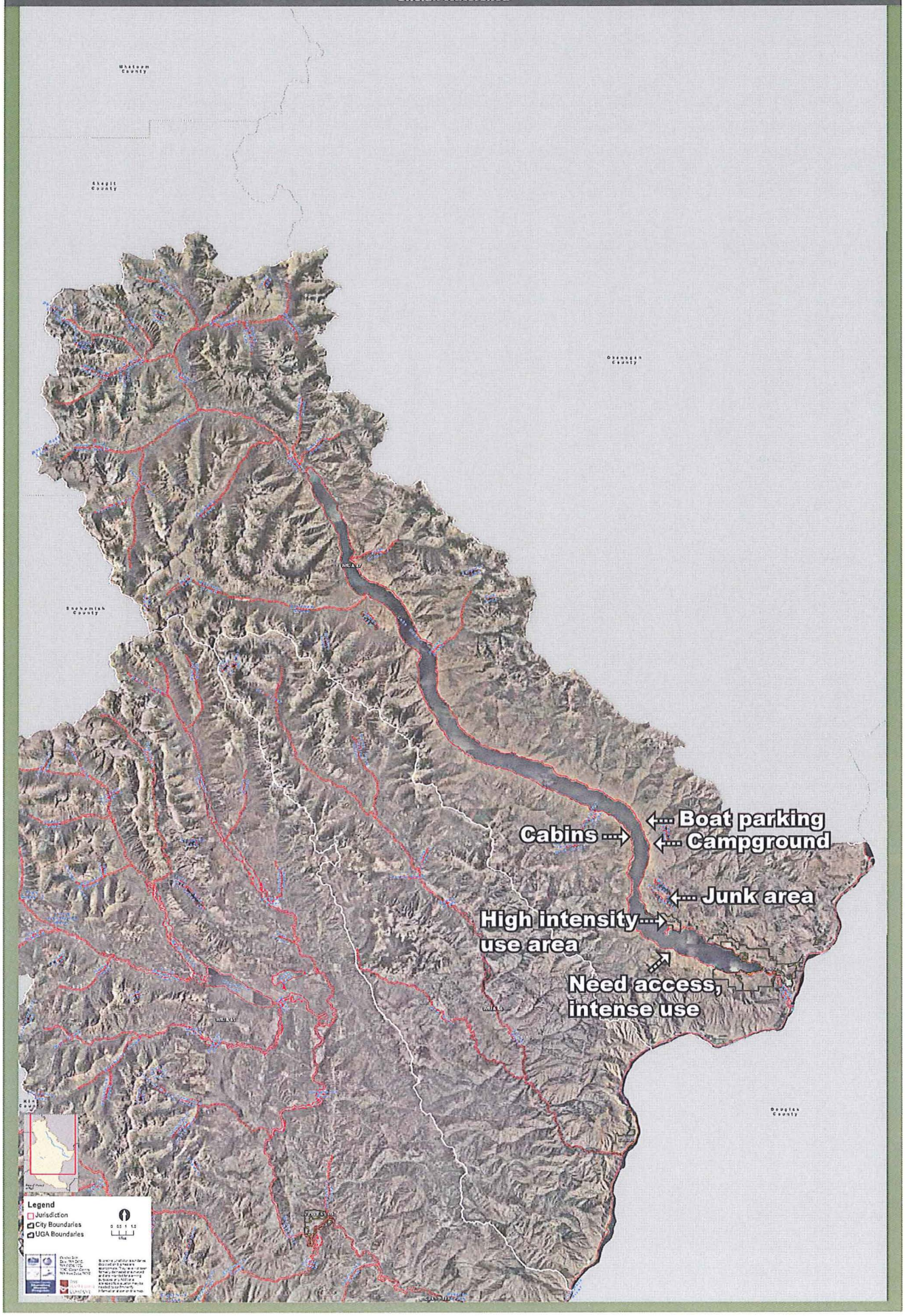
DRAFT



Shoreline Use & Development

Chelan Watershed

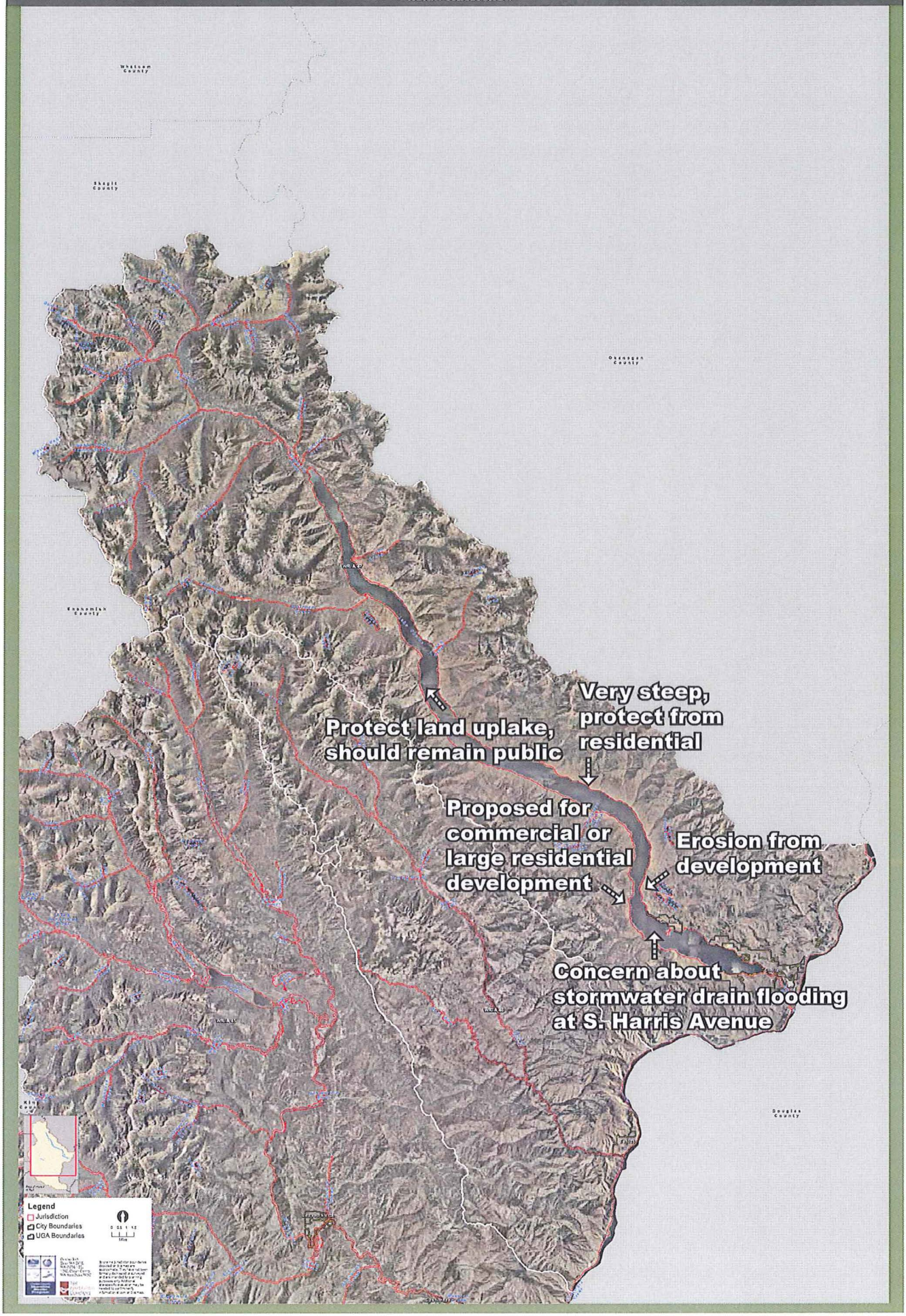
DRAFT



Environmental Protection

Chelan Watershed

DRAFT



A.1.9 Entiat Watershed / Columbia River above Wenatchee

November 5, 2008
Entiat Grange Hall – 14108 Kinzel Road
6:00 to 8:00 pm
7 participants

Question and Answer Session

Q What does clearing and grading cover?

A Water dependent uses

Q How will enforcement be managed?

A County will consider enforcement/management structure based on available budget. Permitting process will help determine, manage and define enforcement. County wants to streamline permitting process.

Q Does streamlining include agency review?

A County ensures consistency with agency requirements and thus helps with permit streamlining.

Break-Out Group Discussion

PUBLIC ACCESS AND RECREATION

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

    - Need public access along Entiat River
    - Need public access to Columbia River – lots of private ownership currently
    - With no clear public access, people make their own pathway across private property without permission
    - Entiat River property purchased by WDFW – are there any opportunities?
    - County needs to identify public property and easements along Entiat River, then determine opportunities for more public access
    - Signage needed for public access points
    - Need boat launch on Chelan County side of Columbia River
    - Petition PUD for public area on waterfront near Earthquake Point
    - Railroad tracks are an obstacle

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.)

    - Walk, wildlife viewing, hydro plane races, waterfront Chamber of Commerce events (e.g., Summer Fest), camping, boating, fishing, canoeing, kayaking, graffiti, hunting, education, swimming, jet skis and personal water craft

3. How do you feel about your level of waterfront access, both visual and physical?

    - Need uses that promote local economic vitality
    - Inadequate public access
    - Lots of access to forest lands, so there is not necessarily inadequate access locally – just not much "urban" access, more backcountry
    - Lack of access along Columbia River
    - Lack of public viewpoints
    - Inventory scenic vistas and turnout points (especially above Rocky Reach)
    - Parking and viewpoints used above the dam may not be legal

4. Are there areas that need public access (that currently don't have any)?

    - Need fishing access along Entiat River
    - Identify public ownership areas, then determine more public access points
    - Inventory land trust properties (recently purchased acreage)

Shoreline Use and Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? What is there too much or too little of?

    - There is going to be too much residential
    - Additional access and usage stress the river
    - Fishing and water craft are conflicting uses
    - Need more commercial within Entiat city limits and along shoreline
    - Look into Chelan Falls land inventory
    - Add commercial

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

    - Find balance between wildlife and proposed marina

- Marina may help reduce private dock construction

3. What other developments would you like to see on the shoreline? Where?

- Waterfront hotel
- Pocket parks
- Restrooms between Wenatchee and City of Chelan
- Marina infrastructure
- Community pool or aquatic center

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

- We have enough residential, but have areas available for commercial
- Hotel for multi-day use vs. our existing 2-room day-use facility
- Port of Chelan is investing in the area

ENVIRONMENTAL PROTECTION

1. Does your community have natural areas that you feel should be preserved or protected?

- Entiat watershed plan has list of areas for preservation
- From PUD substation north, where cliffs come to Columbia River – heavily used by water fowl – near Earthquake Point
- PUD could surplus land for conversion to public access (southern tip of Earthquake Point)
- PUD has staff dedicated to enhancing waterfowl habitat and raptor research
- Sensitive area in front of proposed marina
- Inventory land that could be potential wildlife habitat
- Need perches and nesting poles for osprey as development increases
- Concern about beaver damage to trees

2. How can these areas best be protected? (Volunteer actions, regulations, purchase)

- Grant funding
- Lots of inventorying to be done by PUD

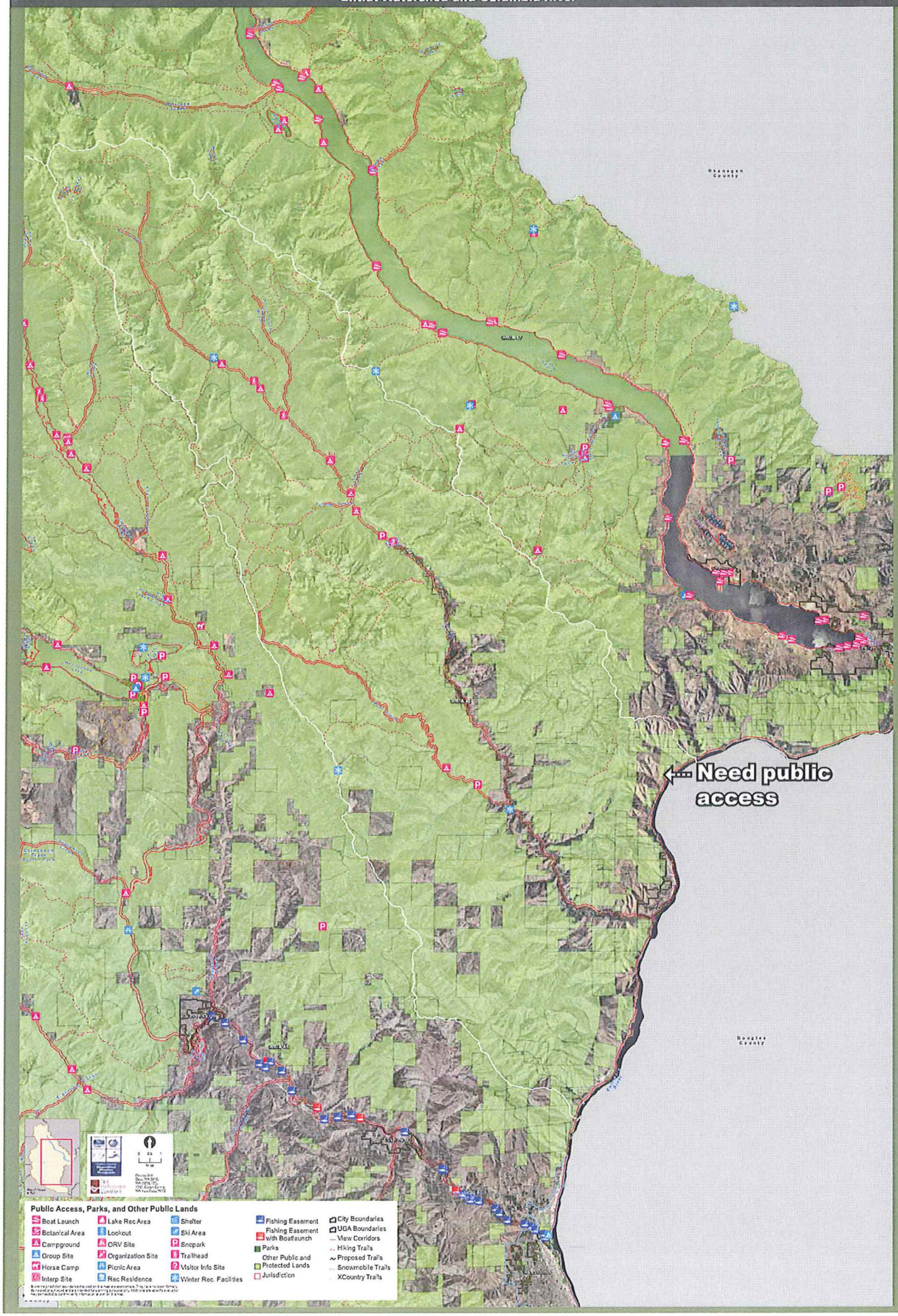
3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

    - Oklahoma Gulch – supposed to be restored? Area with Lewis' woodpeckers and rattlesnakes
    - Springs and streams at mouth of Columbia River
    - County should be responsible for restoration

Public Access & Recreation

Entiat Watershed and Columbia River

DRAFT



A.2 Comment Cards and Questionnaires

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name

Affiliation

Address

City/State/Zip

Judy Terry
2995 Malaga Alcoa Hwy.
Malaga, WA 98828

Would you like someone to contact you? ☐ Yes ☐ No
If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation.
For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html
or e-mail erin.fonville@co.chelan.wa.us

Thanks for gathering information in Malaga. We greatly need public Shoreline access for recreation. A waterfront Park would be an incredible asset to our area, as would a public dock and boat launch. A starting point might be a Shoreline ownership inventory.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name M.J. GRIFFITH

Affiliation homeowner

Address 16609 N SHORE DR

City/State/Zip LEAVENWORTH

Would you like someone to contact you? ☐ Yes ☐ No
If yes, what is the best way to contact you? ☒ E-mail ☐ Phone

E-mail griffvick@gmail.com Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

(1) There is a major point source to Lake Wenatchee, east side of Lake, about 150 feet SE of where Brown Road joins North Shore Drive.
There is a culvert which dumps here at this bay/inlet.
The culvert is buried all the way from the ~~lake~~ Lake, under private property all the way to the East side of the main highway.
The drainge comes from a very large field that extends much of the way toward Fish Lake. There used to be only 1 or 2 residents back there, now there are many mailboxes. And animals grazing at times
The water that dumps into the Lake is often yellow/brown. We have noticed more lake growths

(2) Newcomers are "landscaping". Removing natural growth. Planting non-native shrubs and yes even lawns. And fertilizing the landscaping. Lawns and fertilizer near the shore, wow, and then they "claim" more vegetation in the Lake. Duh!!

Tape here.

Additional comments

(3) Anything wrong with septic tank like Lahlike a city-style treatment plant they are not knocked out of commission for several days at a time and dump raw sewage into our waterways. Most soil here is tight and clay. People even have a hand time drilling decent wells within 50 feet of the Lake -- ---- not much gets through the clay soil!!

and drain field uses we did have a neighbor whose cabin was down next to the water, but he connected to the sewer. I and my neighbor are all up on the bluff where we are not a threat to anything.

Fold here.

Chelan County
Natural Resource Department
Attn: Erin Fonville
316 Washington Street, Suite 401
Wenatchee, WA 98801

Chelan County Shoreline Master Program

WENATCHEE WA 98801 PM 30 OCT 2008

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 90 WENATCHEE WA

POSTAGE WILL BE PAID BY ADDRESSEE

ERIN FONVILLE
SMP PROJECT MANAGER
CHELAN COUNTY NATURAL RESOURCES
316 WASHINGTON ST STE 401
WENATCHEE WA 98801-9964

Received 10/31/08

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name

Affiliation

Address

City/State/Zip

Would you like someone to contact you? ☐ Yes ☐ No
If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation.
For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html
or e-mail erin.fonville@co.chelan.wa.us

Please not only look into other public access areas but restore current public access areas to the public.

Thank you.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name Gordon Ivie

Affiliation City Cashmere

Address 101 Newberry

City/State/Zip Cashmere WA 98815

Would you like someone to contact you? ☐ Yes ☑ No

If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

Re Hearing at Cashmere Center 10/23/08

I did not hear the opening remarks well enough to follow – please use a mike – female voices have a different pitch – and volume –

It might be well to have the resource women – or all of you – tour the city of Cashmere to get a firsthand look at the various streams "within" the city.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County Shoreline Master Program

Name: Vicky Cubicki

Affiliation: Cashmere resident

Address: 301 Forest Dr.

City/State/Zip: Cashmere, 98815

Would you like someone to contact you? ☐ Yes ☒ No

If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail

Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

1) Would love to see a Lvth to Wenatchee bicycle trail included in the Shoreline Master Plan!!

2) Rejuvenate Lake Juvenile (west of Aplets Way Bridge b/w Hwy + River)

3) Move boat launch away from salmon spawning ground near Jarvis substation.

4) Develop Sleepy Hollow swimming Hole (or @ least don't discourage people from using it)

5) Don't require a fishing vehicle permit @ ~~[illegible]~~ Rodeo Hole. Can't fish the river anymore. It's all Kayakers, swimmers that use that area.

6) In 1958, PUD purchased a bunch of public access sites 3/4 mile apart. Resurrect that document. Maybe more public access.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name PHIL FIKKAN

Affiliation CASHMERE RESIDENT

Address 123 RIVERFRONT DR

City/State/Zip CASHMERE, WA. 98815

Would you like someone to contact you? ☒ Yes ☐ No

If yes, what is the best way to contact you? ☒ E-mail ☐ Phone

E-mail pfikkan@verizon.net Phone 509-782-8222

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

OVERALL GOOD MEETING. SPEAKERS NEED TO SLOW UP PERHAPS USE MIKES. DIFFICULT TO HEAR. PUBLIC NEEDS TO SEE CLEAR MAPS AS TO WHO OWNS WHAT.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name	B. Bix
Affiliation	BLUE STAR Growers
Address	200 BLUE STAR WAY
City/State/Zip	CASHMERE . WA 98815

Would you like someone to contact you? ☐ Yes ☑ No
If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation.
For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html
or e-mail erin.fonville@co.chelan.wa.us

Railroad / Highway / Agriculture are some excellent habitat.

Often more undisturbed than individual homeowners.

Concern Farmers have critical concerns with air flow during spring frost an types of vegetation used for export issues. Will farmers be able to maintain open bays for air flow in shoreline trees.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name CARIN SMITH

Affiliation community member + Kayaker

Address 9001 Derby Canyon

City/State/Zip Peshastin 98847

Would you like someone to contact you? ☐ Yes ☐ No not necessary

If yes, what is the best way to contact you? ☑ E-mail ☐ Phone

E-mail carin@smithnet.com Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

Priority - Get the large trash out of the River
Find out who is responsible (facilitators NOT SURE) + Fix it! It is ugly and dangerous (large pieces of metal between Dryden + Cashmere in + along river)

"View corridor" Leavenworth to Cashmere
The whole thing is a view corridor
No need to develop on the shoreline

There needs to be many more public access areas

The trail is a high priority

Secure the natural beauty

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name Don Rolfs

Affiliation

Address 508 Day Road N.

City/State/Zip Wenatchee

Would you like someone to contact you? ☒ Yes ☐ No

If yes, what is the best way to contact you? ☒ E-mail ☐ Phone

E-mail donrolfs@aol.com Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

(1) Provide info @ Preservation of
- Native flora vs. invasive exotics
- Native pollinators vs. alien pollinators
-

I can provide responsibly, reproducable protocol for establishing baseline data for survey of Native Pollinators in shoreline under jurisdiction of this master program.

Don Rolfs
donrolfs@aol.com

(2) Educational Resource — Native flora accessible to students in formal classes related to ecology - observe native plants observe native pollinators & other fauna. Students of grade school — w/ college would benefit.

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County Shoreline Master Program

Name

Affiliation

Address

City/State/Zip

Would you like someone to contact you? ☐ Yes ☐ No
If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail Phone

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For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html
or e-mail erin.fonville@co.chelan.wa.us

- What is the Status of the "Fingers" Shoreline Area? Could this Land be purchased for public Access Development?

- Are Recommendations made by the Study Done 5-8 yrs ago By Biologists from Lake Tahoe Studying Lake Chelan Water Quality ... Are they Being Considered and incorporated into Lake Chelan Environmental and Water Quality Smp?

Comment Card

Chelan County Shoreline Master Program

Please print legibly.

Chelan County **Shoreline Master Program**

Name Dixie J. Baker

Affiliation

Address 2025 W. TERRACE AVE.

City/State/Zip CHELAN, WA. 98816

Would you like someone to contact you? ☐ Yes ☐ No

If yes, what is the best way to contact you? ☐ E-mail ☐ Phone

E-mail dixiebaker@nwi.net Phone

Please share your comments on the Shoreline Master Program. Thank you for your time and participation. For additional information, please visit www.co.chelan.wa.us/nr/nr_shoreline_master_program.html or e-mail erin.fonville@co.chelan.wa.us

There is enough off shore businesses currently in operation. The traffic on the lake is congested enough. I would favor leaving things capped off as is with only attrition replacing the existing number of businesses in operation.

Received 10/30/08

Chelan County Shoreline Master Program
Community Workshops Questionnaire

Thank you for your interest in the Shoreline Master Program update and for attending the City of Chelan's Community Workshop. Below are the questions that were asked during the Community Workshop on October 21, 2008. Any information that you can provide will be very helpful to the update process. Feel free to provide feedback on any or all of the questions. Please either e-mail your responses to erin.fonville@co.chelan.wa.us or mail to: Erin Fonville, Chelan County Natural Resource Department, 316 Washington St., Suite 401, Wenatchee, WA 98801

Purpose

The purpose of the first round of community workshops is to capture citizen goals and aspirations with respect to the findings of the shoreline inventory. Information gathered during these meetings will help in the development of shoreline goals, policies and regulations. Subsequent meetings will cover shoreline analysis, shoreline management recommendations, and draft policies and regulations.

Community Workshop Questions

Shoreline Use & Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture?

   yes, most of the usable shoreline is being used

   a. What is there too much of?

      jet skis, loud boats noise

   b. What is there too little of?

      control of lake level, lake should remain full especially for Sept. + Oct

2. Are there current community shoreline uses that you feel aren't appropriate? Why?

   jet ski business, due to lake + noise pollution

3. Aside from public access and recreational uses, what other developments would you like to see on the shoreline? Where?

   Nice restravant near downtown

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development?

   NO!

5. When you imagine the future shoreline, what will it look like in terms of shoreline use and development?

   Hope it does not change, no more Condo's on the shoreline

Chelan County Shoreline Master Program
Community Workshops Questionnaire

6. What do you like best about your community waterfront now?

7. What concerns you most about your community waterfront now?

High density development

Public Access & Recreation

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

Same

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.)

All the above

3. How do you feel about your level of waterfront access, both visual and physical?

ok

4. Are there areas that need public access (that currently don't have any)?

No

5. How do you think your community should balance provision of additional public access, if needed, against uses that might provide direct economic benefits to your community?

Public access should be near Town

6. How often do you visit shorelines in Chelan County? Which ones?

Not. Lake Chelan

Environmental Protection

1. Does your community have natural areas that you feel should be preserved or protected?

The Lake

2. How can these areas best be protected? (Volunteer actions, regulations, purchase, etc.)

Chelan County Shoreline Master Program
Community Workshops Questionnaire

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration?

Boat dock on way into Town. It should be easier for people to get permits to maintain & improve lake shore properties Dealing with shoreline mgmt, Fisheries Cty, Corp of Eng, & Dept of Ecology, is way to difficult

4. When you imagine the future shoreline, what will it look like in terms of environmental condition?

Hope The pollution from increased boating & jet ski activites doesn't ruin the lake quality and shoreline. Also that all the above agency's improve dealing with people who want to keep the shoreline looking good

Thank you for your interest in the Shoreline Master Program update and for attending the City of Chelan's Community Workshop. Below are the questions that were asked during the Community Workshop on October 21, 2008. Any information that you can provide will be very helpful to the update process. Feel free to provide feedback on any or all of the questions. Please either e-mail your responses to or mail to: Erin Fonville, Chelan County Natural Resource Department, 316 Washington St., Suite 401, Wenatchee, WA 98801

Purpose

The purpose of the first round of community workshops is to capture citizen goals and aspirations with respect to the findings of the shoreline inventory. Information gathered during these meetings will help in the development of shoreline goals, policies and regulations. Subsequent meetings will cover shoreline analysis, shoreline management recommendations, and draft policies and regulations.

Community Workshop Questions

Shoreline Use & Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture?

   a. What is there too much of?
   Too much traffic.

   b. What is there too little of?
   Too little parking.

2. Are there current community shoreline uses that you feel aren't appropriate? Why?
   The proposal to make parks or micro parks out of road ends is inappropriate. In some instances the shoreline is too steep and dangerous. In other instances there is little to no parking available to accommodate a park facility, no space for bathrooms, and it would create an intrusion into quiet neighborhoods that are not zoned TA.

3. Aside from public access and recreational uses, what other developments would you like to see on the shoreline? Where? **Lake Chelan is currently too congested as it is to promote additional recreational uses on the shoreline. Parking is a long standing issue and a problem that has yet to be addressed.**

4. Are there areas of your community shorelines that you feel are suitable for high-intensity development? **No. Absolutely not.**

5. When you imagine the future shoreline, what will it look like in terms of shoreline use and development? **At the current rate, without more restrictions, I foresee more congestion, and high rise condominiums blocking the lake view.**

6. What do you like best about your community waterfront now? Beautiful views. Availability to boat launches, Lakeside Park, etc.

7. What concerns you most about your community waterfront now? Section J of the proposed trail and the proposed Micro Park coming into the neighborhood creating more congestion and parking problems than we currently experience every Summer.

Public Access & Recreation

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation? **Lakeside Park and Don Morse Park are great recreational areas for public access.**

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.) Boating, rafting, trails, and swimming.

3. How do you feel about your level of waterfront access, both visual and physical? Good.

4. Are there areas that need public access (that currently don't have any)? No.

5. How do you think your community should balance provision of additional public access, if needed, against uses that might provide direct economic benefits to your community?

6. How often do you visit shorelines in Chelan County? Which ones?

Environmental Protection

1. Does your community have natural areas that you feel should be preserved or protected? The Lake and Chelan Butte.

2. How can these areas best be protected? (Volunteer actions, regulations, purchase, etc.)
Regulations must be enforced. Parking should be acquired AND REQUIRED to accommodate any proposed useage.

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration? **Three fingers should be restored to the public.**

4. When you imagine the future shoreline, what will it look like in terms of environmental condition?
5. Overuse and congestion can only mean noise and pollution.

Received 11/18/2008

Chelan County Shoreline Master Program
Community Workshops Questionnaire

Thank you for your interest in the Shoreline Master Program update and for attending the City of Chelan's Community Workshop. Below are the questions that were asked during the Community Workshop on October 21, 2008. Any information that you can provide will be very helpful to the update process. Feel free to provide feedback on any or all of the questions. Please either e-mail your responses to erin.fonville@co.chelan.wa.us or mail to: Erin Fonville, Chelan County Natural Resource Department, 316 Washington St., Suite 401, Wenatchee, WA 98801

Purpose

The purpose of the first round of community workshops is to capture citizen goals and aspirations with respect to the findings of the shoreline inventory. Information gathered during these meetings will help in the development of shoreline goals, policies and regulations. Subsequent meetings will cover shoreline analysis, shoreline management recommendations, and draft policies and regulations.

Community Workshop Questions

Shoreline Use & Development

1. Are there adequate areas for residential, business, recreation, public access, habitat, open space and agriculture? A safe shoulder or path for biking, walking or running would be good.
   a. What is there too much of?
   PWC's
   b. What is there too little of?
   Low water ~~beaching~~ launching and low water docking for boats
2. Are there current community shoreline uses that you feel aren't appropriate? Why?
   No
3. Aside from public access and recreational uses, what other developments would you like to see on the shoreline? Where? I think all the things that I think of are recreational. More boat moorage
4. Are there areas of your community shorelines that you feel are suitable for high-intensity development? Maybe Manson Bay
5. When you imagine the future shoreline, what will it look like in terms of shoreline use and development? Keep garish development off the waterfront

Chelan County Shoreline Master Program
Community Workshops Questionnaire

6. What do you like best about your community waterfront now? Ease of use and space to play

7. What concerns you most about your community waterfront now? Overcrowding at the City Park + Lakeside in the peak summer season

Public Access & Recreation

1. When you imagine the future shoreline, what will it look like in terms of public access and recreation?

2. How do you use the shorelines? (View points, trails, parks or recreation areas, boating, rafting, swimming, etc.) We boat + swim

3. How do you feel about your level of waterfront access, both visual and physical? Pretty good except when the lake drops below 1085.5.

4. Are there areas that need public access (that currently don't have any)? Not that I can think of except low water recreational boating access

5. How do you think your community should balance provision of additional public access, if needed, against uses that might provide direct economic benefits to your community? Finding that balance

6. How often do you visit shorelines in Chelan County? Which ones? ~~[illegible]~~ — Don Morris Lake Chelan Marina, 200+ days a year — Manson Bay Mill Bay,

Environmental Protection

1. Does your community have natural areas that you feel should be preserved or protected? Yes - Mill Creek.

2. How can these areas best be protected? (Volunteer actions, regulations, purchase, etc.) By making sure the development doesn't allow run off

Chelan County Shoreline Master Program
Community Workshops Questionnaire

3. Are you aware of any degraded areas that you feel should be restored? Who should be responsible for shoreline restoration? Primarily PUD funding. Community Volunteer work could augment it.

4. When you imagine the future shoreline, what will it look like in terms of environmental condition? Well managed and protected from pollutants, litter and unsightly development

A.3 Letters and Emails

SMP WORKSHOP FOR CHELAN COUNTY and CASHMERE

OCT 23, 2008

I went with Amy to listen to people's access ideas and issues from three groups;

GROUP 1

Considerable discussion on the Sleepy Hollow area.

Access problems at Sleepy Hollow bridge during summer

Question on do we know what the railroad uses to kill weeds, fight fires, etc.

Cashmere Dike access

Keep the river accesses clean

I talked to Mr. Peterson on river access. He owns a large ranch that has a fishing access area with toilet. He is very supportive on the river access areas.

Group 2

Question on whether the property line is the high water line or the centerline of the riverbed

Lots of different activities to use the river access points; fishing, kayaking, bird watching, canoes, etc

Record/document owners along the river

Railroad ownership/rules/regulations

Need to consider what is planned for bike trail from Wenatchee to Leavenworth

Impact of local gold mining on the salmon, et al, fishery and water quality

TBD Cashmere area boat launch that puts boats right over salmon spawning beds

Group 3

Interest in seeing riverbank restaurants in Cashmere
Keep access areas clean
Provide poles, etc, to build eagle nest platforms
Will increase water usage result in liability issues
Very expensive wastewater fixes being mandated

Received 10/27/08

Thank you for your questionnaire on the development of out future shoreline. This narrative is centered on our first meeting and that is the shoreline within the city of Chelan.

We are at a critical point in the development of our shoreline within the City of Chelan. With the increased pressure for development we must stop the random development of each individual project and look to a comprehensive plan for the entire shoreline. Some Suggestions:

Access to the lake is not just physical. We need new plans to maintain both the physical and "lake experience" access to the lake. This includes sight, sound and even smell. It's ironic that we are building a great trail to surround the lake while at the same time we are approving 50 foot high building projects on the shoreline that will cut off both the physical and "lake experience" access . It reminds me of Lake Tahoe. On the California side you have great "lake experience" access. You can see the lake as you drive by. You have public parks and open space with low height development. Buildings are not jammed together and are (I Think) at least 30 feet apart to maintain this lake experience for all. You hit the Nevada border and the lake disappears. High rise development jammed on 5 foot borders on the shoreline cuts the lake off .
Or lesson should be to develop high density projects in the hills not the shoreline. We should make sure all projects must leave adequate boundaries (15 foot from line) between neighbors. Projects must be low enough to maintain the view of the lake from the trail. We new a new zoning requirement for just shoreline projects.

Water quality is a must. We can not keep approving projects that will put more and more boats in the lake. All boats leak and will pollute. Putting 500 and more boats in marines just up lake and up current from our water supply is not only not smart but dangerous. Additional boats mean additional boat traffic, more noise pollution, more rough boat wakes and more conflict on the water. We need quiet water areas.
New projects must provide adequate parking for boat trailers.
We need good restaurants on the shoreline.
We need a first class year round city marina that would provide sea plane and charter boat public access.
We need the lake to be full year round.

However if I were King I would make sure our shoreline would end up a lot more like that of Kelowna, B.C. I would move the trail down to the shoreline. I would require all projects add this trail and ready access in all their plans. I would include parks and open area with benches. Low rise commercial areas would be built in the area just up from the trail complex. I would insure that the entire lake experience was part of the long term heritage of what we do now.

Thank you for this opportunity and I would like to be involved in the Shoreline Master Program.

Lyle Mettler
P.O. Box 63
Chelan, WA
Flying4chelan@aol.com
509-682-2328

Olympia Office:
316 Legislative Building
P.O. Box 40412
Olympia, WA 98504-4012
Phone: (360) 786-7622
Fax: (360) 786-1266

Washington State Senate

Senator Linda Evans Parlette
Senate Republican Caucus Chair
12th Legislative District

District Office:
625 Okanogan, Suite 301
Wenatchee, WA 98801
Phone: (509) 663-9702
E-mail: Parlette.Linda@leg.wa.gov
Hotline: 1-800-562-6000

October 30, 2008

Erin Fonville, Natural Resource Specialist
Chelan County Natural Resources
316 Washington St. Suite 401
Wenatchee, WA 98801

RE: Update Shoreline Master Plan; Chelan County

Dear Erin, Erin,

Thank you for inviting me to comment on Chelan County's purposed Shoreline Master Plan (SMP). As a member of a Lake Chelan Pioneer family, the beauty of the Lake and the sensible use of it's shoreline is important to me. The shorelines in our region are a limited resource which, when developed, should be used for the highest and best use for the communities who reside near them.

Over the past two years, my family and I have been working through the process of contesting a shoreline decision made by the Chelan County hearing examiner regarding a purposed community dock on Lake Chelan. Our case went in front of the Shoreline Hearings Board, whose decision upheld our position. It was a very expensive process to go through and I believe much of it could have been avoided if the City of Chelan updated their Shoreline Master Plan as required by law when a piece of lake frontage was annexed into the city limits.

I share this because, I understand Chelan County, and the encompassed cities, will have proposed shoreline jurisdiction over an area that is distributed among 80 rivers and streams, 54 lakes and reservoirs, as well as four Watershed Resource Inventory Areas (WRIAs). The amount of new growth in areas surrounding our waterways has greatly increased in the past few years and I am glad Chelan County and the municipalities with it's border are taking the time to update the Shoreline Master Plan to bring everyone on the same page.

I would hope the final recommendations are found to be clear, consistent, and feasible for those charged with implementation. Public access to water ways is of importance to me. I would hope that lands owned by public utility districts on Chelan County waterways will be looked at carefully to see if there is any potential for public access. I would encourage the planning group to seek out input from the P.U.D. to learn more about their vision for more public access on shorelines they own.

I would also hope the updated SMP will give guidance to local jurisdictions that may have a marina or dock already in place that has potential for expansion or modernization; for example, the City of Chelan's docking facility. Capitalizing on existing infrastructure for highest and best use for public benefit is a fiscally prudent way to maximize our shoreline use.

Thank you for opportunity to comment on this very important process.

Sincerely,

Linda Evans Parlette

LINDA EVANS PARLETTE
Washington State Senator
12th Legislative District

Erin Fonville

From: patti cassell [pattinevarilcassell@hotmail.com]
Sent: Friday, October 17, 2008 7:37 PM
To: Erin Fonville
Subject: Shoreline Master Program
Follow Up Flag: Follow up
Flag Status: Yellow

Hello, and thank you for the notice of the Community Workshop for the Chelan Co. Master Shoreline Program on October 30th.
I am sorry to say I am unable to attend this workshop, and hope that this email can serve as my solicited input.
My husband and I purchased land and built a home in Manson 15 years ago, drawn by the unbelievable beauty of the area, and the small town feel.
I have to say that over these past years we have been increasingly frustrated by the seemingly uncontrolled growth, especially at the waterfront. I get the feeling that if growth continues this way, the only people that will even get to **view** the lake from the highway are the wealthy property owners. Please, please put some covenants in place that prevents enormous multistory homes and/ or multiple use dwellings directly at the waterfront.
The lake and it's views should be available for all to enjoy, not the just the elite class. Sincerely, Patti Cassell

Store, manage and share up to 5GB with Windows Live SkyDrive. Start uploading now

Erin Fonville

From: Mark Cassell [mcasel@msn.com]
Sent: Friday, October 17, 2008 7:01 PM
To: Erin Fonville
Subject: Chelan County Shorline Master Program
Follow Up Flag: Follow up
Flag Status: Yellow

Erin,

We can't attend....but...we would like to see the lake as we drive around it! No high rise buildings right on the Lake....no dock extending out more than 50'...max!

No floating stores, no mega houseboats.

Septic systems must be state of the art if there are no sewers.

Keep multi family, hotels and condos in Chelan.

No uplake past Wapato Point multifamily!

Thanks for asking.

Mark Cassell
30 Washington St
Manson

Erin Fonville

From: Cordy Beckstead [cordy@becksteadelectric.com]
Sent: Wednesday, October 22, 2008 3:04 PM
To: Erin Fonville
Subject: Shoreline Use & Development issues
Follow Up Flag: Follow up
Flag Status: Yellow

Re: Your questionnaire for tonight's meeting.

1. I would like to see a public docking area on each side for those who might like to ride their boats to work. Perhaps they already exist.
2. I prefer a real mix of uses so it would be a real challenge for me to say so.
3. I would like to see retail spaces such as shops or eating places. There is a wonderful mix of shops on a pier that goes out into the lake at Sandpoint Idaho, for example. A restaurant on the edge would be lovely, too. Fairbanks, Alaska, has several and they are great to sit outside (in the summer of course) and watch the boats go by. I would also favor businesses on the river. Trees or bushes along the edge would of course be important for fish management.
4. Yes, several, particularly along the loop trail.
5. In the future I imagine a 3rd bridge across the river at about the bottom of 5th St. This location would be important primarily because Wenatchee needs more lanes out of town for safety purposes. I imagine every foot of the shoreline within the 2 current bridges is used extensively by the community and tourists. I imagine another park perhaps by the Olds Bridge on the east side. I hope for a mix of commercial and residential and industrial much like the waterfront in Seattle on the sound with the smells and sights of a diverse population enjoying a diverse number of activities and purposes. For example I think it is great that Columbia Cold Store is located at 5th St. and Worthen. It is tremendous to get the ice for the rink from their business (I realize that may be ending) and for the City it is great to get the revenue. The inconvenience of the trucks is a small price to enjoy the diversity.
6. The loop.
7. I am most concerned that regulations and policies will be too firm, tight and cover every activity imaginable. I vote for more flexibility and diversity of ALL kinds.

Thank you so much, Erin, for making this available.
Elisabeth

Erin Fonville

From: Erin Fonville
Sent: Wednesday, October 29, 2008 9:20 AM
To: 'Darren Talley'
Subject: RE: Community Workshop Questions

Darren,

Thanks for your comments and concern. I apologize if everything mentioned was not correctly written down during the workshop and appreciate you following up with me. I'll add the information below to what we collected during the workshop.

Thanks,

Erin Fonville
SMP Project Manager/
Natural Resource Specialist
Chelan County Natural Resources
316 Washington St. Suite 401
Wenatchee, WA 98801

Office: (509) 667-6324
Cell: (509) 699-9016
E-mail: erin.fonville@co.chelan.wa.us

Website: www.co.chelan.wa.us/nr_main.htm

From: Darren Talley [mailto:Darren@TalleyFinancial.com]
Sent: Monday, October 27, 2008 10:38 AM
To: Erin Fonville
Subject: RE: Community Workshop Questions

Erin,

Thank you for putting together a good work shop. I noticed that we are getting voices from everyone, with just their pet peeves. For instance one person said, all public access points on the lake should only be for non motorized transportation... like kayaks. That point was written down by the moderator (I think it was Amy). To be the counter point to that type of thinking I said, that motorized transportation should be encouraged. My point did not get written down by the moderator. This could skew the general voices being heard if someone reads through all that was written down, and counter balancing points are left out. It would lead someone who was not at the meeting or receives a letter from the workshop to believe that everyone's general opinion was taken into account, when in fact only certain points were written down helping to shape an certain outcome. I am not saying Amy did this intentionally, but really to every point that is brought out at these workshops there is a counter point that should be listed.

Thanks for listening,

Darren Talley

Darren J. Talley & Dean W. Talley
Lake Chelan Development, LLC
Granite Ridge, LLC
PO Box 969
Chelan, WA 98816

APPENDIX B: WORKSHOP MATERIALS

B.1 Display Board

CHELAN COUNTY Shoreline Master Program UPDATE

What is an SMP?

Shoreline Master Programs (SMP) are a combination of rules and comprehensive planning that are developed by local governments to guide the development of stream and lake shorelines in accordance with the State Shoreline Management Act (RCW 90.58). Chelan County's current SMP was adopted in 1975 and contains goals, policies and regulations for shorelines within the local area. Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee are partnering to update their SMP as part of a county-wide effort with project funding from the Department of Ecology (DOE). The updated SMP, as required by DOE, will provide environmental protection for shorelines, preserve and enhance public access, and encourage appropriate development that supports water oriented uses.

What are shorelines?

Shorelines are special water bodies that meet certain size or flow criteria under the Shoreline Management Act, including the adjacent uplands. They specifically include lakes greater than 20 acres, streams and rivers with an average annual flow greater than 20 cubic feet per second (cfs), lands within 200 feet of the ordinary high water mark, floodways, some floodplains, and associated wetlands. Chelan County has at least 130 shorelines that meet the definition, which include approximately 50 lakes and 80 streams or rivers.

What do shoreline rules cover?

Shoreline rules apply to any land use activity that occurs within the shoreline jurisdiction as defined in the SMP. The rules cover the folllowing:

- construction of new structures such as houses, sheds, and decks
- building height
- construction of in-water and over-water structures such as docks, buoys, and piers
- water-dependent uses such as residential docks and marinas
- land development such as clearing, grading, dredging, or filling
- other activities along the shorelines, including restoration (e.g., riparian planting, bank stabilization), trails, and public access.

Get involved!

The County and Cities invite you to become actively engaged in the SMP update process. The many ways to participate are:

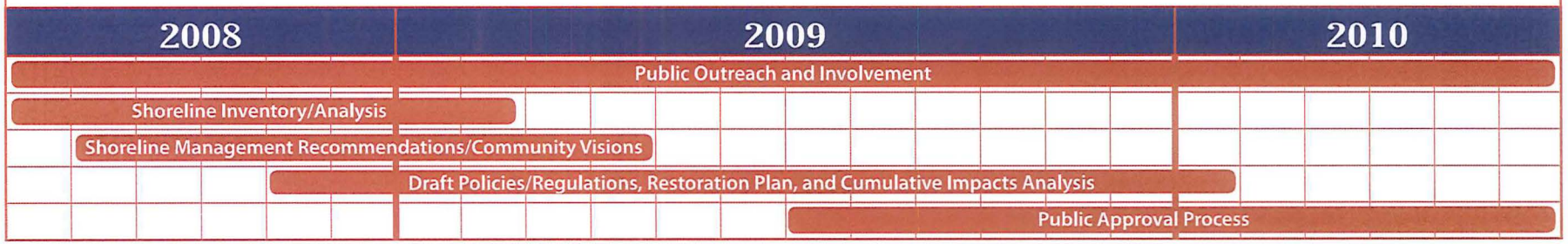
- attend our public meetings and workshops
- invite us to attend your community organization meetings
- sign up for our e-mail distribution list
- learn more about shorelines
- talk to your neighbors and friends
- ask questions and provide comments on the products developed during the update

Our meeting schedule is available on the Internet, along with meeting notes and agendas, project updates, and products developed through the process. Visit the website for more information:

www.co.chelan.wa.us/nr/nr_shoreline_master_program.html

How long will it take?

The SMP update and adoption process is anticipated to take two years (with completion by June 30, 2010). Existing County and City SMPs will remain in effect until the updated plans are adopted by Ecology, the Board of Chelan County Commissioners, and the City Councils.



B.2 Brochure

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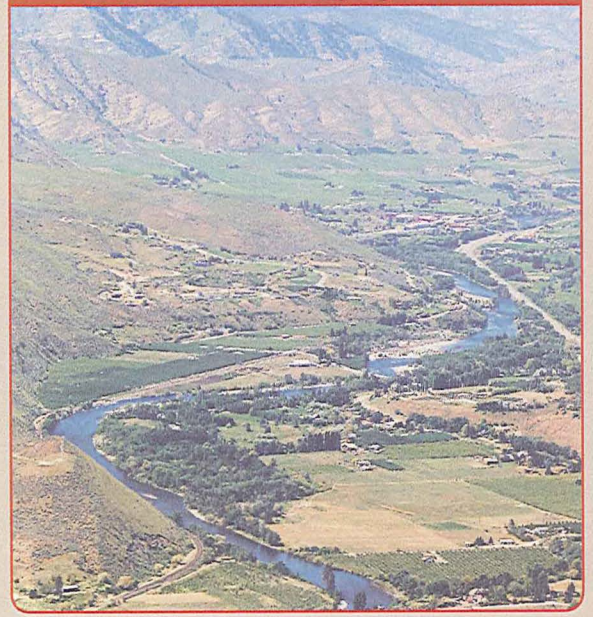

Need more information?

Chelan County

Erin Fonville, SMP Project Manager
Natural Resource Department
316 Washington St., Suite 401, Wenatchee, WA 98801
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Chelan County

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City of Leavenworth

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Washington Department of Ecology

Clynda Case, Project Officer
Central Regional Office
15 W. Yakima Ave., Ste. 200, Yakima, WA 98902
(509) 457-7125 • clca461@ecy.wa.gov

Chelan County Shoreline Master Program

CHELAN COUNTY Shoreline Master Program UPDATE

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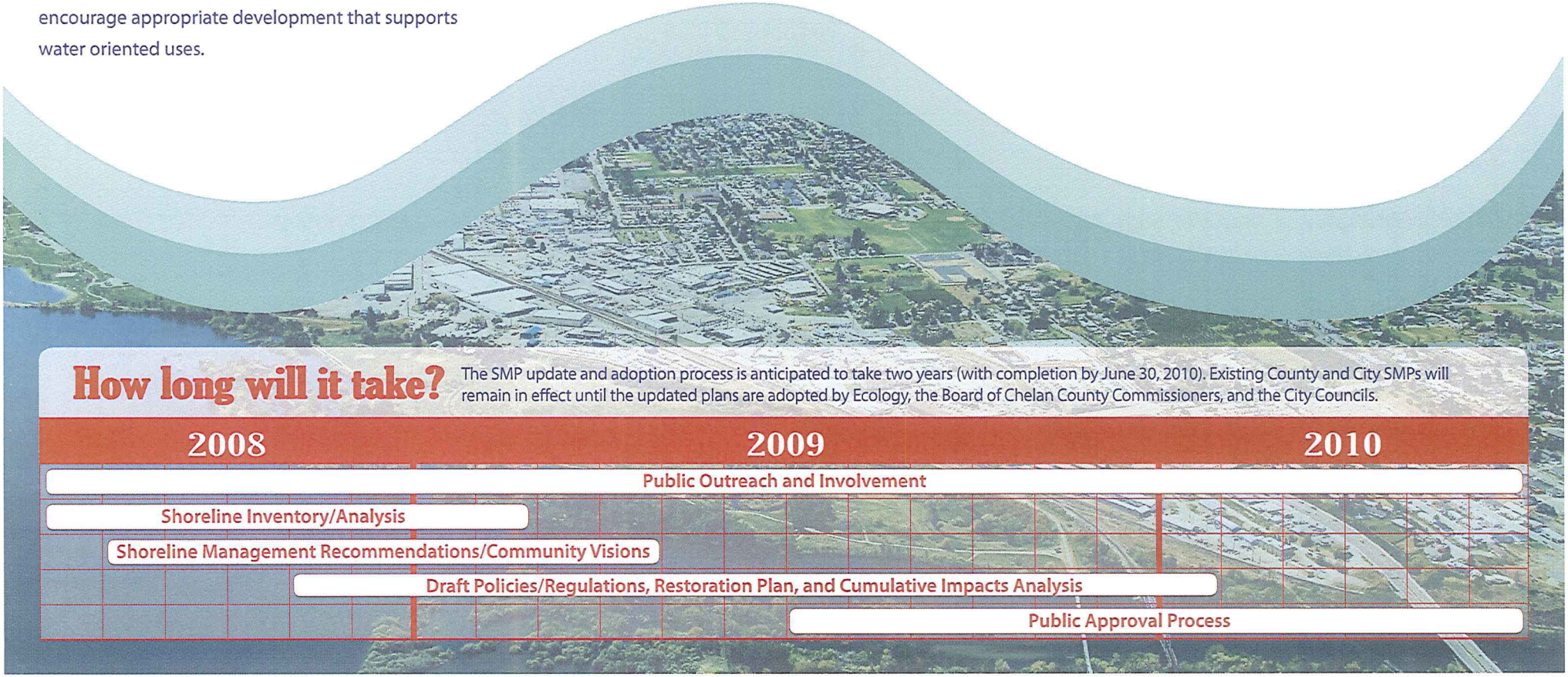

B.3 Postcard Announcement

Save the Date!

What? **Community Workshop** for the Chelan County Shoreline Master Program Update

Why? Do you care about what the shorelines within the Lake Chelan, Manson and surrounding areas will look like in the future? Join us for a workshop to gather public insight on future shoreline use & development; public access and recreation; and environmental protection.

When? **Thursday, October 30th, 6 - 8 p.m.**

Where? **Chelan Fire Hall**
232 East Wapato Avenue, Chelan

For More Information

Erin Fonville
Chelan County Natural Resource Dept.
(509) 667-6324
erin.fonville@co.chelan.wa.us

Chelan County
Shoreline Master Program

Save the Date!

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Chelan County
Shoreline Master Program

Chelan County
Natural Resource Department
Attn: Erin Fonville
316 Washington Street, Suite 401
Wenatchee, WA 98801

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Chelan County
Natural Resource Department
Attn: Erin Fonville
316 Washington Street, Suite 401
Wenatchee, WA 98801

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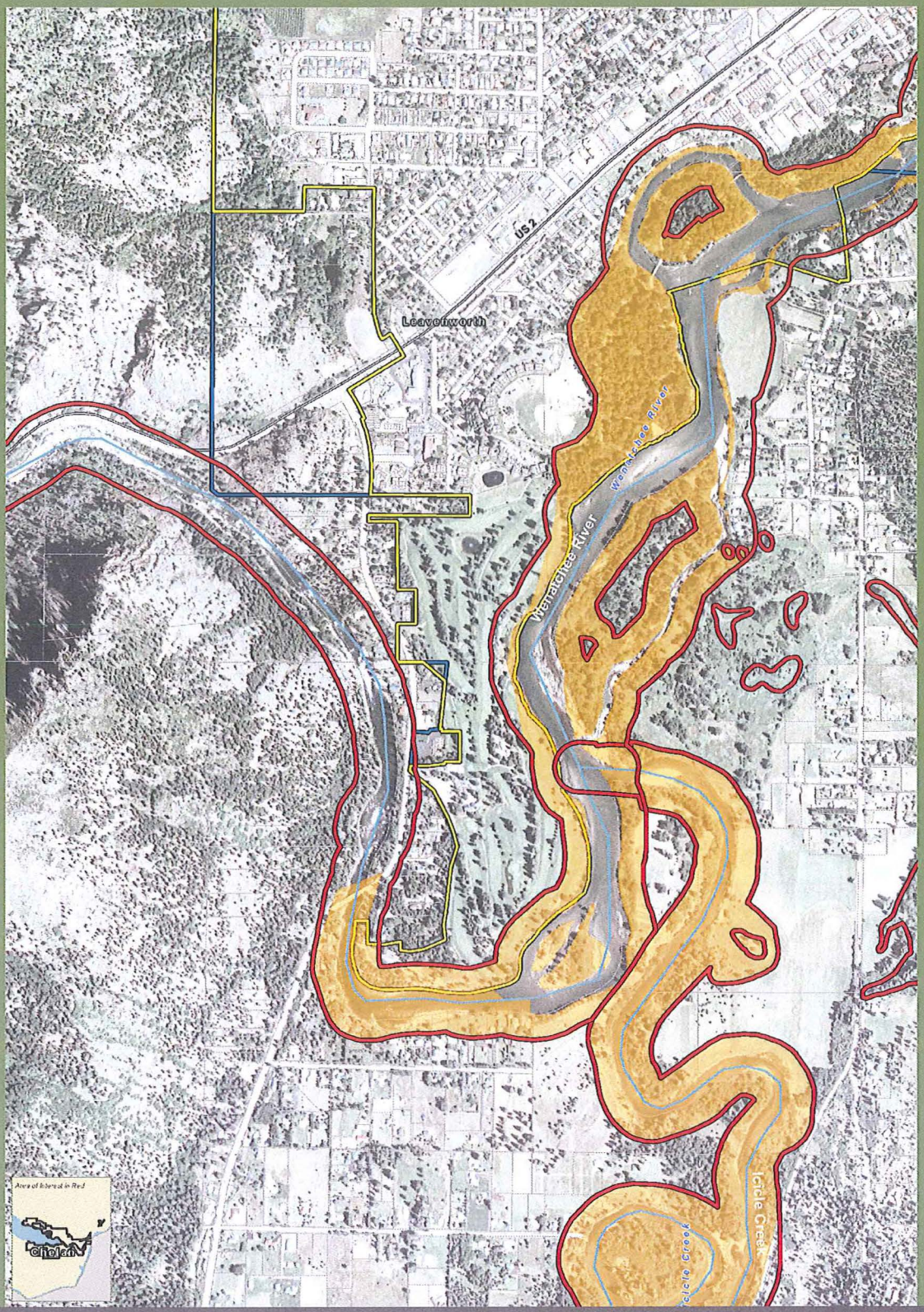
Appendix E
Channel Migration Zone Maps



SMP Regulatory Channel Migration Zone

Leavenworth 01

Chelan County Shoreline Master Program

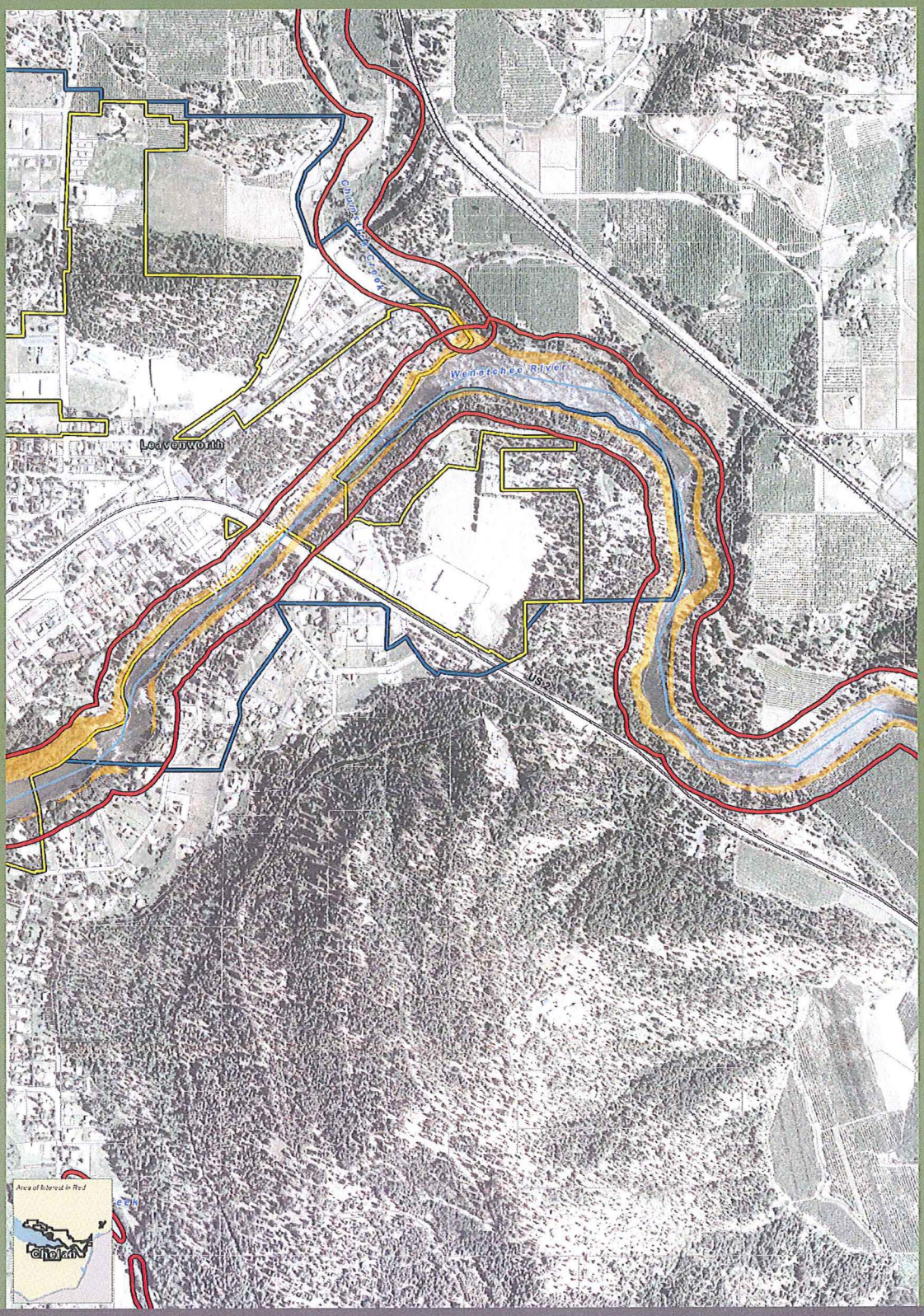
0 400 800
Feet

The Watershed Company

November 29, 2012
Data: WADNR, WA OFM, Chelan County

- Channel Migration Zones
- Rivers & Streams
- Highways
- Railroads
- Parcels
- Jurisdiction
- City Boundaries
- UGA Boundaries

Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/ verify information shown on this map.



SMP Regulatory Channel Migration Zone

Leavenworth 02

Chelan County Shoreline Master Program

THE WATERSHED COMPANY

0 400 800
Feet

November 29, 2012
Data: WA DNR, WA OFM, Chelan County

- Channel Migration Zones
- Rivers & Streams
- Highways
- Railroads
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- City Boundaries
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Appendix F
Public Access Plans

Leavenworth Shoreline Public Access Plan

This Leavenworth Shoreline Public Access Plan documents how the City has planned for parks and recreation in the community. The City's primary waterbody is the Wenatchee River, though a short segment of Chumstick Creek is also present in the City and its Urban Growth Area. The plan has been prepared pursuant to WAC 173-26-221 (4)(c), including identifying specific public needs and opportunities to provide public access through an open public process. This plan is based on the City's *Comprehensive Plan* elements as well as the City's *Parks& Recreation Comprehensive Plan*, the City's *Upper Valley Regional Trails Plan*, and the City's *Downtown Master Plan*. The City's plans provide a variety of shoreline access opportunities and circulation for pedestrians, bicycles, and vehicles, as well as public viewing areas and include recommended projects and actions.

Shoreline Public Access Laws and Rules

Public access refers to the ability of the general public "to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline from adjacent locations" (WAC 173-26-221(4)(a)). Public access can be physical access such as via a trail or park and/or visual such as a view corridor from a road.

Public access is a preferred use per the Shoreline Management Act (RCW 90.58.020). The Shoreline Master Program (SMP) Guidelines require that public access be provided with most new development, except that more flexibility is allowed where there is a coordinated public access planning process (WAC 173-26-221(4)(c)). When public access is addressed in a SMP, it implements the "public trust doctrine" which is a common law principle holding that "the waters of the state are a public resource owned by and available to all citizens equally for the purposes of navigation, conducting commerce, fishing, recreation and similar uses." While the doctrine "protect(s) public use of navigable water bodies below the ordinary high water mark," the doctrine "does not allow the public to trespass over privately owned uplands to access the tidelands."[1] Generally, public or private landowners are limited in terms of liability when there are unintentional injuries to any public access users based on state law at RCW 4.24.210.

[1] See the State of Washington's Department of Ecology's website at: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/public_trust.html. Accessed March 24, 2010.

Shoreline Recreation Goals and Plans

Much of the City's shorelines are in public ownership and reserved for recreational purposes, such as parks, golf courses, boat launches, and trails. These have been developed over several decades based on a clear vision in City plans.

The City of Leavenworth's *Comprehensive Plan* includes goals and policies that seek to maintain and improve parks and recreation facilities:

- Conserve open space and encourage open space considerations in future development. (Land Use Element, Open Space/Recreation, Goal 1)
- Enhance public recreational opportunities by providing a variety of year-round active and passive recreational activities for both residents and visitors. (Land Use Element, Open Space/Recreation, Goal 2)
- Develop and maintain parks and recreational facilities capable of serving the anticipated needs of Leavenworth, including the urban growth area. (Capital Facilities Element, General Goal 3)

Additionally, the City prepared the *Parks & Recreation Comprehensive Plan* in 1997 and intends to update the plan in 2010. The current plan includes the following goals:

- Where appropriate for recreation or open space purposes, the City of Leavenworth should encourage recreational use of derelict land, easements, tax delinquent land, surplus roadway/highway rights-of-way, and other land not presently in productive use where such land can be used for land exchange, purchase, or long-term leases for recreation purposes. (Parks and Recreation Comprehensive Plan Policy 1, bullet 2)
- The City of Leavenworth should encourage the planning, development and full utilization of trails and recreation facilities. (Parks and Recreation Comprehensive Plan Policy 3)

More recently, the City prepared the 2009 *Upper Valley Regional Trails Plan* which includes the following goals relevant to shoreline recreation:

- Connectivity: Facilitate the development of an interconnecting trail system for the Upper Valley of Chelan County, consisting of sidewalks, bike lanes, and non-motorized shared-use paths for variety of trail users including bicyclists, equestrians, cross-country skiers, and pedestrians of all ages and skill levels.
- Recreational Opportunities: Increase access to local and regional recreational opportunities for people of all ages and levels of mobility. Provide a variety of trail experiences by locating trails of varying lengths and difficulty through diverse terrain, scenery, and points of attraction to draw users and maintain their interest.

In addition the 2009 City of *Leavenworth Downtown Master Plan* identifies various enhancement areas and provides for a system of trails providing connectivity to shoreline areas.

Parks and Recreation Plans and Public Review Process

The City's parks and recreation goals and plans have been created with extensive public review. Public review opportunities have included citizen committees, open houses, surveys, public meetings and hearings.

Parks Documentation and Process	Description
Comprehensive Plan	City of Leavenworth Comprehensive Plan, Adopted 2003 and annually amended through the docket process, including open space and recreation goals and policies. This plan is undergoing a comprehensive update in 2010
Parks & Recreation Comprehensive Plan	Parks & Recreation Comprehensive Plan Adopted 1997. Plan includes planning process, existing system, goals and standards, and implementation including an acquisition and improvement program. This plan is undergoing a comprehensive update in 2010.
Upper Valley Regional Trails Plan	Upper Valley Regional Trails Plan. Adopted in 2009. Plans for multiple modes such as pedestrian, bicycle, equestrian, and cross-country skiing trails in the City and the region.
Downtown Master Plan	City of Leavenworth Downtown Master Plan. Plans for pedestrian and bicycle access through the downtown to shorelines and provides designated shoreline viewing areas.
Public Involvement Process	Open houses, news ads, public meetings and workshops, community survey, Regional Trails Planning Steering Committee, Planning Commission meetings, and legislative hearings.

Current Facilities in Shoreline Jurisdiction

Approximately 75 acres of parks and open space lie in the shoreline jurisdiction along the Wenatchee River and Chumstick Creek, with the vast majority located on the Wenatchee River. The following parks and recreation facilities along the Wenatchee River provide physical and visual shoreline access and are owned by the City (City of Leavenworth 1997, 2008). Acres represent total acres of parks within and beyond the shoreline jurisdiction:

- Waterfront Park including Blackbird Island – over 26 acres including trails, play apparatus, an amphitheater, picnic areas, and restrooms. Blackbird Island contains productive steelhead rearing ponds and is a popular fishing spot for children.

- Enchantment Park – 36 acres (10 developed acres/26 natural acres) with natural areas, baseball and softball fields, picnic tables, trails and play equipment. The trails connect to Blackbird Island and Waterfront Park.
- Leavenworth Golf Club – over 100 acres with an 18-hole public golf course and a restaurant. The course operator leases the site from the City.
- Boat/raft/tube takeout - There are two boat access facilities, one formal boat launch on the southeast side of the Wenatchee River (previously known as the Trout Unlimited Park), and an informal raft/tube takeout south of the Golf Course on the west. In addition, the City allows private companies to take access from City-owned property through contractual arrangement.

In addition to public facilities, the Barn Beach Reserve is located along the Wenatchee River adjacent to Waterfront Park. The reserve contains a nature center and a museum. The Chelan Douglas Land Trust now owns property adjacent to the Barn Beach Reserve property and City waterfront property. The Land Trust, Reserve, and City are working together on a collaborative trail system in keeping with the system identified in the *Upper Valley Regional Trails Plan.*

There are also privately owned facilities such as the Pine Village KOA in the City's Urban Growth Area. Within the Urban Growth Area, lies a park associated with the Riverbend Park subdivision though the face of the plat does not appear to publicly dedicate the property.

Community Parks and Recreation Standards

The City's 1997 *Parks & Recreation Comprehensive Plan* includes level of service standards for different facilities community wide.

Facility Type	Level of Service Standard
Parks and Open Space	**acres/1000 population**
Playground	0.5-1.5
Neighborhood	2.5
Community	3.5

Public Access Analysis & Objectives by Shoreline Reach

Public access conditions are presented in order of numbered reaches as mapped in the "Shoreline Inventory and Analysis Report for Shorelines in Chelan County and the Cities of Cashmere, Chelan, Entiat, Leavenworth, and Wenatchee" dated March 2009.

Waterbody and Reach	Current Shoreline Facilities	Planned Shoreline Facilities	Discussion
Wenatchee River			

Waterbody and Reach	Current Shoreline Facilities	Planned Shoreline Facilities	Discussion
CLV 01	CLV 01 R: Pine Village KOA	None	Serves tourists.
CLV 02	CLV 02 L: None CLV 02 R: Riverbend Park, Pine Village KOA, Potential ROW access	None	CLV 02 L: Residential lots. Limited potential for new development. CLV 02 R: KOA serves tourists, park serves subdivision (dedication unknown), ROW access exists but access and parking are difficult.
CLV 03	CLV 03 L: Wastewater Treatment Plant CLV 03 R: Fishing Easement, Potential ROW access	CLV 03 R: Upper Valley Trails Plan	CLV 03 L: City owned property. CLV 03 R: WDFW is investigating status of all fishing easements. Trails Plan identifies pedestrian crossing enhancement at bridge. ROW access exists but access and parking are difficult.
CLV 04	CLV 04 L: None CLV 04 R: Chelan-Douglas Land Trust and Barn Beach Reserve	Upper Valley Trails Plan	CLV 04 L: Trails plan identifies a community trail. CLV 04 R: Trails Plan identifies Icicle Station Trail, a planned trail and trail access point.
CLV 05	CLV 05 L: Boat Launch CLV 05 R: Barn Beach Reserve, Waterfront Park, portion of Blackbird Island with existing Community Trail	None	
CLV 06	Waterfront Park, portion of Blackbird Island with existing Community Trail	None	
CLV 07	Potential ROW access	None.	Residential lots. Right of way exists but difficult to access.
CLV 08	Enchanted Park with some fishing access ponds, portion of Blackbird Island with existing Community Trail	None	
CLV 09 and CLV 10	Golf Course; winter public access – cross country skiing	Upper Valley Trails Plan	Trails plan identifies a proposed community trail.
Chumstick Creek			

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Waterbody and Reach	Current Shoreline Facilities	Planned Shoreline Facilities	Discussion
CLV 01	None	None	Residential lots. Limited potential for new development.
CLV 02	Visual access from highway bridge. County shops property. No formal access.	Upper Valley Trails Plan	Trails Plan: Identifies Icicle Station Trail, a planned trail; a new bridge; and a proposed regional trail.

Implementation

The City will implement its shoreline public access plan through implementation of its *Comprehensive Plan, Upper Valley Trails Plan, and Parks & Recreation Comprehensive Plan* (current and forthcoming). The City's *Upper Valley Trails Plan* includes a section on implementation addressing priorities, cost, funding sources, maintenance & operations, and an action plan The City's budget also contains a capital improvement program. The Shoreline Master Program update also contains public access and recreation standards designed to be compatible with and support the shoreline public access plan. The City may also revisit its shoreline public access plan during periodic reviews of the SMP, anticipated every seven years. (RCW 90.58.080)

Supporting Maps

The following attached maps are provided for reference and in support of the shoreline public access plan:

- Public Access maps prepared for the Shoreline Master Program update, July 22, 2010

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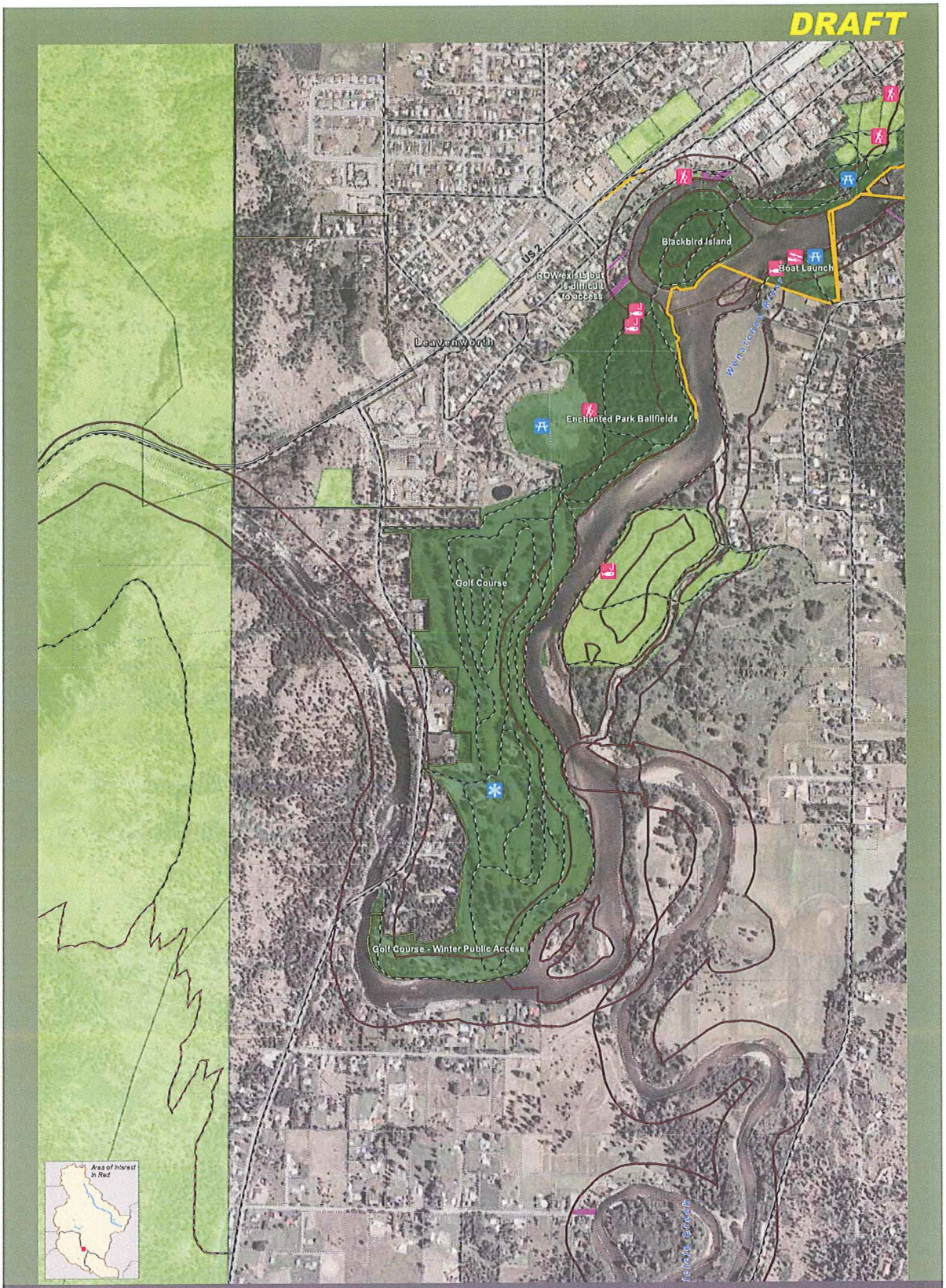

Public Access
Leavenworth 01

Chelan County Shoreline Master Program

THE WATERSHED COMPANY

0 250 500
Feet
1 Inch = 800 feet

July 22, 2010
Data: WA DOE, WA OFM, TPL, TNC, Chelan County, WA State Parks, WNF

Public Access, Parks, and Other Public Lands

- Boat Launch
- Campground
- Comm. Dock/Marina
- Fishing Access
- Horse Camp
- Marina
- Other Boating Facility
- Picnic Area
- RV Camp
- Ski Area
- SnoPark
- Trailhead
- Visitor Info Site
- Winter Rec. Facility

WDFW Fishing Easements

- Fishing Easement
- Fishing Easement with Boatlaunch
- Parks
- Other Public and Protected Lands
- Potential ROW Access
- View Corridors
- Hiking Trails
- Proposed Trails
- Highways
- Railroads
- Parcels
- Jurisdiction
- City Boundaries
- UGA Boundaries

Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

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Public Access
Leavenworth 02

Chelan County Shoreline Master Program

THE WATERSHED COMPANY

0 250 500
Feet
1 Inch = 800 feet

July 22, 2010
Data: WA DOE, WA OFM, TPL, TNC, Chelan County, WA State Parks, WNF

Public Access, Parks, and Other Public Lands

- Boat Launch
- Campground
- Comm. Dock/Marina
- Fishing Access
- Horse Camp
- Marina
- Other Boating Facility
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- RV Camp
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- SnoPark
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WDFW Fishing Easements

- Fishing Easement
- Fishing Easement with Boatlaunch
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- Railroads
- Parcels
- Jurisdiction
- City Boundaries
- UGA Boundaries

Shoreline jurisdiction boundaries depicted on this map are approximate. They have not been formally delineated or surveyed and are intended for planning purposes only. Additional site-specific evaluation may be needed to confirm/verify information shown on this map.

Appendix G

Cumulative Impacts Analysis

CUMULATIVE IMPACTS ANALYSIS

Shorelines in the City of Leavenworth

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CUMULATIVE IMPACTS ANALYSIS

CITY OF LEAVENWORTH

1 INTRODUCTION

1.1 Shoreline Management Act Requirements

The Shoreline Management Act guidelines require local shoreline master programs to regulate new development to "achieve no net loss of ecological function." The guidelines (WAC 173-26-186(8)(d)) state that, "To ensure no net loss of ecological functions and protection of other shoreline functions and/or uses, master programs shall contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts."

The Guidelines further elaborate on the concept of net loss as follows:

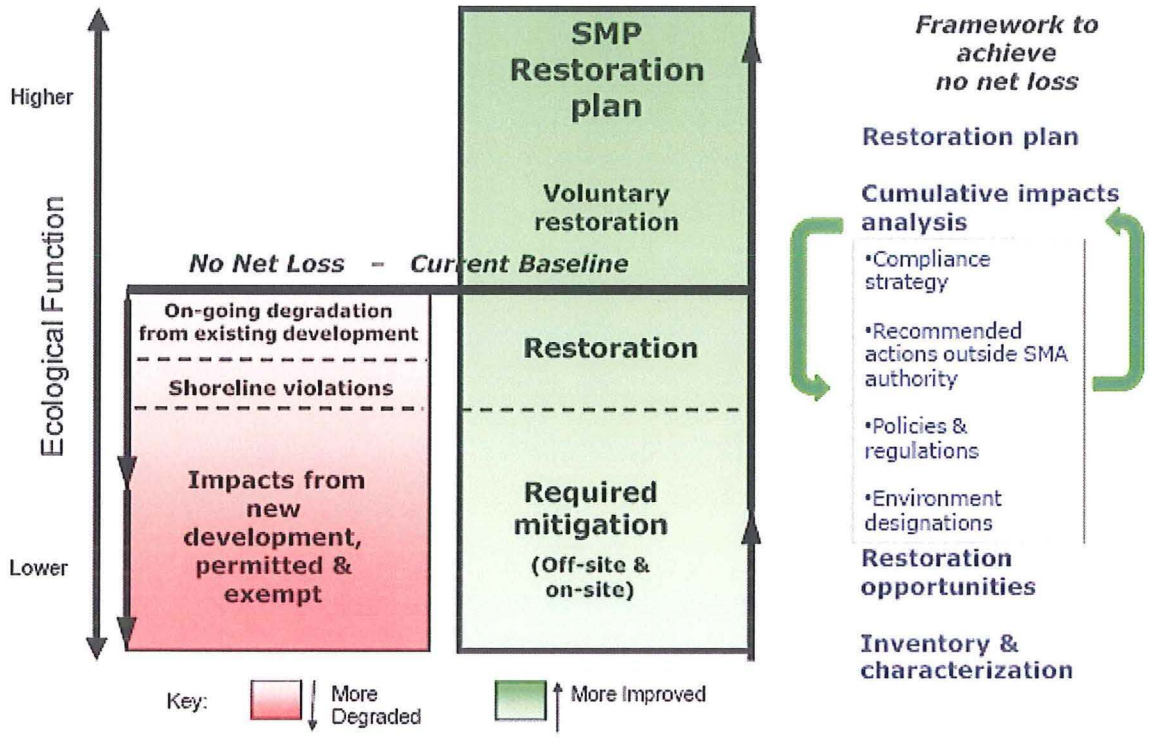
> *"When based on the inventory and analysis requirements and completed consistent with the specific provisions of these guidelines, the master program should ensure that development will be protective of ecological functions necessary to sustain existing shoreline natural resources and meet the standard. The concept of "net" as used herein, recognizes that any development has potential or actual, short-term or long-term impacts and that through application of appropriate development standards and employment of mitigation measures in accordance with the mitigation sequence, those impacts will be addressed in a manner necessary to assure that the end result will not diminish the shoreline resources and values as they currently exist. Where uses or development that impact ecological functions are necessary to achieve other objectives of RCW 90.58.020, master program provisions shall, to the greatest extent feasible, protect existing ecological functions and avoid new impacts to habitat and ecological functions before implementing other measures designed to achieve no net loss of ecological functions." [WAC 173-26-201(2)(c)]*

In short, updated SMPs shall contain goals, policies and regulations that prevent degradation of ecological functions relative to the existing conditions as documented in that jurisdiction's characterization and analysis report. For those projects that result in degradation of ecological functions, the required mitigation must return the resultant ecological function back to the baseline. This is illustrated in the figure below. The jurisdiction must be able to demonstrate that it has accomplished that goal through an analysis of cumulative impacts that might occur through implementation of the updated SMP. Evaluation of such cumulative impacts should consider:

(i) current circumstances affecting the shorelines and relevant natural processes [Chapter 2 below and Shoreline Analysis Report];

(ii) reasonably foreseeable future development and use of the shoreline [Chapter 3 below and Shoreline Analysis Report]; and

(iii) beneficial effects of any established regulatory programs under other local, state, and federal laws." [Chapter 5 below]



Source: Department of Ecology

As outlined in the *Shoreline Restoration Plan* prepared as part of this SMP update, the SMA also seeks to restore ecological functions in degraded shorelines. This cannot be required by the SMP at a project level, but Section 173-26-201(2)(f) of the Guidelines says: "master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions." See the Shoreline Restoration Plan for additional discussion of SMP policies and other programs and activities in Chelan County and the City of Leavenworth that contribute to the long-term restoration of ecological functions relative to the baseline condition.

1.2 Methodology

This cumulative impacts analysis was prepared consistent with direction provided in the Shoreline Master Program Guidelines as described above and using the information, both textual and graphic, developed and presented in the *Shoreline Analysis Report* as well as information developed to support SMP development. To the extent that existing information was sufficiently detailed and assumptions about possible new or re-development could be made with reasonable certainty, the following analysis is quantitative. However, in many cases information about existing conditions and/or redevelopment potential was not available at a level that could be assessed quantitatively or the analysis would be unnecessarily complex to reach a conclusion that could be derived more simply. Further, ecological function does not have an easy metric. For these reasons, much of the following analysis is more qualitative.

Analysis of cumulative impacts is generally limited to areas that fall within the proposed shoreline jurisdiction; however, because floodplains, channel migration zones, and rivers are closely interconnected and may not be captured within shoreline jurisdiction, the area outside of the immediate shoreline jurisdiction was considered in determining effects for areas with mapped channel migration zones and for Shorelines of Statewide Significance.

The Aquatic shoreline environment is not evaluated individually in this CIA. Most development activities do not occur below the ordinary high water mark (OHWM), more typically occurring in the adjacent upland shoreland environments. However, shoreline modifications below the OHWM, such as docks and bank armoring, usually occur in conjunction with adjacent upland development and were evaluated in this analysis.

To estimate potential changes in land use along the shoreline, a land capacity analysis was conducted projecting growth over a 20-year timeframe. The land capacity analysis estimates development that may occur in the future along shorelines given draft shoreline use environments and development standards. The method to determine shoreline land capacity is summarized below.

1. Determine shoreline use boundaries. The land capacity analysis includes all lands within shoreline jurisdiction, generally 200 feet upland of the ordinary high water mark, associated wetlands, the floodway, and up to 200 feet of floodway-contiguous floodplain where present. Additionally, in two cases parcels partially included in jurisdiction and extending beyond are included:
    - Channel migration zone areas, since rivers may move over time; and
    - Shorelines of Statewide Significance, due to the importance of these waterbodies and the ecosystem-wide processes emphasized in WAC 173-26-251.

2. Compile County and City land capacity analyses. Based on adopted Comprehensive Plans and County and City planner input, assumptions about vacant, partially used, and under-utilized properties have been compiled.
3. Determine land status. The analysis estimates developable acres by City, Urban Growth Area (UGA), and Watershed Inventory Analysis Area (WRIA). The developable acres are also sorted by waterbody, shoreline environment designation, and future land use/zoning category. Developable acres include: 1) vacant (no building value); 2) partially used (e.g. single-family properties containing one home, but the land can be further subdivided); or 3) under-utilized (land value exceeds building value on multifamily, commercial or industrial properties).
4. Deductions. Constraints such as critical areas, shoreline buffers, rights of way, and infrastructure are deducted from gross acres. Market factor reductions, which account for land that may not be available (e.g. owner does not wish to develop), are also included.
5. Densities or floor area ratios are applied to the net buildable acres to estimate total future dwellings or commercial/industrial square feet.
6. Public and mineral lands. Due to the different purposes for public lands/land trusts and mineral lands, typical assumptions regarding dwelling and commercial/industrial density were not applied. However, because these shoreline properties could be altered due to a variety of public purposes such as recreation, utilities, or resource extraction, acres estimates are provided for each WRIA and City/UGA, as appropriate.

Appendix A provides a detailed matrix of assumptions and maps illustrating the categories of land status, including the three buildable categories as well as public and land trust properties.

Based on the results of the quantitative analysis of anticipated development, a qualitative analysis was performed to determine how foreseeable growth patterns might result in impacts to shoreline functions. A qualitative evaluation of potential impacts associated with possible future development, including upland development, overwater structures, shoreline armoring, mining, and aquaculture, was conducted at a County-wide level. For each waterbody with anticipated development within shoreline jurisdiction, effects were evaluated in terms of hydrologic, shoreline vegetation, hyporheic, and habitat functions. A qualitative analysis was performed to determine how applicable regulations related to each of the impacts identified, and what, if any regulations should be added or expanded to create more protection.

2 SUMMARY OF EXISTING CONDITIONS

The Shoreline Analysis Report included an evaluation of existing conditions in Chelan County and the City of Leavenworth. The sources and limitations of the data are listed in Table 9 of the Shoreline Analysis Report. Several types of data, including geology, soils, vegetation, impervious surface coverage, provide a regional characterization of existing conditions, but are not appropriate for a local or parcel-based quantitative evaluation of existing conditions. Other data, including critical areas, may require a site-specific study to confirm the presence or absence of mapped features. Data gaps in the inventory data include aquifer recharge areas and shoreline stabilization. For a complete assessment of data limitations, assumptions, and data gaps, see Table 9 and Chapter 8 of the Shoreline Analysis Report. The Table 1 provides a summary of existing conditions by waterbody.

2.1 City of Leavenworth and UGA

Current land uses within the City and its UGA are dominated by open space, residential, government/utility, and commercial uses. Shoreline characteristics and functions vary within the City, and they are generally related to shoreline use. Shoreline vegetation along the golf course on the western side of the City is characterized by mown grass with scattered trees along the water's edge. In contrast, the City's parks offer significant forested areas along the river with low-intensity public access. Among areas of residential development, shoreline vegetation varies, but is generally less dense, with fewer trees compared to the City parks. The mouth of Chumstick Creek is well vegetated with trees and shrubs, but the vegetated buffer decreases just upstream of the mouth, where it runs adjacent to the Chelan County Public Works Facility.

Shorelines in the City of Leavenworth and its UGA contain 115 acres of priority habitats, consisting only of priority riparian zone concentrations. All of the City's shorelines contain priority fish species. According to the National Wetlands Inventory information, as much as 26% of the total shoreline area may be wetlands, although on site review would need to be completed to confirm existence and boundary. No information was available regarding presence of geologically hazardous areas in the City of Leavenworth shorelines.

A summary Table 1 provides further details on each waterbody's shoreline characteristics.

Table 1. Summary Table of Basic Characteristics of Each Shoreline Waterbody in the City of Leavenworth and its Urban Growth Area.

Jurisdictional Streams/Lakes	Area of Upland Shoreline Jurisdiction (acres)	Major Existing Land Uses[1]	Ownership Profile[2]	Critical Area/Priority Habitat or Species (PHS)[3] Presence	Presence of Impaired Waterbodies (303d list)? Yes/No Category 4 and 5 listed	Area (square feet) and Percent Coverage of Overwater Structures
Chumstick Creek	7.45	Government/Utility (48%), Single Family Residential (24%), No Category (17%), Undeveloped Land (10%), Agriculture (1%)	Private 52% Public (County, PUD) 48%	PHS riparian zone FEMA floodplain 1% wetland	No	0 sf
Wenatchee River	140.8	Open Space (46%), Single Family Residential (25%), No Category (9%), Government/Utility (8%), Commercial (4%), Other Residential (3%), Undeveloped Land (3%), Cultural/ Recreation/ Assembly (3%), Natural Resources (1%)	Private 59% Public (Municipal, PUD) 41%	PHS riparian zone Channel migration zone FEMA floodplain 28% wetland	Yes: 5-Temperature	1.325 sf, <1%

[1] Major existing land use is reported by acres located in the shoreline jurisdiction rather than full parcels. "Government/Utility" includes governmental services, utilities, and other transportation and communication utilities.
[2] Acres of shoreline owned by public or private entities. Public includes municipal, County, PUD, State, and federal lands.
[3] PHS = Priority habitat or species as identified by WDFW

3 ANTICIPATED DEVELOPMENT

Table 2 below provides a summary of the likely development potential within the proposed environment designations for each shoreline waterbody within the City and Urban Growth Area. As explained in Section 1.2, the land capacity analysis includes all lands within shoreline jurisdiction, generally 200 feet upland of the ordinary high water mark, associated wetlands, the floodway, and up to 200 feet of floodway-contiguous floodplain where present. Additionally, in two cases parcels partially located in jurisdiction and extending beyond are included:

- Channel migration zone areas, since rivers may move over time; and
- Shorelines of Statewide Significance, due to the importance of these waterbodies and the ecosystem-wide processes emphasized in WAC 173-26-251.

For this reason, most of the cells in Tables 2 and 3 contain two numbers. The first number represents acreage, square feet or units in the "study area," which includes the shoreline jurisdiction as well as the remainder of any parcels that extend outside of jurisdiction if they are located in CMZs or are on Shorelines of Statewide Significance. The second number (in parentheses) represents just the acreage, square feet or units in shoreline jurisdiction. In many cases, the numbers are identical where a waterbody is not a Shoreline of Statewide Significance and does not contain CMZs that extend outside` of shoreline jurisdiction.

It is important to note that this analysis is intended to give an overall picture of the potential for development along shorelines, but is not an exact predictor of which parcels may develop or redevelop. In addition, the analysis does not provide a "rate" of development.

3.1 City of Leavenworth

Within the City of Leavenworth shoreline study area, relatively little development is projected due to the limited available acres for development and the much greater extent of publicly owned shoreline recreation areas. Most of the growth is along the Wenatchee River.

The total development potential is:

- Single Family Dwellings: 4 total, 3 net, when excluding an existing dwelling (2 new dwellings in shoreline jurisdiction)
- Commercial Square Feet: 55,155 square feet (28,494 in shoreline jurisdiction)
- Industrial Square Feet: 1,883 (all in shoreline jurisdiction)
- Public Use Acres: 156.27 (152.44 in shoreline jurisdiction)

There is some small amount of industrial use in the Shoreline Residential designation due to underlying Light Industrial zoning. Similarly, the Urban Park designation is applied primarily to Recreation Public zoned property, but there is some underlying commercial zoning.

Table 2. Potential for Future Development in the City of Leavenworth.

Environment Designation / Waterbody	Acres in Total Shoreline Jurisdiction	Acres Outside of Buffers in Study Area (Jurisdiction)	Net Acres- Vacant in Study Area (Jurisdiction)	Net Acres- Partially Used/ Underused in Study Area (Jurisdiction)	Single Family Units in Study Area (Jurisdiction)	Multi-Family Units in Study Area (Jurisdiction)	Commercial Sq Ft in Study Area (Jurisdiction)	Industrial Sq Ft in Study Area (Jurisdiction)	Net Public Use Acres in Study Area (Jurisdiction)
High Intensity									
Chumstick Creek	0.01	0.01 (0.01)	0	0.005 (0.005)	0	0	0	85 (85)	0
Wenatchee River	8.55	12.60 (7.69)	1.36 (0.89)	2.72 (1.64)	2 (1)	0	42,165 (26,964)	0	3.82 (0)
Shoreline Residential									
Chumstick Creek	0.63	0.55 (0.55)	0.23 (0.23)	0.10 (0.10)	1 (1)	0	0	1,798 (1,798)	0
Wenatchee River	7.55	6.72 (6.08)	0.19 (0.01)	0	1 (0)	0	0	0	6.4 (6.4)
Urban Park									
Wenatchee River	70.14	148.11 (63.22)	1.19 (1.05)	0	0	0	12,990 (1,530)	0	146.05 (146.05)

3.1.1 Leavenworth UGA

The Leavenworth UGA is projected to have relatively little development, as much of it is already in use. As with the City limits, most of the potential growth is along the Wenatchee River. Commercial growth is the most prevalent projected use.

The total development potential is:

- Single Family Dwellings: 4 dwellings all in shoreline jurisdiction

- Commercial Square Feet: 179,279 (87,212 in shoreline jurisdiction); some of this could occur on the KOA campground which is zoned for commercial uses
- Industrial Square Feet: 26,140 (all in shoreline jurisdiction)
- Public Use Acres: 1.58 (all in shoreline jurisdiction)

Shoreline Residential is applied to the Light Industrial zone and should be reviewed to ensure compatibility.

Table 3. Potential for Future Development in the Leavenworth UGA.

Environment Designation / Waterbody	Acres in Total Shoreline Jurisdiction	Acres Outside of Buffers in Study Area (Jurisdiction)	Net Acres- Vacant in Study Area (Jurisdiction)	Net Acres- Partially Used/ Underused in Study Area (Jurisdiction)	Single Family Units in Study Area (Jurisdiction)	Multi-Family Units in Study Area (Jurisdiction)	Commercial Sq Ft in Study Area (Jurisdiction)	Industrial Sq Ft in Study Area (Jurisdiction)	Net Public Use Acres in Study Area (Jurisdiction)
High Intensity									
Chumstick Creek	4.29	3.87 (3.87)	0.30 (0.30)	1.48 (1.48)	0	0	0	25,807 (25,807)	1.58 (1.58)
Wenatchee River	0.21	0.18 (0.15)	0.12 (0.10)	0	1 (1)	0	0	0	0
Shoreline Residential									
Chumstick Creek	0.10	0.03 (0.03)	0	0.02 (0.02)	0	0	0	334 (334)	0
Wenatchee River	1.32	1.4 (1.12)	0.95 (0.93)	0.81 (0.81)	3 (3)	0	0	0	0
Urban Park									
Wenatchee River	19.24	25.48 (16.98)	0	16.46 (7.76)	0	0	179,279 (87,212)	0	0

4 PROPOSED SMP PROVISIONS

In its Shoreline Master Program Handbook, Ecology identified the following components of SMP provisions as potential means to help achieve no net loss of ecological functions.

- **Establish appropriate shoreline environment designations**. The environment designations must reflect the inventory and characterization. A shoreline landscape that is relatively unaltered should be designated Natural and protected from any use that would degrade the natural character of the shoreline.

- **Prohibit uses** that are not water-dependent or preferred shoreline uses. For example, office and multi-family housing buildings are not water-dependent or preferred uses.

- **Require that all future shoreline development**, including water-dependent and preferred uses, is carried out in a manner that limits further degradation of the shoreline environment.

- **Require buffers and setbacks.** Vegetated buffers and building setbacks from those buffers reduce the impacts of development on the shoreline environment.

- **Establish strong policies and regulations.** Policies and regulations will define what type of development can occur in each shoreline environment designation, determine the level of review required through the type of shoreline permit, and set up mitigation measures and restoration requirements.

- **In all cases, require mitigation sequencing**. The SMP must include regulations that require developers to follow mitigation sequencing: avoid impacts, minimize impacts, rectify impacts, reduce impacts over time, compensate for impacts, monitor impacts and take corrective measures.

The proposed SMP provisions described below implement the above guidance to the extent consistent with each community's local Comprehensive Plan and vision, facilitating the County and City's achievement of the no net loss standard.

4.1 Environment Designations

The first line of protection of the County and City's shorelines is the environment designation assignments. Chapters 3 through 5 and Appendix B of the SMP

identifies the prohibited and allowed uses and modifications in each of the shoreline environments for each local jurisdiction.

Each table clearly shows a hierarchy of higher-impacting uses and modifications being allowed in the already highly altered shoreline environments, with uses more limited in the less developed areas either through prohibition or a requirement for a Conditional Use Permit. This strategy helps to minimize cumulative impacts by concentrating development activity in lower functioning areas that are not likely to experience significant function degradation with incremental increases in new development.

4.1.1 City of Leavenworth

The City of Leavenworth's environment designations include Aquatic, Urban Park, Shoreline Residential, and High Intensity (Figure 1). The Urban Park designation applies to the majority of the City's shoreline jurisdiction, which includes the existing golf course and the City's Waterfront Park. The High Intensity environment applies to the City's downtown area and the area where Highway 2 crosses the Wenatchee River. Figure 2 shows how shoreline functions are distributed among the different shoreline environments. All of the high-functioning shorelines occur in the Urban Park environment. On the other hand, low-functioning shorelines only occur in the Shoreline Residential and High Intensity environments.

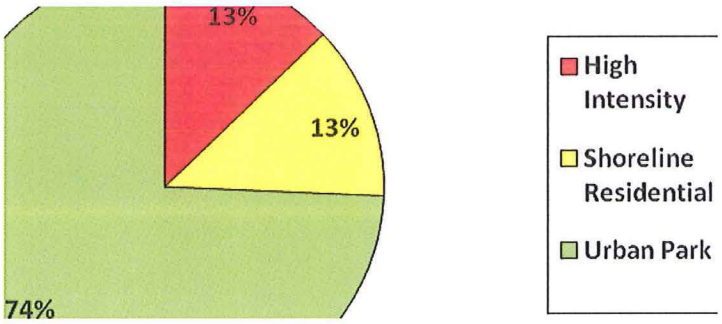


Figure 1. Distribution of Shoreline Environment Designations in the City of Leavenworth

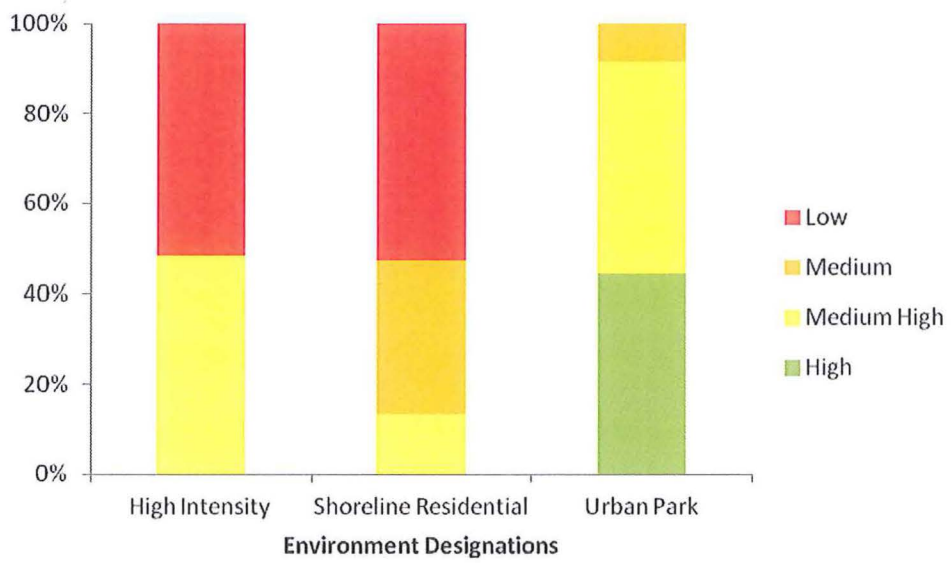


Figure 2. Distribution of Shoreline Functional Scores among Environment Designations in the City of Leavenworth

Leavenworth UGA

The majority of lands in the Leavenworth UGA are designated as Shoreline Residential environment (Figure 4). A small area of Urban Park environment occurs at the far western edge of the City's UGA. The High Intensity designation occurs along Chumstick Creek, to the west of the Highway 2 bridge, and on the far southeastern edge of the UGA. Figure 5 shows how shoreline functions are distributed among the different shoreline environments. Low and Medium functions predominate in the High Intensity environment. Functions progressively increase in the Shoreline Residential and Shoreline Park environments.

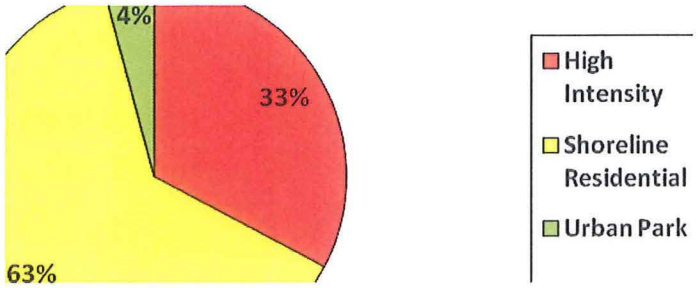


Figure 3. Distribution of Shoreline Environment Designations for Unincorporated Areas in the City of Leavenworth's UGA

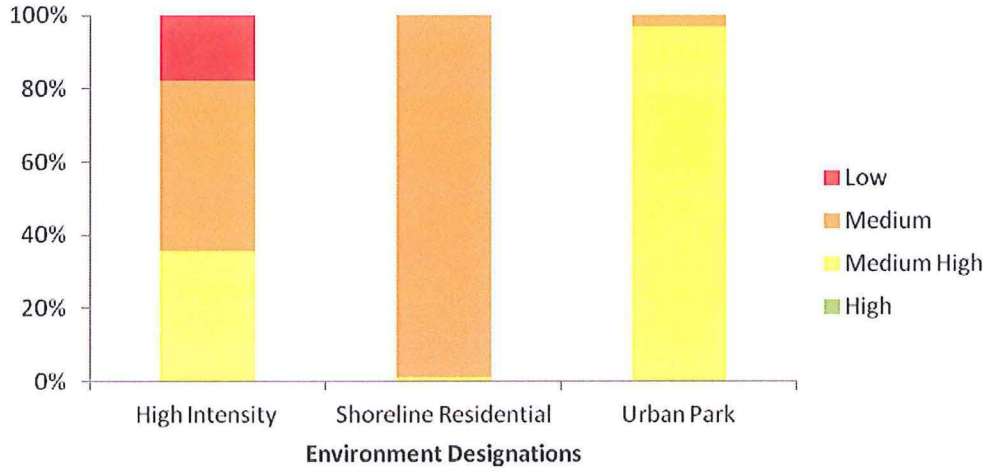


Figure 4. Distribution of Shoreline Functional Scores among Environment Designations in Unincorporated Areas of City of Leavenworth's UGA

4.2 General Policies and Regulations

The SMP contains numerous general policies, with supporting regulations (see SMP Chapters 3, 4 and 5), intended to protect the ecological functions of the shoreline and prevent adverse cumulative impacts. The General Policies and Regulations chapters apply to all activities, uses and modifications. These regulations are summarized below in Table 4, including an indication of which function or functions the regulation helps to protect.

Table 4. Summary of Key SMP General Regulations that Protect Ecological Functions. [this table will need to be updated by each jurisdiction following development and any further revisions of the integrated SMP]

Shoreline Ecological Functions[1]				
Hydrologic	Water Quality	Shoreline Vegetation	Habitat	SMP Regulations Providing Protection for Ecological Functions
X	X	X	X	4.2.2.A (5.8.2.D, 5.9.2.A) Mitigation sequencing is required
X	X	X	X	4.2.2.D Mitigation is required for all projects that have adverse impacts on shoreline ecological functions
X	X	X	X	4.2.2.I Local jurisdictions are responsible for weighing cumulative effects of all uses and development, including exempt development. Local jurisdictions shall prohibit projects that result in unmitigated, adverse cumulative impacts.
X				4.3.2.D Specific uses permitted in the floodplain and channel migration zone include: 1. Actions that protect or restore the ecological processes or functions; 2. Forest practices; 3. Existing and ongoing agricultural practices; 4. Mining consistent with Section 5.13 and shoreline environment designation; 5. Public utility and transportation structures where no other feasible alternative exists; 6. Repair, maintenance, modifications, or additions to an existing use, provided that channel migration is not further limited, or flood hazards increased, and that new development includes protection of ecological functions. 7. Development in cities and UGAs where existing structures prevent active channel movement and flooding. 8. Measures to reduce excessive shoreline erosion that are accompanied by mitigation of impacts.
		X	X	4.5.2.C.1 A mitigation plan must be prepared when adverse impacts to shoreline vegetative functions are proposed.
X	X	X	X	4.5.2.D Filling, clearing and grading shall be minimized, and BMPs shall be implemented to minimize and control erosion.
		X	X	4.5.2.E Tree removal other than hazard tree removal shall be mitigated at a 1:1 ratio.
		X	X	4.5.2.F One view corridor, limited to 25 percent of the width of the lot frontage, or 25 feet, whichever distance is less, may be permitted per lot with the submittal of a restoration plan. Whenever possible, view corridors shall be located in areas dominated with non-native vegetation and invasive species.
X	X			4.6.2.A Shoreline use and development shall incorporate measures to protect and maintain surface and groundwater quantity and quality in accordance with all applicable laws. (WAC 173-26-221(6)(b)(i))
X	X			4.6.2.B New development shall provide stormwater management facilities and implement low impact development in accordance with the current Stormwater Management Manual for Eastern Washington (WAC 173-26-221(6)(b)(ii)).
X	X			4.6.2.D Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all development in shoreline jurisdiction through an approved temporary erosion and sediment control (TESC) plan.
X	X			4.6.2.E On-site sewage systems shall be located and designed to meet all applicable water quality, utility, and health standards (WAC 173-26-221(6)(b)(ii)).
X	X			4.6.2.F All materials that may come in contact with water shall be constructed of materials, such as untreated or approved treated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals.
County- and City-specific regulations are located in Appendix B of the SMP				

[1] Only primary effects of ecological functions are identified. Many actions may have indirect effects on each ecological function category.

4.3 Shoreline Uses and Modifications

The SMP contains numerous shoreline modification and use policies and supporting regulations (see SMP Chapter 3 and Chapter 5) intended to protect the ecological functions of the shoreline and prevent adverse cumulative impacts. Key shoreline use and modification regulations that help protect ecological functions are summarized below in Table 24, including an indication of which function or functions the regulations helps to protect.

Table 5. Summary of Key SMP Shoreline Use and Modification Regulations that Protect Ecological Functions. [this table will need to be updated by each jurisdiction following development and any further revisions of the integrated SMP]

Shoreline Ecological Functions[1]				Specific Shoreline Use or Modification	Potential Direct and Indirect Impacts to Shoreline Function	SMP Regulations Providing Protection for Ecological Functions	Related Watershed Restoration Efforts Underway or Planned (See Section 4.5)
Hydrologic	Water Quality	Shoreline Vegetation	Habitat				
X	X	X	X	All	See below	5.3.2.C; 5.6.2.A; 5.10.2.A.2; 5.11.2.D; 5.13.2.C; 5.15.2.H; 5.16.2.A.4; 5.17.2.D; 5.18.2.A; 5.19.2.B; 5.20.2.H No net loss of ecological function	Refer to section 4.5
	X	X		Agriculture	Pesticide/ fertilizer runoff; Nutrient enrichment; Fecal coliform contamination; Riparian vegetation clearing; Erosion of fine sediment	5.3.2.D.2 Feedlots not qualifying as existing agriculture are to be located outside of shoreline buffers, vegetation conservation areas, and 100-year floodplains; to be a minimum of 4 feet between ground surface and water table surface; and to meet BMPs.	• Upper Columbia Salmon Recovery Plan- Irrigation practice improvements; address irrigation withdrawals; Habitat Farming Enterprise Program; host workshops on pesticide use in Entiat watershed • Wenatchee TMDL- point and nonpoint source reductions; incentives for riparian restoration • NRCS- Technical assistance and funding to farmers • Lake Chelan Subbasin Plan- programs to improve livestock grazing practices
X		X	X	Aquaculture	Hydrologic alterations; Diversion of streamflow; Nutrient enrichment; Potential competition with native populations Potential for fisheries enhancement from conservation hatcheries managed to enhance native salmonid populations	5.4.2.A.3 Aquaculture sites shall be selected to avoid and minimize the need for and degree of floodplain or floodway alteration, channel migration zone alteration, shoreline stabilization, native vegetation removal, and/or wetland alteration. Non-commercial aquaculture operations may be required to submit a site alternatives analysis.	• Upper Columbia Salmon Recovery Plan - Conservation hatcheries
			X			5.4.2.B Aquaculture that involves substantial aquatic substrate modification or sedimentation through dredging, trenching, digging, or other similar mechanisms, shall not be permitted in areas where the proposal would have long-term adverse impacts on important fish or wildlife habitats.	
			X			5.4.2.E No introduced species without approval state approval.	
	X		X			5.4.2.J If uncertainty exists regarding potential impacts of a proposed aquaculture activity, and for all experimental aquaculture activities, baseline and periodic operational monitoring by a qualified professional may be required, at the applicant's expense, and shall continue until adequate information is available to determine the success of the project and/or the magnitude of any probable significant adverse environmental impacts.	
		X	X	Boating Facilities	Alteration of submerged aquatic vegetation,	5.5.2.A.1 New boating facilities are not allowed over areas of aquatic or emergent vegetation unless not other options are available or the facility would result in a net improvement of shoreline ecological functions.	• Upper Columbia Salmon

Shoreline Ecological Functions[1]				Specific Shoreline Use or Modification	Potential Direct and Indirect Impacts to Shoreline Function	SMP Regulations Providing Protection for Ecological Functions	Related Watershed Restoration Efforts Underway or Planned (See Section 4.5)
Hydrologic	Water Quality	Shoreline Vegetation	Habitat				
X			X		nearshore habitat, predator /prey relationships, and benthic community assemblages; Reduction in shoreline vegetative functions; Alteration of hydrologic processes; Alteration of sediment transport processes; Water quality impacts from facility construction, boat use and maintenance	5.5.2.A.2 New boating facilities are not allowed in the channel migration zone, in areas that would require dredging, where a flood hazard will be created, or where impacts to shoreline ecological functions and processes cannot be mitigated. Expansions of existing boating facilities should be designed to minimize the need for new or maintenance dredging.	Recovery Plan- Reduce negative species interactions in Columbia River (focused on predator control) • Lake Chelan Subbasin Plan- Eliminate or reduce exogenous species in Lake Chelan by 2015 through fisheries management practices
	X		X			5.5.2.A.3 Moorage at new or expanded boating facilities must be located at depths to prevent prop scour.	
X						5.5.2.A.4 Boating facilities to be located and designed to avoid the need for shoreline stabilization. If stabilization is necessary, only the minimum needed is permitted.	
X	X	X	X			5.5.2.B.1 Impacts of boating facilities are to be avoided, minimized, and mitigated, following mitigation sequencing.	
X			X			5.5.2.B.3 Dimensional standards for boating facilities are established to minimize effects on ecological function. Standards minimize the width of piers, establish acceptable moorage depth, establish decking standards (Columbia River and Lake Wenatchee only), and limit the number of slips that may be created per associated dwelling unit.	
X						5.5.2.B.4 Launch ramps must be designed to minimize effects on hydrologic and sediment transport processes.	
		X	X			5.5.2.C.3 Covered moorage, including watercraft lift canopies, is prohibited.	
	X					5.5.2.C.6 Pump out facilities are required at new marinas.	
	X					5.5.2.E.1 and 2 Discharge of solid waste (including fish waste) or sewage into a waterbody is prohibited. Boating facilities are to provide garbage or litter receptacles. Marinas must provide restroom and sewage disposal facilities (pump out, holding, and/or treatment facilities).	
	X					5.5.2.E.4 New, expanded, and reconfigured marinas are required to provide fail-safe facilities and procedures for receiving, storing, dispensing, and disposing of oil or hazardous products, as well as a spill response plan for oil and other products.	
X		X	X			5.5.2.F .1 and 2 Applicants for new or expanded boating facilities must provide habitat surveys, critical area studies, and mitigation plans and an assessment of demand.	
X			X			5.5.2.F.4 New boat launch facilities are allowed only if existing facilities do not meet public demand	
X				Breakwaters, jetties, groins, weirs, and barbs	Disruption of hydrologic and sediment processes; In-water habitat alteration	5.6.2.C Groins are prohibited except as a component of a professionally designed community or public beach management program that encompasses an entire reach for which alternatives are infeasible, or where installed to protect or restore shoreline ecological functions or processes	• Upper Columbia Salmon Recovery Plan: Channel reconfiguration through installation of weirs, barbs, and boulders to increase habitat diversity in lower Entiat River; design gravel recruitment structures in Mad River
X						5.6.2.E The size of breakwaters, jetties, groins weirs and barbs shall be limited to the minimum necessary	
X						5.6.2.F Jetties and breakwaters are prohibited except as an integral component of a professionally designed marina. Where permitted, floating, portable or submerged breakwater structures, or smaller discontinuous structures, are preferred where physical conditions make such alternatives with less impact feasible.	
X	X		X	Dredging	Disruption of sediment, hydrologic, and floodplain processes; Water quality impairments- turbidity and heavy metals; Floodplain habitat disturbance; Disturbance of benthic substrate/ organisms; Disturbance of nearshore habitat	5.8.2.A New development shall be sited and designed to avoid and minimize the need for dredging.	• Wenatchee River Channel Migration Zone Study- 24 sites identified for preservation, enhancement, and restoration of off-channel habitats and riparian vegetation. • Entiat Tributary Assessment- Identified opportunities to restore channel and floodplain complexity in the lower 26 miles of the Entiat River
X	X		X			5.8.2.B Dredging is under specific circumstances when other alternatives are not feasible.	
X	X		X			5.8.2.F Disposal of dredge material is only allowed when ecological functions will be maintained or enhanced and when erosion, sedimentation, floodwaters and runoff will not increase shoreline impacts.	
X	X		X			5.8.2.G Disposal of dredged material within the channel migration zone is discouraged and requires a conditional use permit.	
X	X		X			5.8.2.I Dredge material disposal in open waters may only occur under the following conditions: 1. Offshore habitat will be protected, restored, or enhanced; 2. Adverse effects on water quality or biologic resources from contaminated materials will be mitigated; 3. Shifting and dispersal of dredge material will be minimal; and 4. Water quality will not be adversely affected.	
X	X		X			5.2.8.J A detailed analysis of purpose, existing conditions, potential impacts, proposed dredging methods, frequency, and duration, quantity of dredge material, and plans for disposal and maintenance dredging is required to apply for a conditional use permit.	

Shoreline Ecological Functions[1]				Specific Shoreline Use or Modification	Potential Direct and Indirect Impacts to Shoreline Function	SMP Regulations Providing Protection for Ecological Functions	Related Watershed Restoration Efforts Underway or Planned (See Section 4.5)
Hydrologic	Water Quality	Shoreline Vegetation	Habitat				
X		X	X	Fill and excavation	Disruption of sediment, hydrologic, and floodplain processes; Water quality impairments- turbidity and heavy metals; Floodplain habitat disturbance; Disturbance of benthic substrate/ organisms	5.9.2.B Fill and excavation within wetlands, floodways, channel migration zones, or waterward of the OHWM are only permitted under the following conditions: 1. Water-dependent uses, public access, and cleanup and disposal of contaminated sediments; 2. Disposal of dredged material conducted in accordance with the Dredged Material Management Program of WA DNR and/or the Dredged Material Management Office of the Corps; 3. Expansion or alteration of transportation facilities of statewide significance where alternatives to fill are infeasible; or 4. Ecological restoration or enhancement. Except for an ecological restoration project, fills waterward of the OHWM require a conditional use permit.	• Upper Columbia Salmon Recovery Plan – Outreach on functions of wetlands; Update NWI based on known wetlands • Wenatchee River Channel Migration Zone Study- 24 sites identified for preservation, enhancement, and restoration of off-channel habitats and riparian vegetation. • Entiat Tributary Assessment- Identified opportunities to restore channel and floodplain complexity in the lower 26 miles of the Entiat River
X						5.9.2.C Fills or excavation not to be located where shoreline stabilization will be necessary to protect materials placed or removed.	
	X					5.9.2.F All fill and excavation proposals require temporary erosion and sediment control (TESC) plan, including BMPs.	
X	X	X	X	Forestry practices	Reduced infiltration; Increased peak flows; Erosion; Increased impacts of rain-on-snow events; Reduced habitat complexity	5.10.2.A Limit conversion of forest lands to the minimum necessary.	• Lake Chelan Subbasin Plan- programs to improve silviculture practices
X	X	X	X			5.10.2.B Comply with State Forest Practices Act.	
	X	X	X			5.10.2.C Along shorelines of statewide significance, only selective commercial timber cutting of no more than 30% of the merchantable timber may be harvested in any 10-year period.	
X	X	X	X			5.10.2.D Timber harvest prohibited in the Natural environment except under the following conditions: 1. Preserve a pre-climatic state of a plant succession; 2. Prevent an epidemic of insects or disease infestations; or 3. Clean up and restore an area devastated by disaster.	
	X			Industrial Uses	Water contamination; Reduced vegetative functions	5.11.2.B Nonwater-oriented industrial uses are allowed only if the site is physically separated from the shoreline by another property or public right-of-way prior to adoption of this SMP. On properties fronting the shoreline, new nonwater-oriented industrial development is prohibited, unless it provides a significant public benefit and it is part of a mixed-use project that includes water-dependent uses or navigability is severely limited at the proposed site.	• Wenatchee TMDL- point and nonpoint source reductions; incentives for riparian restoration
	X					5.11.2.C Accessory nonwater-dependent industrial development must be upland of the water-dependent or water-related portions of the development and comply with shoreline environment buffers for nonwater-oriented uses.	
	X		X			5.11.2.F Industrial development and redevelopment are encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated. Federal and state requirements for hazardous materials clean up or management shall be addressed.	
X				In-water Work and In-water Structures	Alteration of hydrologic processes; Alteration of sediment transport processes; Alteration of instream habitats; Erosion	5.2.2.A In-water structures and activities will be sited and designed to avoid the need for future shoreline stabilization activities and dredging. Modifications and uses located in the Aquatic environment shall be the minimum size necessary.	• Upper Columbia Salmon Recovery Plan – Replace fish screens for irrigation structures; install large woody debris to improve habitat diversity in the lower Entiat River
X		X	X			5.2.2.L Alteration or disturbance of the bank and bank vegetation will be limited to the minimum necessary.	
X			X			5.12.2.A Channelization projects that degrade shoreline functions are prohibited.	
	X	X				5.12.2.B Filled areas resulting from installation of in-water structures must be stabilized with bioengineering approaches.	
	X					5.12.2.C In-water structures must be constructed and maintained in a manner that does not degrade water quality.	
X			X			5.2.2.P and 5.12.2.E Natural in water features such as snags, uprooted trees, or stumps shall be left in place unless it can be demonstrated that they are actually causing bank erosion or higher flood stages or pose a hazard to navigation or human safety.	
			X	Mining	Disruption of sediment, hydrologic, and floodplain processes;	5.13.2.A.1 Only allowed in designated fish and wildlife habitat areas when it is part of an approved flood control program or in conjunction with a habitat restoration or enhancement plan.	• Upper Columbia Salmon Recovery Plan- habitat
X	X		X			5.13.2.A.2 Only allowed when the material proposed to be extracted is only available in a shoreline location.	

Shoreline Ecological Functions[1]				Specific Shoreline Use or Modification	Potential Direct and Indirect Impacts to Shoreline Function	SMP Regulations Providing Protection for Ecological Functions	Related Watershed Restoration Efforts Underway or Planned (See Section 4.5)
Hydrologic	Water Quality	Shoreline Vegetation	Habitat				
X	X		X		Water quality impairments- turbidity and heavy metals; Floodplain habitat disturbance; Disturbance of benthic substrate/ organisms	5.13.2.A.3 Mining location to be consistent with the applicable SMP environment designation and local government designation of mineral resource lands.	acquisitions and conservation easements, projects to improve off-channel habitat (levee removal, side channel reconnection, and floodplain restoration) • Holden Mine Cleanup Plan (USFS 2010): Actions to cleanup mine tailings in Railroad Creek
						5.13.2.B Requirement to submit operation plans, reclamation plans and analysis of environmental impacts	
X	X		X			5.13.2.F Mining in CMZ, floodplain, and waterward of OHWM must demonstrate: 1) removal of specified quantities of gravel will not adversely affect gravel transport processes, 2)no significant impacts to priority species, and 3) actions will not divert flood flows or increase flooding impacts on-site or in surrounding area.	
X	X		X			5.13.2.G Applications for renewal, extension or reauthorization of mining operations waterward of the OHWM must meet 5.13.2.F, above.	
X			X			5.13.2.J All rocks, cobbles, and boulders moved during in-water gold-mining activities shall be returned to their original positions.	
	X					5.13.2.K The use of mercury or other hazardous substances is strictly prohibited.	
X		X	X	Private moorage facilities	Alteration of submerged aquatic vegetation, nearshore habitat, predator /prey relationships, and benthic community assemblages; Reduction in shoreline vegetative functions; Alteration of hydrologic processes; Alteration of sediment transport processes; Water quality impacts from boat use and maintenance	5.14.2.A Overwater structures must be located to avoid impacting shoreline functions and processes. Covered docks and structures are prohibited waterward of OHWM.	• Upper Columbia Salmon Recovery Plan- Reduce negative species interactions in Columbia River (focused on predator control) • Lake Chelan Subbasin Plan- Eliminate or reduce exogenous species in Lake Chelan by 2015 through fisheries management practices
X		X	X			5.14.2.B.1 New development of two or more dwelling units is only allowed joint use dock facilities.	
			X			5.14.2.B.3 Lighting to be designed to minimize glare.	
			X			5.14.2.B.5 No skirting is allowed on any structure.	
X			X			5.14.2.C.1 and 5.14.2.C.3 Dimensional standards minimize the width and area of piers and ramps.	
			X			5.14.2.C.2 Floats must be at least 20 feet waterward of OHWM on the Columbia River and limit the length of a float to 20 feet in all waters.	
			X			5.14.2.C.4 Minimum height of piers is 2 feet above OHWM.	
	X					5.14.2.C.5 Establishes standards for piling material (no pentachlorophenol, creosote, copper naphthalene, chromate copper arsenate, or comparably toxic compounds) on all waterbodies, and for piling diameter, spacing of pilings, and total number of pilings on the Columbia River.	
			X			5.14.2.C.6 No new structure may be installed within 100 feet of the outlet of any river or stream.	
			X			5.14.2.C.7 Grating or clear translucent material is required for decking on the Columbia River and Other Waterbodies. Float materials contacting the water must be white in color or transparent on the Columbia River and Other Waterbodies. On Lake Chelan, decking may be grating or wood. If decking is wood, a minimum ½ inch space must be left between deck planks.	
			X			5.14.2.E Mooring buoys must be located to avoid impacts to nearshore and vegetated shallows.	
			X			5.14.2.F Standards to limit the size, anchoring impacts, and proximity to nearshore habitats.	
		X	X			5.14.2.G Mitigation standards for new or expanded overwater structures.	
			X			5.14.2.H Replacement docks must meet the dimensional, materials and mitigation standards for new private docks, unless the shoreline administrator approves an alternative plan that meets the following criteria: 1. All appropriate State and Federal agencies have approved the proposal; 2. The total square footage of the replacement structure is no larger than the existing dock; 3. The maximum width for the portion of the dock located within 30 feet of OHWM meets the standards for new docks under C.1; 4. Replacement piles meet the spacing and material specifications under C.5; and 5. Decking and deck materials meet the specifications under C.7.	
			X			5.14.2.I Additions to private docks must demonstrate a need for enhanced safety or water depth. New portions of docks must comply with new dock standards.	
			X			5.14.2.K Dock repairs must use the same materials specified for new docks (decking and pilings)	

Shoreline Ecological Functions[1]				Specific Shoreline Use or Modification	Potential Direct and Indirect Impacts to Shoreline Function	SMP Regulations Providing Protection for Ecological Functions	Related Watershed Restoration Efforts Underway or Planned (See Section 4.5)
Hydrologic	Water Quality	Shoreline Vegetation	Habitat				
	X			Recreational Uses	Water quality impacts from pesticides/ fertilizers and boat use and maintenance	5.15.2.E Best management practices must be employed to prevent chemical contamination from the use of pesticides and fertilizers for recreation uses.	• Upper Columbia Salmon Recovery Plan –Riparian habitat planting; host workshops on pesticide use in Entiat watershed • Wenatchee TMDL- point and nonpoint source reductions; incentives for riparian restoration
X			X	Residential Development	Reduced infiltration; Reduced shoreline vegetative functions; Water quality impacts from fertilizers/ pesticides/ household wastes; Impacts from accessory uses	5.16.2.A.3, 5.16.2.B.2 Design and location to eliminate the need for future stabilization and flood control measures	• Upper Columbia Salmon Recovery Plan – habitat acquisitions and conservation easements; host workshops on pesticide use and riparian vegetation benefits in Entiat watershed; landowner assistance in riparian planting • Wenatchee TMDL- point and nonpoint source reductions; incentives for riparian restoration
		X	X			5.16.2.A.5 Cluster development to avoid critical areas and to preserve natural features and minimize physical impacts.	
	X		X			5.16.2.D Over-water residences and floating homes are prohibited.	
	X					5.16.2.E Liveaboards are only permitted where best management practices for disposal of sewage and hazardous substances are employed.	
X			X	Shoreline Stabilization	Hydrologic and sediment transport alterations; Simplification of nearshore habitat; Reduction in shoreline vegetative functions	5.18.2.A, 5.18.2.E The SMP provisions establish a preference for soft structural shoreline stabilization over hard structural stabilization.	• Upper Columbia Salmon Recovery Plan – streambank protection through habitat acquisitions; conduct Nason watershed evaluation; projects to improve off-channel habitat (levee removal, side channel reconnection, and floodplain restoration) • Wenatchee River Channel Migration Zone Study- 24 sites identified for preservation, enhancement, and restoration of off-channel habitats and riparian vegetation. • Entiat Tributary Assessment- Identified opportunities to restore channel and floodplain complexity in the lower 26 miles of the Entiat River
X			X			5.18.2.B New and enlarged shoreline stabilization is not permitted unless a geotechnical analysis indicates that 1) it is needed to protect an existing structure from erosion, or 2) it is needed to protect a new development from erosion caused by wind and waves, and that non-structural approaches are not feasible. Shoreline stabilization is also allowed to protect ecological restoration projects or hazardous substance remediation.	
X			X			5.18.2.C If shoreline stabilization repairs are conducted waterward of the existing stabilization, they need to meet the provisions of a new stabilization measure.	
X			X			5.18.2.D Replacement of shoreline stabilization measures must meet the same standards as new stabilization measures, except that a geotechnical analysis is not required for replacement with an "softer" stabilization approach. Replacement of hard stabilization structures may not occur further waterward than the existing structure. Some fill waterward of the OHWM is permitted to provide enhancement of shoreline ecological functions.	
X		X	X			5.18.2.E Establishes standards for the minimization and mitigation of stabilization impacts. Mitigation measures include: improving substrate conditions waterward of the OHWM and planting native vegetation along the shoreline.	
X			X			5.18.2.F.3 Fill behind hard structural shoreline stabilization is limited to 1 cubic yard per linear foot.	

Shoreline Ecological Functions[1]				Specific Shoreline Use or Modification	Potential Direct and Indirect Impacts to Shoreline Function	SMP Regulations Providing Protection for Ecological Functions	Related Watershed Restoration Efforts Underway or Planned (See Section 4.5)
Hydrologic	Water Quality	Shoreline Vegetation	Habitat				
	X	X	X	Transportation and Parking	Water quality impacts (heavy metals and oils); Fish passage barriers; Reduced infiltration; Reduced vegetative functions	5.19.2.B.4 New roads and railroads must be setback from the OHWM as much as possible.	• Upper Columbia Salmon Recovery Plan – Culvert removals and upgrades, road reconstruction, removal, and drainage upgrades • WDFW Fish Passage Inventory for Colockum Creek, Stemilt Creek, and Squilchuck Creek- Assessment of fish passage barriers • Lake Chelan Subbasin Plan- programs to improve road management
X	X		X			5.19.2.D Shoreline crossings are to be designed to have the least ecological impacts.	
	X	X				5.19.2.I Parking facilities are prohibited unless parking outside of shoreline jurisdiction is not feasible to support the planned primary use.	
		X	X	Utilities	Reduced vegetative functions; Habitat disturbance	5.20.2 Provisions to minimize the ecological impact of utilities through location, design, and restoration of any disturbed areas.	• Upper Columbia Salmon Recovery Plan –Riparian habitat planting
County- and City-specific regulations Please see Appendix B of the SMP.							

[1] Only primary effects of ecological functions are identified. Many actions may have indirect effects on each ecological function category.

4.4 Critical Areas

The SMP contains policies and regulations governing critical areas found within shoreline jurisdiction (see SMP Appendix B) intended to protect the ecological functions of the shoreline and prevent adverse cumulative impacts. Buffer requirements included in these regulations are generally consistent with the jurisdictions' critical areas regulations that apply outside of shoreline jurisdiction. In the City-associated UGA, the County will apply the City's SMP regulations except that the County's critical areas regulations will be applied to any critical areas. These regulations are summarized for the County and City in Table 6.

Table 6. Summary of Shoreline Critical Area buffer requirements.

Jurisdiction	Wetland Rating System	Stream Classification System	Buffer Width (feet)		
City of Leavenworth	Ecology E. WA (2004) Ecology E. WA (As amended)	WA DNR (WAC 222-16-030)	**Wetlands**	**High Intensity**	**Low Intensity**
			Cat 1	300	200
			Cat 2	200	100
			Cat 3	150	75
			Cat 4	50	50
			Shoreline Streams/Lakes		
			Natural	250	200
			Conservancy	250	200
			Rural	150	100
			Urban	100	75
			Non-Shoreline Streams/Lakes		
			Type S	250	200
			Type F	200	150
			Type Np	150	100
			Type Ns	50	50

A summary of key regulations in each jurisdiction are described below.

4.4.1 City of Leavenworth

Standard wetland buffers in the City of Leavenworth range from 40-190 feet. The standard buffer widths for Category I and II wetlands may be increased by 15-75 feet depending on habitat scores of the wetlands. Standard buffer widths for Category III wetlands may be increased by 30-60 feet based on wetland habitat scores. In order for standard buffer widths to apply, specific measures to minimize impacts on wetlands must be implemented (SMP Appendix B, City of Leavenworth). These measures include actions to address lighting and noise impacts, stormwater runoff (water quality and quantity), and habitat corridors. If these measures are not implemented, the standard buffer width is increased by 33% (SMP Appendix B, City of Leavenworth). Buffer averaging to improve

buffer functions may be allowed, provided it meets several specific standards and that the narrowest point of the buffer is no less than 75% of the standard buffer width or 75 feet for Category I and II wetlands, 50 feet for Category III wetlands, or 25 feet for Category IV wetlands, whichever is greater (SMP Appendix B, City of Leavenworth). Stormwater management facilities may be allowed in the outer 25% of the buffer for Category III and IV wetlands (SMP Appendix B, City of Leavenworth).

At a minimum, development must mitigate any risks to the proposed development or to other existing or future development off the site that would be posed by flooding (SMP Appendix B, City of Leavenworth).

4.5 Shoreline Restoration Plan

As discussed above, one of the key objectives that the SMP must address is "no net loss of ecological shoreline functions necessary to sustain shoreline natural resources" (Ecology 2004). However, SMP updates seek not only to maintain conditions, but to improve them:

> *"...[shoreline master programs] include planning elements that when implemented, serve to improve the overall condition of habitat and resources within the shoreline area of each city and county (WAC 173-26-201(c))."*

The guidelines state that "master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions. These master program provisions should be designed to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the master program" (WAC 173-26-201(2)(f)). Pursuant to that direction, the County and City prepared a Shoreline Restoration Plan.

Practically, it is not always feasible for shoreline developments and redevelopments to achieve no net loss at the site scale, particularly for those developments on currently undeveloped properties or a new pier or bulkhead. The Restoration Plan, therefore, can be an important component in making up that difference in ecological function that may otherwise result just from implementation of the SMP. The Restoration Plan represents a long-term vision for restoration that will be implemented over time, resulting in incremental improvement over the existing conditions.

The Shoreline Restoration Plan identifies a number of project-specific opportunities for restoration on both public and private properties inside and outside of shoreline jurisdiction, and also identifies ongoing County and the City's programs and activities, non-governmental organization programs and

activities, and other recommended actions consistent with a variety of watershed-level efforts.

Major shoreline restoration opportunities for the County and the City that could contribute to achievement of no net loss of ecological functions or improvement in ecological functions are summarized below.

4.5.1 County

Washington Department of Ecology Total Maximum Daily Load (TMDL)

The U.S. Environmental Protection Agency (EPA) has approved a TMDL (the Wenatchee River Watershed Dissolved Oxygen and pH Total Maximum Daily Load Water Quality Improvement Plan (TMDL) (Ecology 2009). The TMDL identified three water bodies in the project area exceeding dissolved oxygen standards and six exceeding pH standards. The timeline for compliance with water quality standards is 10 years from TMDL approval, or 2019. Fifty specific activities and goals are identified in the TMDL. They include supporting and regional phosphorus reduction activities, addressing point and nonpoint source activities, facility planning and design, monitoring activities, and habitat improvements.

Timelines for the three phases of TMDL implementation are summarized in Table 7.

Table 7. TMDL implementation timeline

Phase/Target	Definition	Timeline
Phase 1	Point and nonpoint source reductions, data collection and model calibration	2009-2013
Target 1	50% nonpoint source loading reduction	2014
Phase 2	Modification of load and wasteload allocations (if needed); identification of additional nonpoint source reductions	2014-2015
Phase 3	Additional load reductions implemented	2015-2019
Target 2a	NPDES compliance	2019
Target 2b	Reduction in remaining nonpoint source loading	2019
Final Target	Water quality standards achieved	2019

Dissolved oxygen and pH data will be collected every five years to monitor progress toward the goals. Adaptive management will be employed to ensure that goals are achieved. Compliance monitoring will continue after compliance with water quality standards is achieved.

Funding sources include the CCD, which is a current recipient of a Centennial Clean Water Fund grant for TMDL activities; CCNRD, which provides incentive payments for implementation of riparian restoration activities; NRCS, which provides technical assistance to farmers and ranchers and may also be a funding

source; and a number of jurisdictions and entities, including Chelan County, the Chelan County PUD, and the City of Leavenworth have shown interest in investigating sources of nonpoint source phosphorus loading.

4.5.2 City of Leavenworth

Blackbird Island

The City should continue to remain involved in stream bank stabilization and native vegetation establishment efforts. According to the City, the southwest tip of Blackbird Island has eroded 40 feet in 10 years. This site may be a good candidate for shoreline stabilization using bioengineering techniques. A combination of native revegetation and bioengineering techniques could be provided to secure the streambank from excessive erosion, such as was caused by the November 2006 high water event. Design of any stabilization would need to consider the high velocities in the mainstem Wenatchee River and safety issues related to high use of this section of river by non-motorized boaters and recreationists. Interpretive signs could also be updated to provide relevant information about the Wenatchee River, its biological value, and it's potential.

5 Other Regulatory Programs

5.1 Effects of Current County and City Regulations

5.1.1 Critical Areas Regulations

Critical Areas Regulations prepared under the Growth Management Act and adopted through County and City ordinance apply to designated critical areas outside of shoreline jurisdiction. Chelan County and the City Leavenworth each have their own set of critical area regulations that dictate protection of environmentally sensitive areas, including wetlands, streams (fish and wildlife habitat conservation areas), geologically hazardous areas, frequently flooded areas, and aquifer recharge areas. All regulations use a version of the Department of Ecology's Eastern Washington Wetland Rating System.

Table 8 summarizes critical areas regulations for the County and the City.

Table 8. Critical Areas Regulations Outside of Shoreline Jurisdiction.

Jurisdiction	Date of Last Update	Wetland Rating System	Stream Classification System	Buffer Width (feet)		
City of Leavenworth	2011	Ecology E. WA (As amended)	WA DNR Permanent and Interim Water Typing (WAC 222-16-030 and WAC 222-16-031)	**Wetlands**	**Standard buffer (requires mitigation measures)**	**Maximum additional buffer width based on habitat scores**
Title No.				Cat 1	75	75
Chapter 16.08 Critical Areas				Cat 2	75	75
				Cat 3	60	60
				Cat 4	40	NA
				Water Type Permanent	**Water Type Interim**	**Riparian Width**
				S	1	250
				F	2	250
					3	200
				Np, Low mass wasting potential	4	150
				Np, High mass wasting potential		125
				NS, Low mass wasting potential	5	150
				Np, High mass wasting potential		225

5.1.2 City of Leavenworth

Comprehensive Plan: The *City of Leavenworth Comprehensive Plan* (2003) provides for urban land use designations in the City and UGA, and addresses other important elements such as capital facilities (e.g. parks and recreation). The City continually updates its Comprehensive Plan.

Zoning Code: Title 18 Zoning regulates land in the City limits related to uses, building bulk, scale, and location, and other design considerations. Until land is annexed, the County is responsible for permitting in the UGA. However, the County has a Memorandum of Understanding with the City regarding the adoption and use of the City's zoning and zoning standards for review of proposals in the City's UGA.

Floodplain Regulations: Chapter 14.24 of the Leavenworth Municipal Code, Flood Damage Prevention Standards, applies to areas within the City limits identified as "special flood hazard" as identified by the Federal Insurance Administration's FIRM map for the City of Leavenworth.

As indicated in the regulations, general regulations apply to anchoring, drainage paths, construction materials and methods, utilities, subdivision proposals, and building permits. Specific standards are applied to all residential, nonresidential, manufactured homes and recreational vehicles located within special flood

hazard zones. No new construction, substantial improvements or fills are permitted within zones A1-30 and AE on the FIRM. Additionally, no new construction or substantial improvements are permitted within the floodway. The code does, however, have appeal and variance procedures for development projects that would otherwise not be permitted. In shoreline jurisdiction, the appeal and variance procedures would be dictated by the SMP.

5.2 State Agencies/Regulations

Aside from the Shoreline Management Act, State regulations most pertinent to development in the City's and County's shorelines include the State Hydraulic Code, the Growth Management Act, State Environmental Policy Act, tribal agreements and case law, Watershed Planning Act, Water Resources Act, and Salmon Recovery Act. A variety of agencies (e.g., Washington Department of Ecology, Washington Department of Fish and Wildlife, Washington Department of Natural Resources) are involved in implementing these regulations or otherwise own shoreline areas. The Department of Ecology reviews all shoreline projects that require a shoreline permit, but has specific regulatory authority over Shoreline Conditional Use Permits and Shoreline Variances. Other agency reviews of shoreline developments are typically triggered by in- or over-water work, discharges of fill or pollutants into the water, or substantial land clearing.

Depending on the nature of the proposed development, State regulations can play an important role in the design and implementation of a shoreline project, ensuring that impacts to shoreline functions and values are avoided, minimized, and/or mitigated. During the comprehensive SMP update, the County and City considered other State regulations to ensure consistency as appropriate and feasible with the goal of streamlining the shoreline permitting process. A summary of some of the key State regulations and/or State agency responsibilities follows.

Washington Department of Natural Resources: Washington Department of Natural Resources (WDNR) is charged with protecting and managing use of State-owned aquatic lands. Toward that end, water-dependent uses waterward of the ordinary high water mark require review by WDNR to establish whether the project is on State-owned aquatic lands. In Lake Chelan, for example, WDNR has authority over aquatic lands waterward of the 1079-foot elevation. In the Columbia River, WDNR has authority over activities extending into the original (pre-dam) channel. If WDNR has jurisdiction, the project may be required to obtain an Aquatic Use Authorization from WDNR and enter into a lease agreement. Certain project activities, such as single-family or two-party joint-use residential piers, on State-owned aquatic lands are exempt from these requirements. WDNR recommends that all proponents of a project waterward of

the ordinary high water mark contact WDNR to determine jurisdiction and requirements.

Washington Department of Ecology: The Washington Department of Ecology may review and condition a variety of project types, including any project that needs a permit from the U.S. Army Corps of Engineers (see below), any project that requires a shoreline Conditional Use Permit or Shoreline Variance, and any project that disturbs more than 1 acre of land. Project types that may trigger Ecology involvement include pier and shoreline modification proposals and wetland or stream modification proposals, among others. Ecology's three primary goals are to: 1) prevent pollution, 2) clean up pollution, and 3) support sustainable communities and natural resources (http://www.ecy.wa.gov/about.html). Their authority comes from the State Shoreline Management Act, Section 401 of the Federal Clean Water Act, the Water Pollution Control Act, the Federal Coastal Zone Management Act of 1972, the State Environmental Policy Act, the Growth Management Act, and various RCWs and WACs of the State of Washington.

Washington Department of Fish and Wildlife: Chapter 77.55 RCW (the Hydraulic Code) gives the Washington Department of Fish and Wildlife (WDFW) the authority to review, condition, and approve or deny "any construction activity that will use, divert, obstruct, or change the bed or flow of State waters." Practically speaking, these activities include, but are not limited to, installation or modification of piers, shoreline stabilization measures, culverts, bridges and footbridges. These types of projects must obtain a Hydraulic Project Approval from WDFW, which will contain conditions intended to prevent damage to fish and other aquatic life, and their habitats. In some cases, the project may be denied if significant impacts would occur that could not be adequately mitigated.

Watershed Planning Act: The Watershed Planning Act of 1998 (Chapter 90.82 RCW) was passed to encourage local planning of local water resources, recognizing that there are citizens and entities in each watershed that "have the greatest knowledge of both the resources and the aspirations of those who live and work in the watershed; and who have the greatest stake in the proper, long-term management of the resources." Chelan County and partners in the County have taken advantage of the available funding for watershed planning to complete the watershed management plan for the Wenatchee watershed.

Federal Agencies/Regulations

Federal regulations most pertinent to development in the City's and County's shorelines include the Endangered Species Act, the Clean Water Act, and the Rivers and Harbors Appropriation Act. Other relevant federal laws include the National Environmental Policy Act, Anadromous Fish Conservation Act, Clean

Air Act, and the Migratory Bird Treaty Act. A variety of agencies (e.g., U.S. Army Corps of Engineers [Corps], National Marine Fisheries Service, U.S. Fish and Wildlife Service) are involved in implementing these regulations, but review by these agencies of shoreline development in most cases would be triggered by in- or over-water work, or discharges of fill or pollutants into the water. Depending on the nature of the proposed development, federal regulations can play an important role in the design and implementation of a shoreline project, ensuring that impacts to shoreline functions and values are avoided, minimized, and/or mitigated. A summary of some of the key State regulations and/or State agency responsibilities follows.

Section 404: Section 404 of the federal Clean Water Act provides the Corps, under the oversight of the U.S. Environmental Protection Agency, with authority to regulate "discharge of dredged or fill material into waters of the United States, including wetlands" (http://www.epa.gov/owow/wetlands/pdf/reg_authority_pr.pdf). The extent of the Corps' authority and the definition of fill have been the subject of considerable legal activity. However, it generally means that the Corps must review and approve many activities in shoreline waterbodies, and other streams and wetlands. These activities may include wetland fills, stream and wetland restoration, and culvert installation or replacement, among others. Similar to Washington State Environmental Policy Act (SEPA) requirements, the Corps is interested in avoidance, minimization, restoration, and compensation of impacts.

Section 10: Section 10 of the federal Rivers and Harbors Appropriation Act of 1899 provides the Corps with authority to regulate activities that may affect navigation of "navigable" waters. The Columbia River and Lake Chelan are designated navigable waters. Accordingly, proposals to construct new or modify existing in-water structures (including piers, marinas, bulkheads, breakwaters), to excavate or fill, or to "alter or modify the course, location, condition, or capacity of" these waterbodies must be reviewed and approved by the Corps.

Federal Endangered Species Act (ESA): Section 9 of the ESA prohibits "take" of listed species. Take has been defined in Section 3 as: "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The take prohibitions of the ESA apply to everyone, so any action of the County or City that results in a take of listed fish or wildlife would be a violation of the ESA and exposes the County and City to risk of lawsuit. Per Section 7 of the ESA, the Corps must consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service on any projects that fall within Corps jurisdiction (e.g., Section 404 or Section 10 permits) that could affect species listed under the Federal Endangered Species Act. These agencies ensure that the project includes impact minimization and compensation measures for protection of listed species and their habitats.

Clean Water Act: The federal Clean Water Act has a number of programs and regulatory components, but of particular relevance to Chelan County is the National Pollutant Discharge Elimination System (NPDES) program. In Washington State, the Department of Ecology has been delegated the responsibility by the U.S. Environmental Protection Agency for managing implementation of this program.

Federal Power Act: Under the Federal Power Act, the Federal Energy Regulatory Commission (FERC) is responsible for licensing nonfederal hydropower projects on navigable waterways and federal lands. The Commission's staff prepares an environmental analysis of every new and relicensed hydropower proposal to ensure that environmental impacts are weighed in the location, design, and ongoing use of hydropower dams.

6 Summary of Potential Impacts of Likely Development and Effects of SMP

WAC 173-26-186(8)(d) guides local master programs to evaluate and consider cumulative impacts of "reasonably foreseeable future development on shoreline ecological functions." The most commonly anticipated changes in shoreline development involve residential, commercial, and industrial development. These activities include upland development, and may also include the development of overwater structures and/or shoreline stabilization. As directed by the WAC, the policies and regulations in the proposed SMP are designed to ensure that cumulative impacts do not result in a net loss of ecosystem functions. A discussion of the general potential impacts of these anticipated developments and the county-wide effects of the SMP are provided in Sections 6.1-6.3, below.

Potential development is not limited to residential, commercial and industrial uses; however, the location, timing, and impacts of less common uses and development projects are less predictable. WAC 173-26-201(3(d)(iii) provides guidance that "for those projects and uses with unanticipatable or uncommon impacts that cannot be reasonably identified at the time of master program development, the master program policies and regulations should use the permitting or conditional use permitting processes to ensure that all impacts are addressed and that there is not net loss of ecological function of the shoreline after mitigation." Potential uses and projects with less predictable implementation and impacts include such activities as aquaculture and mining. In addition to regulations that avoid, minimize, and mitigate for potential

impacts from these less common developments, the proposed SMP includes specific regulations that require these types of developments to demonstrate on an individual basis that proposed projects will not result in a loss of ecological functions. Because these developments will be required to demonstrate no net loss on an individual basis, these types of projects will generally not be addressed in great detail in this cumulative impacts analysis. However, because several entities have expressed concern regarding potential impacts of mining, a summary of potential mining impacts and effects of the SMP is provided in Section 6.4.

6.1 Summary of Potential Impacts Associated with Upland Development and Effects of SMP

6.1.1 General

The most commonly anticipated changes in shoreline use involve residential, commercial, and industrial development. These developments and developments accessory to these uses, including utility and transportation infrastructure, generally involve impacts to shoreline functions, which typically result from the replacement of pervious, vegetated areas with impervious surfaces and/or a landscape management regime that includes chemical treatments of lawn and landscaping. These actions have multiple potential effects on shoreline ecological functions, including:

- Reduction in ability of site to improve quality of waters passing through the untreated vegetation and healthy soils.
- Potential contamination of surface water from chemical and nutrient applications.
- Increase in surface water runoff due to reduced infiltration area and increased impervious surfaces, which can lead to excessive soil erosion and subsequent in-water sediment deposition.
- Elimination of upland habitat occupied by wildlife that use riparian areas.

The amount of space between the shoreline and a structure is an excellent quick evaluation of shoreline condition. The extent of native vegetation and the amount of impervious surfaces are often important indicators of shoreline function since these factors influence the quantity of stormwater runoff reaching shorelines. Changes in vegetation are a significant consideration when evaluating the net effects of development on shoreline ecological function. The conservation of riparian vegetation is critical to the ecological functions of the watercourses and waterbodies in Chelan County. Riparian vegetation provides filtration of upland contaminants, bank stability, shading of waterbodies, habitat

complexity (both aquatic and terrestrial), a source of terrestrial insect prey for fish, and increased water storage potential.

Table 9 identifies the potential impacts of specific likely changes in development in Chelan County and the primary anticipated effects of the SMP.

Table 9. Summary of Potential Impacts Associated with Upland Development in Shoreline Jurisdiction.

Shoreline Function	Major Types of Anticipated Future Development Likely to Affect Shoreline Function	Potential Impacts to Shoreline Function	Effects of SMP
River/Stream			
Hydrologic (includes hyporheic)	• Additional residential development within existing pockets of residential uses • Commercial and industrial development • Improvement and expansion of transportation and utility infrastructure • Creation of more parks/public access sites	• Modification of flow regimes and channel migration with construction of buildings, roads, or recreational-use structures • Increased runoff from added impervious surface and vegetation loss, increased potential for localized flooding, increased erosion and reduced groundwater recharge • Reduced groundwater recharge combined with increased stormwater runoff rates means higher high flow volumes and lower seasonal low flow rates • Higher flows alter stream sediment balance	• Shoreline environment designations to concentrate development in least sensitive areas • Development restrictions in floodplains and channel migration zones • Clustering of development to minimize physical impacts • Shoreline crossings for utilities and transportation to be designed to minimize ecological impacts • Mitigation standards for vegetation clearing
Water quality		• Increase in runoff and associated water quality impacts • Increase in runoff and associated water quality impacts with the creation of new impervious surfaces • Vegetation loss reduces filtration of excess nutrients, sediments and pollutants during hyporheic exchange.	• Provisions to maintain surface and groundwater quality • Standards for stormwater management and low impact development • BMPs to minimize erosion • Standards for on-site sewage location and design • Industrial development encouraged to locate where environmental

Shoreline Function	Major Types of Anticipated Future Development Likely to Affect Shoreline Function	Potential Impacts to Shoreline Function	Effects of SMP
			cleanup and restoration can be incorporated. • Vegetated buffer standards
Shoreline vegetation		• Decrease in shoreline/riparian vegetation • Vegetation loss increases the potential for erosion, bank instability, turbidity, higher water temperatures • Vegetation loss reduces refuge and foraging opportunities for fish and wildlife • Vegetation loss produces less LWD for habitat forming processes	• Clustering of development to minimize physical impacts • Vegetated buffer standards • Mitigation standards for vegetation clearing
Habitat		• Loss of or disturbance to riparian habitat • Loss of instream habitat complexity, less LWD for habitat forming processes • Vegetation loss reduces terrestrial insect subsidies • Increased flow rates scour and redistribute gravel beds needed for spawning	• Clustering of development to minimize physical impacts • Provisions to locate and design utilities and transportation infrastructure to avoid sensitive areas and restore disturbed areas • Vegetated buffer standards • Mitigation standards for vegetation clearing

Provisions in the proposed SMP guide future development and redevelopment to avoid, minimize, and mitigate for shoreline impacts caused by upland development. As described in Section 4.2 and summarized in Table 9, provisions in the proposed SMP address potential impacts to vegetative, habitat, water quality, and hydraulic functions. The following specific use provisions also help to avoid a net loss of shoreline function from upland development:

- Limit conversion of forest lands to minimum necessary
- Cluster residential development to avoid ecologically sensitive areas.
- Design subdivisions of land so that newly developed lots will be able to comply with SMP requirements and not require a Shoreline Variance.

- Locate, design, and mitigate for roads and utilities servicing upland development.
- Locate industrial development where environmental cleanup and restoration of the shoreline area can be incorporated. Address federal and state requirements for hazardous materials clean up or management.

In addition to the above provisions, vegetation conservation and shoreline buffer regulations are critical to maintaining and/or improving the functions of existing riparian vegetation. It is important that impervious surfaces be separated from the waterbody to the extent that those surfaces replace vegetation. In the proposed SMP, shoreline buffer standards were established specific to each local jurisdiction and environment designation. Specific shoreline buffers will be discussed below in Section 7. Wetland buffers found in each jurisdiction's shoreline critical areas regulations also limit the effects of development on shoreline-associated wetlands.

In general, new residential, commercial, and industrial development is expected within shoreline jurisdiction in the County and the City over the next 20 years. Standards for stormwater control, vegetation conservation, mitigation, buffers, and other measures in the SMP, will help maintain ecological functions of the shoreline over the long term.

6.1.2 Upland Development outside of Shoreline Jurisdiction

Although SMP regulations only apply within shoreline jurisdiction, development outside of shoreline jurisdiction may influence shoreline ecological functions. The potential impacts of development outside of shoreline jurisdiction tend to be more indirect than impacts within shoreline jurisdiction; nevertheless, their potential effects can be significant, and include the following:

- Reduced infiltration potential on hillslopes and in headwater areas increases surface flows and reduces groundwater storage. This increases peak flows and flashiness of shoreline waterbodies, and may result in channel incision and reduced instream channel complexity.
- Increased impervious surfaces and reduced infiltration increases runoff of untreated waters and the potential for water quality degradation through the introduction of herbicides, pesticides, and heavy metals, and other toxic compound to the shoreline waterbody.
- Elimination of upland wildlife corridors.
- Development in channel migration zones and floodplains is inherently susceptible to damage. Efforts to protect new developments have the potential to isolate floodplains and prevent channel migration, thereby interfering with shoreline processes.

Because SMP provisions do not apply to upland areas, other local regulations, including zoning codes, critical areas regulations, floodplain regulations, and stormwater regulations, as well as applicable state and federal regulations will guide development in those areas. Specifically, critical areas regulations for erosion hazards, included in geologically hazardous areas, are expected to limit future development in channel migration zones. Despite these regulations and the spatial separation from the shoreline, developments near shoreline jurisdiction may have some impacts to shoreline functions. For those areas where extensive development is anticipated in the study area, but outside of shoreline jurisdiction, particular attention should be paid during review of those projects under other regulations to ensure that the upland impacts are fully mitigated and no net loss of functions is achieved.

6.2 Summary of Potential Impacts Associated with Overwater Structures and Effects of SMP

Overwater structures can adversely affect ecological functions and habitat in the following ways:

- Alter patterns of light transmission to the water column, affecting macrophyte growth and altering habitat for and behavior of aquatic organisms, including juvenile salmon and other prey species and the composition and diversity of benthic organisms.
- Interfere with long-shore movement of sediments, altering substrate composition and development.
- Contribute to contamination of surface water from chemical treatments of structural materials, as well as indirect effects of boat use and maintenance.
- Clearing of shoreline vegetation to accommodate docks reduces shoreline vegetative functions.

Table 10 identifies the potential impacts of specific likely changes in development in Chelan County and a summary of the effects of SMP provisions.

Table 10. Summary of Potential Impacts Associated with Over-water Structures in Shoreline Jurisdiction.

Shoreline Function	Major Types of Anticipated Future Development Likely to Affect Shoreline Function	Potential Impacts to Shoreline Function	Effects of SMP Provisions
River/Stream (Primarily Columbia River)			
Hydrologic (includes hyporheic)	• Creation of more parks/public access sites – construction of over-water	• Modification of flow regimes and channel migration with construction of docks, ramps, bridges, or other recreational-use structures	• Boating facilities prohibited in channel migration zones, areas that would require dredging, or flood

Shoreline Function	Major Types of Anticipated Future Development Likely to Affect Shoreline Function	Potential Impacts to Shoreline Function	Effects of SMP Provisions
	structures associated with access and water recreation • Construction of single-family docks associated with existing or new residential use • Construction of new bridges for transportation corridors • Repair/reconstruction of existing bridges and culverts	• Repair of existing bridges and replacing culverts with bridges could reduce flow impacts, channel constraints, and fish passage barriers	hazard zones • Shoreline crossings to be designed for the least ecological impact
Water quality		• Water quality impacts associated with construction of docks and other in-water structures (e.g., spills, harmful materials use) • Water quality impacts from uses associated with new docks (e.g.., motor boat use and maintenance) • Water quality impacts associated with stormwater generated on new bridges	• Toxic wood preservatives are prohibited • Pumpout facilities required for new marinas • Shoreline crossings to be designed to minimize ecological impacts
Shoreline vegetation		• Alterations of aquatic vegetation communities • Reduction in riparian vegetation to accommodate new overwater structures • Loss of riparian vegetation increases the potential for erosion, bank instability, turbidity, higher water temperatures	• New boating facilities and private moorage structures prohibited over aquatic or emergent vegetation • Mitigation standards for new structures may include planting of shoreline vegetation • Mitigation required for vegetation removal
Habitat		• Alteration of predator/prey dynamics of aquatic species • Increasing migration obstacles for juvenile salmonids • Less LWD for habitat forming processes • Reduction in benthic invertebrates	• Dimensional standards to minimize extent of overwater cover • Decking standards to maximize light penetration • Skirting and walled structures prohibited

SMP standards are designed to minimize the extent of overwater structures, particularly in the nearshore area, which is critical to many small fish, including salmonids. SMP standards prohibit skirting, walled structures, and several toxic preservatives that could otherwise impair water circulation, light attenuation, and water quality. The SMP provides specific dimensional criteria for boating

facilities and private moorage to minimize the effects of overwater structures, particularly within the nearshore area. The proposed SMP also requires grated decking on piers, ramps, and floats in the area not underlain by float tubs. Together, these design standards minimize the area in which light transmission is affected, thereby limiting the potential impacts of new docks on the aquatic ecosystem. The SMP also provides standards for lighting overwater structures, which helps avoid behavioral impacts to aquatic species at night. In addition to limits on design, siting, and dimensions, the proposed SMP guides the location of boating facilities to minimize any ecological impacts. Furthermore, only joint-use piers are allowed for subdivisions of two or more waterfront dwelling units. This provision prevents the proliferation of single use piers with residential subdivision and development.

In addition to local shoreline permit requirements, both WDFW and the Corps require permits for the installation, replacement, and repair of overwater structures. Mitigation measures for overwater structures encouraged by WDFW include the installation of grated decking, removal of unused piles (especially those formerly treated with creosote), reduction of pile size and quantity, and general reduction in overall square footage of cover. As part of efforts to minimize and compensate for impacts, mitigation in the form of native shoreline planting is often required. Any new or replacement structure would require a Hydraulic Project Approval (HPA) from WDFW and a Section 10 Rivers and Harbors Act permit from the Corps of Engineers. Because of the presence of listed salmonids, a Corps permit would also entail consultation with the National Marine Fisheries Service to comply with the Endangered Species Act. These agencies would likely require similar mitigation measures noted above for WDFW.

Expansion, reconfiguration, and repair of several overwater structures is expected. New structures will need to comply with strict regulations to minimize and mitigate impacts. Where existing shoreline vegetation is degraded, mitigation measures proposed for new private moorage facilities are expected to offset the impacts of new overwater structure development. Where existing overwater structures are common, dimensional, material, and design standards are expected to reduce the individual impacts of structures compared to existing conditions. Overall, the improvements gained through repair and replacement over time, and mitigation associated with any new overwater structures are expected to achieve no net loss of ecosystem functions.

6.3 Summary of Potential Impacts Associated with Shoreline Stabilization and Effects of SMP

Shoreline stabilization measures typically have the following effects on ecological functions compared to natural shorelines:

- Reduced connectivity between floodplain and river, leading to reduced channel migration potential, floodplain habitat diversity, and floodplain functions.
- Reduction in nearshore habitat quality for juvenile salmonids and other aquatic organisms. Specifically, shoreline complexity from downed wood and emergent vegetation that provide forage and cover may be reduced or eliminated. Elimination of shallow-water and off-channel habitats reduces opportunities for small fish to find refuge from predators and from high flows.
- Reduction of natural sediment recruitment from the shoreline. This recruitment is necessary to replenish substrate and preserve shallow water conditions.
- Increase in wave energy at the shoreline if shallow water is eliminated, resulting in increased nearshore turbulence that can be disruptive to juvenile fish and other organisms.

Repairs and replacements of existing bulkheads perpetuate the conditions described above. Table 11 identifies the potential impacts of specific likely changes in development in Chelan County.

Table 11. Summary of Potential Impacts Associated with Shoreline Stabilization in Shoreline Jurisdiction.

Shoreline Function	Major Types of Anticipated Future Development Likely to Affect Shoreline Function	Potential Impacts to Shoreline Function	Effects of SMP Provisions
River/Stream			
Hydrologic (includes hyporheic)	New, replaced, and repaired shoreline modification such as bulkheads for shoreline residential uses, parks and public access sites, and other water dependent uses	• Reduction in LWD recruitment and other organic material as shoreline habitats are altered • Modification of flow regimes and channel migration Reduction in floodplain function leads to higher peak flows, less groundwater recharge, and greater sediment scour, erosion, and channel migration downstream • Reduction of natural sediment recruitment from the shoreline. This recruitment is necessary to replenish substrate and preserve shallow water	• Residential development to avoid the need for future stabilization or flood control • Demonstration of need to protect primary structure required for new stabilization • Mitigation requirements include improving substrate conditions waterward of OHWM

Shoreline Function	Major Types of Anticipated Future Development Likely to Affect Shoreline Function	Potential Impacts to Shoreline Function	Effects of SMP Provisions
		conditions.	
Water quality		• Water quality impacts associated with construction • Reduction in floodplain connectivity reduces floodplain filtration potential • Removal of shoreline vegetation increases water temperatures	• Mitigation requirements include planting native vegetation
Shoreline vegetation		• Potential associated vegetation loss increases potential for erosion, turbidity, higher water temperatures potential	• Mitigation requirements include planting native vegetation
Habitat		• Reduction in shoreline complexity and emergent vegetation that provides forage and cover • Reduced floodplain connectivity limits off-channel refuge for fish during high flows • Reduction of natural sediment recruitment from the shoreline. This recruitment is necessary to replenish substrate and preserve shallow water conditions • Elimination of shallow-water habitat may also increase vulnerability of juvenile salmonids to aquatic predators	• Preference for soft-shoreline stabilization • Mitigation requirements include improving substrate conditions waterward of OHWM and planting native vegetation

The SMP sets standards for new and repaired shoreline armoring, as well as conditions and uses where new shoreline armoring is allowed or prohibited. Under the proposed SMP, new developments must be designed and sited to avoid the need for structural shoreline stabilization wherever feasible. Residential subdivisions must be designed so that shoreline stabilization will not be required. Structural shoreline stabilization is not allowed except to protect restoration projects, or unless a geotechnical analysis demonstrates that it is

necessary to protect a primary structure from erosive action caused by currents, waves, or other waterward processes.

Where structural stabilization is necessary, the SMP establishes a preference for soft structural stabilization and requires that the size of the structure be minimized to the greatest extent possible. Together, these measures should successfully minimize the extent of new shoreline stabilization, and may result in a reduction or softening of existing stabilization measures. Finally, the SMP requires mitigation for stabilization impacts. Mitigation measures include improving substrate conditions waterward of the OHWM and planting native vegetation along the shoreline. These measures are expected to mitigate for the changes in shoreline gradient associated with stabilization and to ensure that shoreline vegetative functions are maintained, or in some cases, improved.

Both the Corps and the WDFW have jurisdiction over new shoreline stabilization projects and repairs or modifications to existing shoreline stabilization. Where actions may affect federally threatened or endangered species, the Corps must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (NMFS) regarding potential Endangered Species Act issues. As part of those agencies' efforts to minimize and compensate for shoreline stabilization-related impacts, the federal agencies require mitigation, frequently through the implementation of native shoreline planting plans. Further, NMFS requires additional impact compensation measures for many bank modification projects, including angling the face of the structure landward to reduce wave turbulence, and/or shifting the structure as far landward as feasible.

Over time, the combined effects of the proposed SMP, implementation of the Shoreline Restoration Plan, permit reviews from the WDFW and the Corps, and planned restoration actions are expected to result in a reduction or softening of existing stabilization structures, and any new stabilization structures that are permitted will be accompanied by appropriate minimization and mitigation measures to offset shoreline impacts.

6.4 Summary of Potential Impacts Associated with Mining and Dredging and Effects of SMP

Mining and dredging operations are conducted to serve several distinct objectives in Chelan County and Washington State. Channel dredging may be conducted for flood control, navigation, utility installation, the construction or modification of essential public facilities and regional transportation facilities, and/or restoration. Gravel bar mining may occur for flood control purposes. Metals mining and floodplain gravel mining are also conducted for commercial resource extraction.

Each of the practices identified above has potential impacts on ecological and physical river processes, summarized below.

Dredging:
- Simplification of in-channel habitats.
- Disruption of benthic community.
- Reduction in shallow-water habitat.
- Alteration in channel hydrologic and sediment processes.
- Reduction in water quality from turbidity and in water dredge material disposal.

Metals mining:
- Water quality contamination from mine tailings, which often include high levels of dissolved metals and cyanide complexes.
- In-water gold mining disturbs the substrate, potentially disturbing benthic communities and temporarily results in increased turbidity.

Floodplain gravel mining:
- Alteration of hydrologic and sediment transport processes, potentially leading to erosion, channel incision, head cutting, and/ channelization of a river upstream or downstream from the mining location.
- Potential to strand fish during pit capture events.
- Loss of floodplain habitat associated with armoring and levees to isolate pits from the river channel.

The SMP includes provisions to ensure that impacts are avoided, minimized and mitigated through the design, location, construction, maintenance, and reclamation actions.

The following is a more in-depth discussion of the potential effects of floodplain gravel mining and approaches to minimizing and mitigating impacts. Gravel pits from commercial mining in floodplains and channel migration zones have the potential to alter hydrologic and sediment transport processes and result in habitat simplification. If a channel shifts course into a gravel pit, a process known as "pit capture," it has the potential to cause channel bank and bed instability upstream and downstream through accelerated erosion, river channelization, channel incision, disruption in sediment transport, and degradation of habitat, including benthic invertebrate assemblages and salmon spawning habitat, upstream and downstream of a pit (Norman et al. 1998, Cluer 2009). Pit capture may present stranding hazards for native fish species, and gravel pits may provide warm water predator habitat (Cluer 2009).

Despite potential negative impacts of gravel mining, "Careful siting, planning, limiting mining, a thorough hydrogeological analysis, use of alternative

resources, and innovative reclamation can mitigate and reduce some mining impacts (Norman et al. 1998)." Potential approaches to minimize ecological impacts include modification of pit design and restoration strategies to provide diverse off-channel habitats (e.g., emergent marsh, open water, and forested areas) that can benefit fish and other aquatic species (Norman 1998, Cluer 2009). Wide, topographically higher, and thickly vegetated buffers could be considered to minimize interactions between the river and mining pit (Norman 1998).

The proposed SMP severely limits mining opportunities to ensure the conservation of ecological functions. New mining projects are prohibited in the in the Natural environment of unincorporated Chelan County. In the City of Leavenworth mining in the CMZ or floodplain may only be permitted through the conditional use process in the High Intensity environment. Regardless of jurisdiction, new mining is also prohibited in designated fish and wildlife conservation areas unless it is part of a flood control or habitat restoration plan. New mining proposals must demonstrate that the resource is not available outside of shoreline jurisdiction. Furthermore, new mining proposals in the CMZ, floodplain, or waterward of OHWM are subject to a CUP, and must submit reclamation plans and an analysis of environmental impacts, demonstrating that operations will not adversely affect gravel transport, significantly impact priority species, divert flood flows, or increase flooding impacts on-site or in nearby areas. Furthermore, ongoing mining operations waterward of the OHWM must demonstrate compliance with environmental standards during renewal, extension, or reauthorization.

In addition to regulations under the SMP, mining is regulated by other County, State, and Federal regulations. The County's zoning code limits long-term mining to areas designated as commercial mineral lands, and proposals are subject to a conditional use permit. These areas are limited in geographic extent, and only occur in portions of the Little Wenatchee River, Peshastin Creek, and the White River. Furthermore, these areas fall within the Natural environment on the Little Wenatchee and White River, where new mining is prohibited. In-water mining requires a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW); however, WDFW does not have jurisdiction over floodplain mining until after an avulsion has occurred. The Surface Mine Reclamation Act, administered by Washington Department of Natural Resources, generally requires extensive hydrologic analysis, which outlines management measures to limit channel erosion and avulsion, and which requires mines to be reclaimed immediately after each segment is mined.

Given the stringent requirements to demonstrate that practices will not degrade ecological conditions and mitigate for any impacts, as well as the limited areas in the County in which mining is allowed, it is anticipated that new mining operations will be exceedingly rare. In conclusion, with strict implementation of

the proposed SMP regulations, new and ongoing mining operations are not expected to result in a loss of ecological functions.

7 Cumulative Impacts on Ecological Function

In addition to the relevant regulations discussed in those sections above which apply to the County and City, each local jurisdiction developed certain regulations specific to local conditions, plans, and interests. For example, shoreline buffer regulations differ by jurisdiction based on existing conditions and planned development. In many cases, regulations are similar or identical across many, but not all, jurisdictions. The following discussion will build on the general discussion of potential impacts and effects of general SMP regulations from Section 6 to present a summary analysis of how planned development is likely to affect existing conditions on a local scale in light of local SMP regulations, other regulations (Section 5), and planned restoration (Section 4.5).

7.1 City of Leavenworth

Relatively little development is projected in shoreline jurisdiction. The most significant growth potential is for new commercial development in the High Intensity environment along the Wenatchee River.

Approximately half of the potential commercial development would occur on the western edge of the city center, where any new development would be separated from the River by Commercial Street, which parallels the River and falls within the standard 50-foot buffer width. Provided that vegetation conservation standards outside of shoreline buffers are strictly enforced, additional development landward of the road would likely result in minimal impacts compared to existing impacts from roadway drainage and the habitat disturbance created by road use.

Another area of potential commercial development lies just east of the Highway 2 bridge crossing. Forested vegetation on vacant lots generally occurs within 80 feet of the OHWM, meaning that approximately half of the existing forested vegetation would be protected under proposed buffer standards. General vegetation conservation standards (SMP 4.5.2) would minimize clearing outside of required buffer areas. If a buffer reduction were pursued, the shoreline could benefit from an increased density of native vegetation cover.

Much of the area in shoreline jurisdiction in the City of Leavenworth is in public ownership and recreational use; these areas are designated as the Urban Park environment. The intensity of public uses is widely varied, ranging from a City-owned golf course with minimal riparian vegetation to densely forested vegetation with only minor disturbances from a trail network. Based on the 2011 City of Leavenworth Parks Plan, planned parks development in intact forested areas is limited to improving trail signage, improving trail connections, and maintaining existing parks facilities (City of Leavenworth 2011). More intensive recreational development plans are limited to expanding amenities at existing active use parks (City of Leavenworth 2011). A standard buffer of 50 feet and a standard reduced buffer of 37.5 feet would not be expected to protect the relatively intact forested areas if significant intensive recreational development were proposed. However, significant changes are not proposed or anticipated, and additionally, the majority of the Urban Park land within the City also falls within the channel migration zone, which further limits permitted development under the City's geohazard standards. Furthermore, proposed SMP regulations require that recreational development shall be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions. The proposed SMP also requires the implementation of best management practices to limit water quality impacts from the use of pesticides or fertilizers that could be associated with the maintenance of public use sites.

Table 12. Summary of waterbodies with likely residential, commercial, and industrial development in shoreline jurisdiction in the City of Leavenworth.

Environment Designation / Waterbody	Acres in Total Shoreline Jurisdiction	Acres Outside of Buffers in Study Area (Shoreline Jurisdiction)	Single Family Units in Study Area (Jurisdiction)	Commercial Sq Ft in Study Area (Jurisdiction)	Industrial Sq Ft in Study Area (Jurisdiction)
High Intensity					
Chumstick Creek	0.01	0.01 (0.01)	0	0	85 (85)
Wenatchee River	8.55	12.60 (7.69)	2 (1)	42,165 (26,964)	0
Shoreline Residential					
Chumstick Creek	0.63	0.55 (0.55)	1 (1)	0	1,798 (1,798)
Wenatchee River	7.55	6.72 (6.08)	1 (0)	0	0
Urban Park					
Wenatchee River	70.14	148.11 (63.22)	0	12,990 (1,530)	0

7.2 City-Associated Urban Growth Areas

7.2.1 Leavenworth UGA

Anticipated residential development in the Leavenworth UGA is expected to be highly limited; however, there is significant commercial development potential in the Urban Park environment on the Wenatchee River. Two underdeveloped areas are identified on the Wenatchee River - one at the KOA campground on the far eastern side of the City's UGA, and another on the far western side of the City's UGA. SMP provisions require that commercial development be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions.

The Shoreline Inventory and Analysis Report identified conditions at the KOA campground as 'high' functioning, primarily based on vegetation coverage and a lack of impervious surface coverage or bank modifications within shoreline jurisdiction. Outside of shoreline jurisdiction, a significant portion of the campground is either paved or cleared of significant vegetation to accommodate active recreational uses. The CMZ extends approximately 80 feet upland from the OHWM, and any development within those 80 feet would need to avoid a need for future shoreline stabilization and would require compliance with the City's shoreline critical areas regulations. City to amend likely development depending on permitted uses and modifications in Urban Park environment.

On the western side of the City's UGA, development could occur on a large hill that separates Icicle Creek and Highway 2. Site development within shoreline jurisdiction in this location is highly limited by the site's geographic position immediately adjacent to Highway 2 and the site's topography (presence of steep slopes).

Potential industrial development is limited to an area on Chumstick Creek that is presently occupied by a gravel lot and a storage yard. Existing ecological functions at this site are degraded, and there is potential for site restoration to accompany any new industrial development. Given SMP standards to ensure that industrial development is located, designed, and constructed to avoid a loss of functions, no significant impacts are expected to result from industrial development on Chumstick Creek.

Table 13. Summary of waterbodies with likely residential, commercial, and industrial development in shoreline jurisdiction in the City of Leavenworth UGA.

Environment Designation / Waterbody	Acres in Shoreline Jurisdiction	Acres Outside of Buffers in Study Area (Jurisdiction)	Single Family Units in Study Area (Jurisdiction)	Commercial Sq Ft in Study Area (Jurisdiction)	Industrial Sq Ft in Study Area (Jurisdiction)
High Intensity					
Chumstick Creek	4.29	3.87 (3.87)	0	0	25,807 (25,807)
Wenatchee River	0.21	0.18 (0,.15)	1 (1)	0	0
Shoreline Residential					
Chumstick Creek	0.10	0.03 (0.03)	0	0	334 (334)
Wenatchee River	1.32	1.4 (1.12)	3 (3)	0	0
Urban Park					
Wenatchee River	19.24	25.48 (16.98)	0	179,279 (87,212)	0

8 NET EFFECT ON ECOLOGICAL FUNCTIONS

The CIA indicates that future growth is likely to be targeted in specific waterbodies and environment designations in each of the local jurisdictions, and these developments have the potential to impact specific shoreline functions. This analysis can help inform County and City officials of potential future shoreline impacts and the importance of specific proposed SMP provisions.

The proposed SMP, which includes the Shoreline Restoration Plan, is expected to protect and improve shorelines within Chelan County and the City while accommodating the reasonably foreseeable future shoreline development. No net loss of shoreline ecological function will be achieved, and ecological functions may improve over time. Other local, state and federal regulations, acting in concert with this SMP, will provide further assurances of improved shoreline ecological functions over time.

As discussed above, major elements of the SMP that ensure no net loss of ecological functions fall into five general categories: 1) environment designations (Chapter 3, 2) general policies and regulations (Chapter 4), 3) shoreline use and modification provisions (Chapter 5),
4) critical areas regulations (Appendix B), and 5) Shoreline Restoration Plan (Appendix C of the SMP).

Environment designations: The Shoreline Analysis Report provided the information necessary to assign environment designations by segment to each of the shoreline waterbodies (see Chapter 3 of the SMP). Shoreline uses and modifications were then individually determined to be either permitted (as substantial developments or conditional uses) or prohibited in each of those environment designations. The most uses and modifications are allowed in areas with the highest level of existing disturbance.

General provisions: Chapter 4 of the SMP contain a number of regulations on a variety of topics that contribute to protection and restoration of ecological functions.

Shoreline modification and use provisions: Chapter 5 of the SMP contain a number of regulations on a variety of topics that contribute to protection and restoration of ecological functions. Shoreline modification regulations emphasize minimization of size of structures, and use of designs that do not degrade and may even enhance shoreline functions. Use regulations prohibit uses that are incompatible with the existing land use and ecological conditions, and emphasize appropriate location and design of the various uses. These regulations also emphasize avoidance and minimization of ecological impacts via appropriate setbacks, protection and enhancement of vegetation, reduction of impervious surfaces and use of innovative designs such as LID techniques that do not degrade and may even enhance shoreline functions.

Shoreline Restoration Plan: The *Shoreline Restoration Plan* (Appendix C of the SMP) identifies a number of project-specific opportunities for restoration on both public and private properties inside and outside of shoreline jurisdiction, and also identifies ongoing County and City programs and activities, restoration partners, and recommended actions consistent with a variety of watershed-level efforts.

The following are some of the key features identified in the proposed SMP and this evaluation which protect and enhance shoreline ecological functions.

- Much of the County's shoreline area is relatively undisturbed and in public ownership or resource lands; these undisturbed areas were designated as Natural environment, and no significant development is

anticipated within shoreline jurisdiction in those areas designated Natural.

- Regulations focus development and growth in areas that are already developed or where functions are already degraded, while protecting those areas that are ecologically intact or otherwise sensitive to development pressures.
- Vegetation conservation areas and structural setbacks throughout the County and the City are based on environment designation and existing conditions. Larger setbacks are required in areas with a higher need for protection of shoreline resources.
- SMP provisions require any projects with potential for significant adverse ecological effects to follow mitigation sequencing to avoid, minimize and mitigate any impacts.
- Planned restoration along the shorelines of the County and City will provide opportunities to restore shoreline ecological functions.
- Emphasis on achieving no net loss of shoreline ecological functions throughout shoreline jurisdiction.

9 Long-Term Monitoring

County and City planning staff will track all land use and development activity, including exemptions, within their respective shoreline jurisdictions, and will incorporate actions and programs of other departments as well. Reports will be assembled by each jurisdiction that provides basic project information, including location, permit type issued, project description, impacts, mitigation (if any), and monitoring outcomes as appropriate. Examples of data categories might include square feet of non-native vegetation removed, square feet of native vegetation planted or maintained, reductions in chemical usage to maintain turf, linear feet of eroding stream bank stabilized through plantings, linear feet of shoreline armoring removed or modified levees, changes to square footage of over-water cover, or number of fish passage barriers corrected.

The report would also recommend or describe relevant updates to WRIA, County and City goals and implementation plans, and outline current and

ongoing implementation of various programs and restoration actions (by local government or other groups) that relate to watershed health.

The staff reports will be assembled to coincide with Comprehensive Plan updates and will be used, in light of the goals and objectives of the Shoreline Master Program, to determine whether implementation of the SMPs is meeting the basic goal of no net loss of ecological functions relative to the baseline condition established in the Shoreline Analysis Report. In the long term, each local government should be able to demonstrate a net improvement in their respective shoreline environments.

Based on the results of these assessments, each local government may make recommendations for changes to its SMP.

10 REFERENCES

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APPENDIX A: LAND CAPACITY ANALYSIS

Land Capacity Analysis was completed by doing an aerial survey of all parcels that intersect the shoreline jurisdictional area using GIS. The assumptions include:

1. Residential zoned parcels with capacity had to have at least double the minimum area divisible by zoning district.

   R-6 Zoning: those lots greater than 12,000 sq ft.
   R-10 Zoning: those lots greater than 20,000 sq ft.
   R-12 Zoning: those lots greater than 24,000 sq ft.
   RM Zoning: those lots greater than 12,000 sq ft

2. Parking lots or open space within commercial or industrial zoned properties were considered under-utilized.

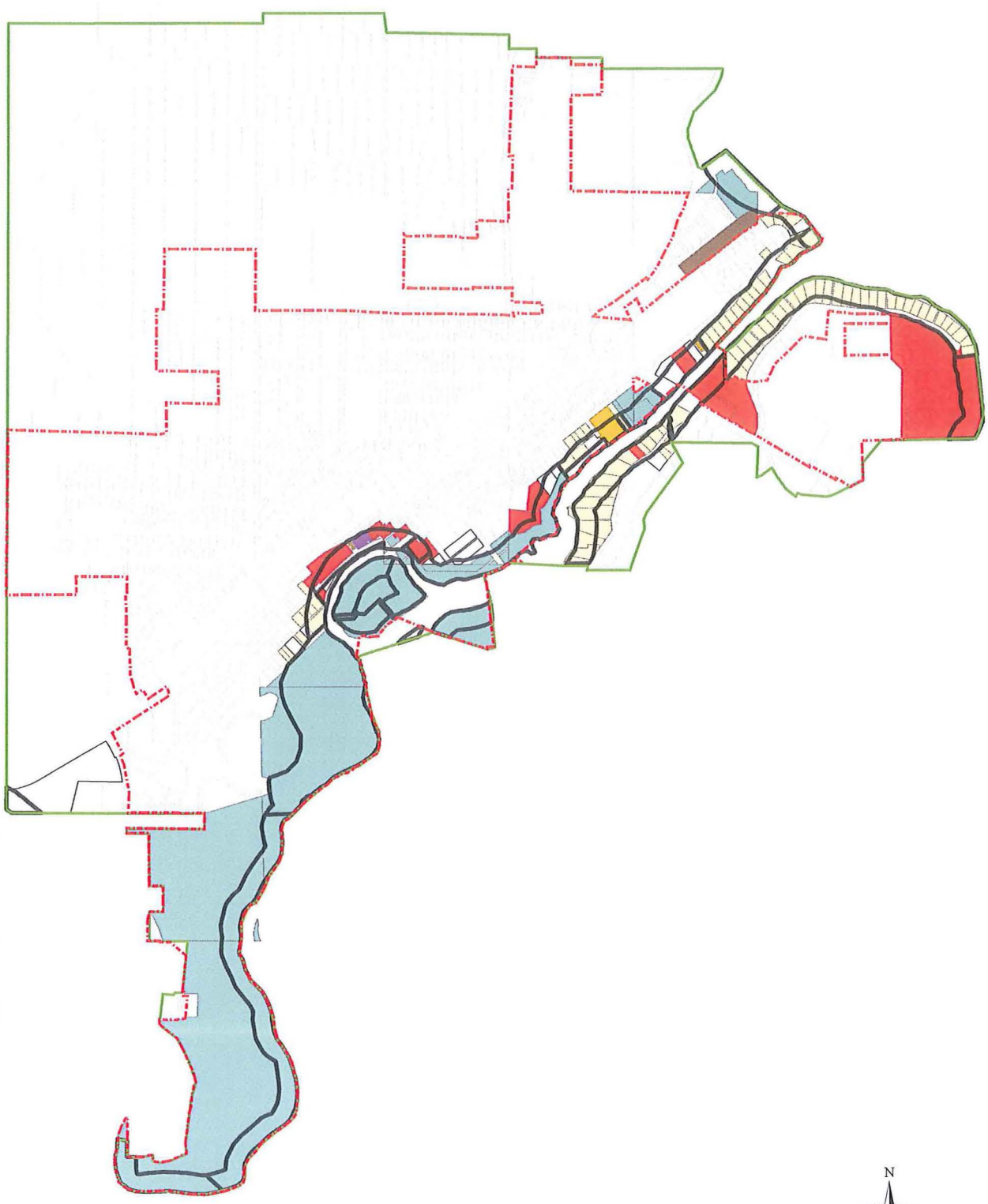
3. The analysis did not consider placement of existing structures to determine whether the lot could be subdivided.

4. Several shoreline lots which fit the criteria for potential division, but were developed to retain 200′ of water/lot frontage were excluded because of the SMP regulatory conditions that would prevent further development.

5. Since intersect was used for the GIS selection, the acreage is likely to exceed what is actually within the jurisdictional area.

The results are as follows:

# Parcels	Acres	Type of Occupation
131	211.3	Fully Developed
15	35.3	Under-utilized
8	6.2	Divisible by district square footage minimums
14	21.1	Vacant/unoccupied
168	**273.9**	**Total**



SCJ ALLIANCE
ENGINEERING AND PLANNING SERVICES

City of Leavenworth Parcels that Intersect the Shoreline Master Program Environment Designatons

1:12,000

0 0.0750.15 0.3 0.45 0.6 Miles

Legend

- City Limits
- Urban Growth Area
- SMP Environment Designations

Leavenworth Land Use Inventory 2012

- Single Family
- Multi Family
- Public
- Quasi Public
- Commercial
- Utilities
- ROW
- Vacant

Leavenworth Parcels