

CHAPTER VIII
SHORELINE MANAGEMENT
ELEMENT

A. INTRODUCTION TO THE SHORELINE MANAGEMENT ELEMENT

THE SHORELINE MANAGEMENT ACT

In 1971, in response to a citizens' initiative, the Washington State Legislature passed the Shoreline Management Act (the "SMA" or "Act"). The SMA was adopted by the public in a 1972 referendum. Its purpose is to manage the shorelines of the state in order to protect the public interest in shoreline resources. You can view the entire SMA (RCW 90.58) on the Washington State Legislature's web site at <http://apps.leg.wa.gov/RCW/default.aspx?cite=90.58>. The sites listed below also offer information about the SMA and shoreline management in the State of Washington.

Municipal Research and Services Center of Washington (MRSC):
<http://www.mrsc.org/Subjects/Environment/shorelin.aspx>.

Washington Department of Ecology:
http://www.ecy.wa.gov/programs/sea/SMA/st_guide/SMP/index.html.

SHORELINE MASTER PROGRAMS

Water is one of our most important natural resources. Whether it is for domestic consumption, municipal use, irrigation, recreation or habitat for myriad fish and wildlife species, water and the many beneficial uses it supports are the basis for life and the economy in Brewster.

The overall statewide goal of shoreline management planning is *"to prevent the inherent harm from uncoordinated and piecemeal development of the state's shorelines"*. One of the ways in which Brewster protects shoreline resources is through the preparation, adoption, implementation and updating of a Shoreline Master Program which is comprised of this Element of the Comprehensive Plan and shoreline regulations adopted in 17.46 and related chapters of the Brewster Municipal Code.

Under the SMA each city and county that includes "Shorelines of the State" must adopt a Shoreline Master Program (SMP) that is based on state laws and rules but may be tailored to the specific needs of the community. The SMP is essentially a shoreline comprehensive plan (that is, a planning document – this element) and zoning ordinance (that is, a regulatory document – Chapter 17.46 BMC) applicable to shoreline areas and customized to local circumstances.

SMPs are developed and administered by local jurisdictions in partnership with the Washington State Department of Ecology (Ecology). Brewster has developed this Shoreline Management Element and Chapter 17.46 BMC that reflect local conditions and meet local needs. Ecology reviews the programs prior to final adoption. In reviewing master programs, Ecology is limited to a decision on whether or not the proposed changes are consistent with the policy and provisions of the Act and the SMP guidelines (see below for a discussion of the SMP guidelines).

Local governments also administer SMPs—that is, review project proposals, issue permits, and enforce the SMP regulations. Ecology reviews Shoreline Conditional Use Permits and Variances and may review some of the local governments' other permit decisions.

SHORELINES OF THE STATE

Shorelines of the State can be divided into two categories: “Shorelines” and “Shorelines of Statewide Significance.”

Shorelines include:

- All streams and associated shorelands, together with the lands underlying them, beginning at the point where mean annual flow is 20 cubic feet per second (cfs) or more
- All lakes over 20 acres in size

Shorelines of Statewide Significance are those that have importance beyond the region; they are afforded special consideration.

In Brewster, the Columbia River (Lake Pateros), the City’s only shoreline, is a shoreline of statewide significance and thus must be afforded special consideration.

SHORELINE JURISDICTION

Shoreline jurisdiction is the area to be managed under this Element and Chapter 17.46 BMC and is defined as follows:

- Upland areas that extend 200 feet from the ordinary high water mark from the waters listed above measured on the horizontal; and
- The following areas when they are associated with those waters:
 - Wetlands and river deltas; and
 - 100-year floodplains

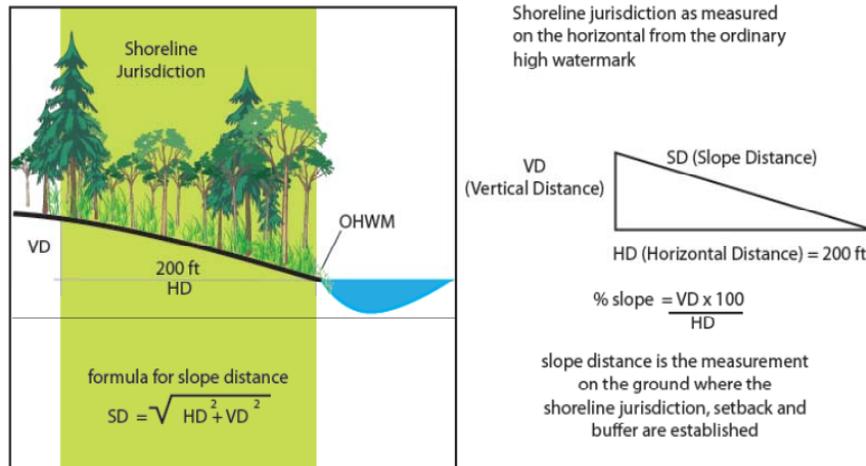


Figure 1.1 Defining Shoreline Jurisdiction

DEPARTMENT OF ECOLOGY'S ROLE

Since the SMA requires a cooperative effort between state and local governments in the protection of shoreline resources, the Department of Ecology has a significant role in the development and implementation of this Master Program. Most of Ecology's work involves providing technical assistance *prior* to a local decision and is focused in the following areas:

- Ecology shoreline specialists work with local planners on the phone, at pre-application meetings, and through site visits
- Ecology works with applicants to make sure the project does not harm shorelines—in many cases the project can be redesigned so that it meets the policies and regulations of the local master program
- Ecology often receives early notice of a project through SEPA, and works with applicants and local governments before the permit is issued.
- After a local government issues its permits, Ecology has 21 days to review Substantial Development Permits and 30 days to review Conditional Use and Variance permits.
- Ecology's role is to determine if the local action is consistent with the local Master Program and the policies of the Act
- If Ecology disagrees with a local decision on a Substantial Development Permit, Ecology must appeal the decision to the Shoreline Hearings Board
- Ecology must approve, approve with conditions or deny all Conditional Use or Variance permits
- Ecology's decisions on Conditional Use or Variance permits may be appealed to the Shorelines Hearings Board

While the primary responsibility to enforce the SMA rests the City, there exists a cooperative program between the local governments and Ecology. The cooperative program is to fulfill the duty to "ensure compliance." Enforcement is done through a variety of means, including technical assistance visits, notices of correction, orders, and penalties and permit rescission.

SMP GUIDELINES

Department of Ecology issues Shoreline Master Program Guidelines in WAC 173.26. Information regarding Shoreline Master Program updates. Procedures and policies including new guidelines and updates can be found at the following URLs:

History and links. Include link to history:

http://www.ecy.wa.gov/programs/sea/sma/guidelines/downloads/SMA_History.pdf.

Ecology site with link, background:

<http://www.ecy.wa.gov/programs/sea/SMA/guidelines/index.html>

State master program approval/amendment procedures and master program guidelines (WAC 173-26): <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-26>.

SHORELINE MODIFICATIONS

Shoreline modifications are generally related to construction of a physical element such as a dike, breakwater, dredged basin, or fill, but they can include other actions such as clearing, grading, application of chemicals, or significant vegetation removal. Shoreline modifications are usually undertaken in support of or in preparation for a shoreline use; for example, dredging (shoreline modification) to allow for a marina (boating facility use). All shoreline uses and activities, even those that are exempt from the requirement to obtain a shoreline substantial development permit, and regardless of the Shoreline Designation in which they are undertaken, must conform to all of the applicable policies and regulations listed in this Element and Chapter 17.46 BMC. For example, a residential development project that included docks and roads would need to comply with the policies and regulations related to docks and roads as well as those related to residential development.

SHORELINE STABILIZATION

Shoreline stabilization includes actions taken primarily to address erosion impacts to upland property and improvements caused by current, wake, or wave action. Those actions include structural, nonstructural, and vegetative methods.

Structural stabilization may be “hard” or “soft.” “Hard” structural stabilization measures refer to those with solid, hard surfaces, such as concrete bulkheads, while “soft” stabilization, such as biotechnical vegetation measures, rely on softer materials. There is a range of measures from soft to hard that includes: upland drainage control, biotechnical measures, anchor trees, gravel placement, riprap, retaining walls, and bulkheads. Generally, the harder the stabilization measure, the greater the impact on shoreline processes.

Non-structural methods include placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, established building setbacks, ground water management, and planning and regulatory measures to avoid the need for structural stabilization as established in this Element and Chapter 17.46 BMC.

Vegetative methods include re-vegetation and vegetation enhancement. In addition, vegetation is often used as part of structural stabilization methods; it is always part of biotechnical stabilization. For the purposes of this section, vegetative methods are considered to include only re-vegetation and vegetation enhancement.

INVENTORY, ANALYSIS, AND CHARACTERIZATION

The SMA requires that all shoreline areas subject to regulation have been inventoried to characterize existing shoreline function to develop a baseline that can be used to measure the no net loss standard against. The inventory is intended to capture opportunities for restoration, public access, and shoreline use patterns. This information informed development of the designations applied to the shoreline areas in the City. More information on the characterization is located in Appendix A and in Part B of this element.

CRITICAL AREAS

The City is required to designate critical areas by the Growth Management Act, RCW 36.70A and is required to regulate development in critical areas within shoreline jurisdiction through the Shoreline Master Program (See Chapter VII Growth Management Element for more detail on critical areas in Brewster and the Future Service Area). Critical Areas include the following areas and ecosystems, as designated by the city:

- wetlands;
- areas with a critical recharging effect on aquifers used for potable water;
- aquatic, riparian, upland and wetland Fish and Wildlife habitat conservation areas;
- frequently flooded areas, including Channel Migration Zones;
- Geologically hazardous areas.

Critical areas within shoreline jurisdiction will be regulated under Chapter 17.46 BMC. Those areas outside shoreline jurisdiction will be regulated under the Chapter 17.30 BMC.

Maps VII-1 through VII-6 in the Map Appendix designate each type of Critical Area within the City and Future Service Area. It should be noted that the city lies on the shoreline of the heavily controlled Columbia River and therefore has no channel migration zone, no federal Flood Insurance Rate Map, limited riparian habitat and wetland areas.

SHORELINES MANAGEMENT GENERAL POLICIES AND CONCEPTS

General Policies: The SMA establishes three general policies:

Protect shoreline natural resources

...including “..the land and its vegetation and wildlife, and the water of the state and their aquatic life...”

Encourage water-dependent uses

Accommodate reasonable and appropriate uses:

“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...”

Promote 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.”

Concepts: The SMA also considers the following important concepts:

Property rights

RCW 90.58.020: “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.”

No net loss

“The point of the no net loss requirement is that local governments need to show that everything permitted under the new SMP, both on a project-by-project and cumulative basis, won't create a net loss of ecological functions. It's not that the SMP has to fix everything that happened before (including ongoing impacts), just that it can't create any NEW loss of ecological function.”

On a project specific basis the City will require mitigation measures to achieve the no net loss standards under the shoreline master program. The mitigation measures will be considered as outlined below in order of descending preference:

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 to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
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;
6. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Preferred uses

The SMA establishes the concept of *preferred uses* of shoreline areas. In order to balance the public's enjoyment of shorelines with “the overall best interest of the state and the people generally”, the SMA gives preference to uses that:

- Are consistent with control of pollution;
- Are consistent with prevention of damage to the natural environment; or
- Are unique to or dependent upon use of the state's shoreline

The Act goes on to say that '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 in the following order of preference:

Water-oriented uses

Water oriented uses are water-dependent, water-related, or water-enjoyment, or a combination of such uses. Each of these types of water-oriented use is described in detail below.

Water-dependent uses

Water-dependent uses are uses or a portion of a use that 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, such as portions of a marina or a hydroelectric generation facility.

Water-related uses

Water-related uses are those that must be located in shoreline areas in order to be economically viable. “Water-related use” means 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.

Water-enjoyment uses

Water enjoyment uses such as 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.

Exempt uses

Exempt activities are defined in Chapter 17.46.050 BMC. An exemption from a permit process is not an exemption from compliance with the Act or the shoreline master program, or from any other regulatory requirements. Regulations for exempt activities are found in 17.46 BMC.

Conforming and non-conforming uses, structures and lots

Conforming uses, structures and lots

A conforming use, structure or lot is compliant with current regulations in Chapter 17.46 BMC.

Non-conforming uses

Nonconforming uses are uses and developments that were legally established and are nonconforming with regard to the use regulations of Chapter 17.46 BMC may continue as legal nonconforming uses.

Non-conforming structures

A nonconforming structure is a lawful structure existing at the effective date of the adoption of Chapter 17.46 BMC that could not be built under the terms of this code or any amendment thereto. Residential and appurtenant structures that were legally established and are used for a conforming use, but that do not meet standards for the following to be considered a conforming structure: setbacks, buffers, or yards; area; bulk; height; or density; and redevelopment, expansion, change with the class of occupancy, or replacement of the residential structure if it is consistent with this Element and Chapter 17.46 BMC, including requirements for no net loss of shoreline ecological functions shall not be considered nonconforming.

Non-conforming lots

A nonconforming lot is an undeveloped lot, tract, parcel, site, or division of land which was established in accordance with local and state subdivision requirements prior to the effective date of the Act or this Element and Chapter 17.46 BMC, but which does not conform to the present lot size standards, may be developed if permitted by other land use regulations of the responsible local government and so long as such development conforms to all other requirements of this Element, Chapter 17.46 BMC and the Act.

Ecological Function and Value

As one of the guiding policies of the SMA, basic policy # 1 requires the protection of shoreline natural resources including the land and its vegetation and wildlife, and the water of the state and their aquatic life. Whenever the terms “shoreline functions and values” are used, it shall refer to the ecological function and ecological value as described below. Similarly, this Element and Chapter 17.46 BMC are required to ensure no net loss in ecological function and value as established below:

Ecological Function

Ecological Function encompasses the ecological processes and interactions that occur within an ecological community. Ecological function includes:

- Provision of habitat for native biota;
- Provision of food and other resources for native biota;
- Maintenance of interactions between species (e.g., pollination, dispersal, mutualism, competition, predation)
- Cycling, filtering and retention of nutrients;
- Carbon storage or sequestration;
- Maintenance of soil processes;
- Maintenance of catchment scale hydrological and geochemical processes; and
- Maintenance of landscape scale ecological processes.

Ecological Value

Ecological Value attributes include productivity, the ability to provide habitats for dependent species and the diversity of species and organization they support.

Riparian areas or zones

Riparian means “*streamside*.” Riparian areas include the land adjacent to lakes, rivers and streams, the vegetation above it, and the groundwater area beneath it. Riparian areas are three-dimensional ecotones of interaction that include terrestrial and aquatic ecosystems that extend into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain to the water, laterally into the terrestrial ecosystem, and along the water course at a variable width. Riparian areas are particularly important to shoreline health because they are ecotones—transition areas between different ecosystems. Ecotones tend to display higher diversity than either of the adjacent ecosystems because they have characteristics of both of them. Riparian areas are no exception. Because they are low-lying and close to the watertable, they offer damp, fertile soil that typically supports more vegetation than either the water or the land alongside it. That vegetation provides habitat elements such as food and cover for many species of animals. The zone as a whole provides important ecological function and values including streamside habitat that supports in stream function and values such as cool water via shade, organic matter, nutrient cycling, and habitat structure for terrestrial species.

In areas where no riparian vegetation exists due to shoreline modifications (as is the case throughout most of Brewster's shoreline areas) or development such as fill or levee-protected areas, riparian zones may not occur or may not exhibit the full suite of ecological functions and values as intact systems. Treatment of these highly altered riparian areas should consider both the potential for restoration or enhancement along with the communities desire to utilize the shoreline for water-dependent and water-oriented uses.

Upland

The portion of the landscape above the valley floor and/or any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils and/or hydrologic characteristics associated with wetlands. Such areas in floodplains are more appropriately termed non-wetlands. Uplands are also often used in relationship to streamside areas that do not have wetlands (see riparian definition above).

Upland Habitat

Upland Habitat is the dry habitat zones adjacent to and landward of bodies of water.

Public Access

Shoreline public access includes the ability of the general public to reach, touch and enjoy the water's edge, to travel on the waters of the state and the ability to have a view of the water and the shoreline from adjacent locations. Public access can include (but is not limited to) picnic areas, pathways and trails, floats and docks, viewing towers, bridges, boat launches, street ends, ingress and egress, and parking. Visual access can also include (but is not limited to) view corridors between buildings.

Instream Structures

In-stream structures are structures placed by humans within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

Clearing and Grading

Clearing and grading are activities associated with developing property for a particular use. Specifically, "clearing" means the destruction, uprooting, scraping, or removal of vegetative ground cover, shrubs, and trees. "Grading" means the physical manipulation of the earth's surface and/or surface drainage pattern without significantly adding or removing on-site materials. "Fill" means placement of dry fill on existing dry or wet areas and is addressed later in this chapter.

Clearing and grading are regulated because they may increase erosion, siltation, runoff, and flooding, change drainage patterns; reduce flood storage capacity; and damage habitat. All clearing and grading within areas under shoreline jurisdiction, even that which does not require a permit, must be consistent with the Shoreline Management Act, the Department of Ecology rules implementing the Act, and the goals and policies within this element and regulations in Chapter 17.46 BMC.

Dredging and Material Disposal

Dredging is the removal or displacement of earth or sediments such as gravel, sand, mud, silt,

and/or other materials or debris from any water body or associated shoreline or wetland. Dredging is normally done for specific purposes such as constructing or maintaining canals, navigation channels, or marinas, for installing pipelines or cable crossings, or for dike or drainage system repair and maintenance. Dredge material disposal is the depositing of dredge materials on land or into water bodies for the purposes of either creating new lands or disposing of the by-products of dredging. Dredge material disposal within shoreline jurisdiction is also subject to the filling policies later in this section.

Fill

Fill is the addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the ordinary high water mark, in wetlands, or on shorelands, including channel migration areas, in a manner that raises the elevation or creates dry land. Fill does not include sanitary landfills for the disposal of solid waste.

Bulkheads

A bulkhead is a type of hard structural shoreline stabilization measure. Bulkheads are walls, constructed parallel to the shoreline and usually in contact with the water, whose primary purpose is to contain and prevent the loss of soil caused by erosion or wave action. A bulkhead-like structure used as part of the structure of a cantilevered dock is not regulated as a bulkhead as long as the width is no more than what is required to stabilize the dock.

Certain bulkheads are exempt from the requirement to obtain a shoreline substantial development permit. However, all bulkheads must comply with the Shoreline Management Act, the rules implementing the Act, this Element and Chapter 17.46 BMC.

Vegetation Conservation

Vegetation conservation includes activities to prevent the loss of plant communities that contribute to the ecological functioning of shoreline areas. The intent of vegetation conservation is to provide habitat, improve water quality, reduce destructive erosion, sedimentation, and flooding; and accomplish other functions performed by plant communities along shorelines. Vegetation conservation deals with the protection of existing diverse plant communities along the shorelines, aquatic weed control, and the restoration of altered shorelines by reestablishing natural plant communities as a dynamic system that stabilizes the land from the effects of erosion.

Vegetation conservation provisions are important for several reasons, including water quality, habitat, and shoreline stabilization. Shoreline vegetation improves water quality by removing excess nutrients and toxic compounds, and removing or stabilizing sediments. Habitat functions of shoreline vegetation include shade, recruitment of vegetative debris (fine and woody), refuge, and food production. Shoreline vegetation, especially plants with large root systems, can be very effective at stabilizing the shoreline.

Vegetation conservation regulations apply even to those uses that are exempt from the requirement to obtain any sort of shoreline permit. A comprehensive list of native plant species is found in Appendix B.

Restoration

Degraded areas from the Inventory and Analysis have been identified including those with impaired ecosystem processes and ecological functions. Of the areas identified those, which

have a high potential for restoration opportunities, have been mapped.

In addition to the Inventory and Analysis conducted as part of this SMP update, regional efforts to restore ecosystem functions and values in response to water quality impairments, water conservation, invasive species, and the listing of threatened and endangered species have identified a multitude of sites for restoration and are underway throughout the county by a variety of agencies and organizations. This restoration plan is intended to provide the city of Brewster with general goal and policies, a prioritization, and strategies for implementation and coordination of restoration of shorelines.

Restoration Goal, Objective and Policies

The governing principals of the shoreline update guidelines requires local jurisdictions that contain shorelines with impaired ecological functions to provide goals and policies to guide the restoration of those impaired shorelines. The regional shoreline staff and advisory committee compiled a list of potential restoration sites using data obtained during the inventory phase of the master program update, which identified impaired shoreline areas. Ongoing restoration efforts were included with the inventoried sites to create a comprehensive list of potential restoration opportunities. General and specific goals and policies have been developed and are listed below to address restoration of these various areas.

Goal

The goal of restoration is to mitigate the negative impacts of past actions, which will likely restore shoreline condition, as needed, to achieve a no net loss standard in shoreline ecological functions of the City's shorelines. Restoration actions will provide for the timely repair and rehabilitation of impaired shorelines through a combination of public and private programs and actions including conservation.

Objectives

- Restoration projects shall be designed with the intent to achieve no net loss of ecological functions.
- Encourage cooperation between public agencies, private property owners, citizens, local schools and non-profits, volunteer groups for restoration projects.
- Facilitate restoration by expediting and simplifying the shoreline permit process for projects that are conducted solely for restoration purposes, when such projects comply with the statutory authority to grant exemptions.
- Encourage public education of shorelines in conjunction with restoration projects.

Policies

- Development proposals in the shoreline shall be evaluated as to their potential for voluntary ecological restoration and conservation in context to regional priorities on behalf of the property owner. The City shall provide guidance and, where appropriate, administrative assistance in voluntary restoration projects.
- Restoration and enhancement of shorelines should be designed using principles of landscape and conservation ecology and should restore or enhance shoreline ecological functions and values at local and watershed scales.

- The Administrator should coordinate and facilitate restoration efforts on behalf of development proposals as they relate to local plans and policies such as recreation and economic development plans.
- The City should seek funding from state, federal, private and other sources to implement restoration, enhancement, and acquisition projects and where appropriate serve as agency sponsors for restoration plans that affect shorelines and water quality of shorelines, especially shorelines of statewide significance
- The Administrator should develop review guidelines that will streamline the review of restoration only projects. Exemption guidelines or criteria need to be developed.
- Educate public and private shoreline owners of the benefit of using native, noninvasive wildlife, fish and plants in shoreline areas.
- Ensure that long-term maintenance and monitoring of mitigation requirements are included in the original permitting of the project.
- Allow for the use of tax incentive programs, mitigation banking, restoration grants, land swaps, or other programs, as they are developed to encourage restoration of shoreline ecological functions and protect habitat for fish, wildlife and plants.
- Jurisdictions shall pursue the development of an incentive based rating system that incorporates public benefit gained from the restoration of the shoreline.
- Jurisdictions shall develop educational materials that promote the stewardship of shoreline functions including information on permitting and regulations.
- Encourage agricultural property owners to work closely with agencies, such as the Douglas County PUD, Natural Resource Conservation Service and Okanogan Conservation District, with expertise in agricultural practices and restoration to improve degraded shoreline functions.
- Shoreline administrator shall participate in local, regional or national efforts as needed to coordinate restoration efforts in the jurisdiction.

Restoration Techniques

Table 1. The following table contains a list of techniques that are available for shoreline restoration by focusing on enhancement of natural functions. Given the City's location on a large dam controlled body of water, restoration opportunities are primarily limited to maintenance and enhancement of existing riparian areas and working to reduce sediment generation in upland areas.

Table 1 Restoration Goals and Techniques

Restoration Goal/Objectives	Function or Value Description	Specific techniques (examples)
Enhance hydrologic and sediment processes	Enhance natural timing, frequency, and duration of peak flows and low flows, and redirect flows to enhance natural processes. Restores sediment process functions that deliver coarse and fine sediment to the aquatic system.	Road improvement: removal, upgrade stream/culvert crossings, reduce road drainage to stream, use natural systems engineering techniques to protect infrastructure and improve/enhance habitat and ecosystem function, traffic reduction; decommissioning of forest roads Riparian Enhancement: fencing, re-vegetation, wetland restoration impervious surface reduction
Nutrient enhancement	Primary productivity increases with nutrients and provides multiple benefits to the capacity and diversity of the aquatic food web.	Carcass placement, stream fertilization, LWD and engineered log structures
Riparian habitat enhancement	Over time, riparian buffers will result in improved near shore habitat and properly functioning conditions.	Increased planting densities, storm water management and creative land use can significantly increase the rate of riparian restoration.

Prioritization

Prioritization is based on a number of factors, including the needs of individual species, locations of refugia, and cost-effectiveness, response time of techniques, and the probability of success (Beechie and Bolton 1999). Those techniques that have a high probability of success, low variability among projects, and relatively quick response time should be implemented before other techniques. In general, reconnect high-quality isolated habitats, then riparian enhancements, and lastly road restoration.

Roni et al., 2002 described a methodology for prioritizing site-specific restoration strategies in a watershed. This methodology describes three key knowledge components needed to prescribe appropriate site-specific restoration, principles of watershed processes, protection of existing high-quality habitats, and the current knowledge of the effectiveness of specific natural system engineering techniques such as placement of engineered log jams and instream channel roughness elements. While the state of the science on the use of this approach is recent, examples from the past decade include work within the Elwha, Yakima, Nooksack, Quinault river systems. It is recommended that shoreline enhancement projects should include a monitoring plan.

Timelines and funding

Multiple entities are responsible for systematically identifying, securing funding, designing, and constructing projects that provide regionally important watershed scale improvements to water quality and habitat improvements. The funding and timing with respect to design and construction of potential restoration projects is a continuous process.

Incentive Programs

Adopt development standards that incorporate restoration in accordance with the performance based development standards. This could encourage development to be preferentially located outside of critical habitat areas to protect them. This program also promotes restoration opportunities, recreation opportunities, and public access opportunities.

The City should evaluate the opportunity to develop a preferential tax incentive through the Public Benefit Rating System administered by the County under the Open Space Taxation Act (RCW 84.34), which would encourage private landowners to preserve and restore shoreline areas for “open space” tax relief. The Department of Ecology has a guidance document for local governments to use any portion of the criteria to tailor their public benefit rating system to the watershed issues they are facing.

The City should evaluate opportunities to reward creative development proposals where voluntary mitigation clearly restores or enhances existing shoreline ecological functions or contributes to adopted public goals and objectives established by this chapter. Incentives may include relaxation of setbacks, lot density bonus or height restriction reductions.

Implementation and Monitoring

In addition to project monitoring required for individual restoration and/or mitigation projects, the cities and the county should conduct system-wide monitoring of shoreline conditions and development activity, to the degree practical, recognizing that individual project monitoring does not provide an assessment of overall shoreline ecological health.

The following approach is suggested:

1. Track information using GIS and the permitting software as activities occur, such as:
 - a. New shoreline development, by permit type
 - b. Unresolved compliance issues
 - c. Mitigation areas
 - d. Restoration areas

The county or city may require project proponents to monitor as part of project mitigation, which may be incorporated into this process. Regardless, as development and restoration activities occur in the shoreline area, the municipalities should seek to monitor shoreline conditions to determine whether both project specific and SMP overall goals are being achieved.

2. Periodically review and provide input to the regional ongoing monitoring programs/agencies, such as:

- Washington Dept of Ecology water quality monitoring
- Methow Watershed Council
- Methow Restoration Council
- Douglas County PUD
- Upper Columbia Regional Fisheries Enhancement Group
- Okanogan Basin Watershed Planning Unit
- Okanogan Conservation District
- Washington Department of Fish and Wildlife
- Upper Columbia Salmon Recovery Board
- Confederated Tribes of the Colville
- Yakama Nation

Through this coordination with regional agencies, the municipalities should seek to identify any major environmental changes that might occur.

3. Periodic review of environmental processes and functions at the time of SMP updates to, at a minimum, validate the effectiveness of the SMP. The review should consider what restoration activities actually occurred compared to stated goals, objectives and priorities, and whether restoration projects resulted in a net improvement of shoreline resources. Under the Shoreline Management Act, the SMP is required to result in no net loss of shoreline ecological functions. If this standard is found to not be met at the time of review, county or city will be required to take corrective actions. The goal for restoration is to achieve a net gain in ecological function. The cumulative effect of restoration over the time between reviews should be evaluated along with an assessment of impacts of development that is not fully mitigated to determine effectiveness at achieving a net improvement to shoreline ecological resources.

To conduct a valid reassessment of the shoreline conditions every seven years, it is necessary to monitor, record and maintain key environmental metrics to allow a comparison with baseline conditions. The City needs to establish metrics as part of this plan to measure overall success of SMP. Most of these were measured during the inventory and analysis. Examples:

- Linear feet of harden bank
- Linear feet of shoreline protected by easement or dedication
- Linear feet of shoreline with intact riparian vegetation
- Number of restoration sites
- Number of mitigation sites
- Number of NDPS permits
- Acreage of floodplain accessible
- Number of public access points
- Linear feet of shoreline accessible to public
- Number of structures in Shoreline and uses
- Crossings and culverts
- Stormwater or pollution abatement facilities

Evaluation of shoreline conditions, permit activity, GIS data, and policy and regulatory

effectiveness should occur at varying levels of detail consistent with the Shoreline Master Program update cycle and the Comprehensive Plan amendment cycle, which takes place every five years. A complete reassessment of conditions, policies and regulations should be considered every seven years.

Existing Efforts and Ongoing Programs

The programmatic measures within the city of Brewster designed to foster shoreline restoration, achieve a no-net loss in shoreline and upland ecological processes, functions and habitats follow.

The city of Brewster has developed a list of priority restoration and public access enhancement project that are located throughout the City but primarily on Public Properties. These include the following:

Douglas County PUD lands – The PUD owns nearly all of the waterfront property in Brewster and its Future Service Area. The City will continue working with the PUD to restore and enhance habitat as well as improve opportunities for public access to the shoreline area.

Shoreline Access Inventory – This project is focused on identifying opportunities to improve existing public access areas on public and private property. The primary goal will be to develop a community access inventory to inform the local planning process of community needs and desires and ensure that adequate access is being provided and maintained through the application of this chapter.

Additionally, there are many programs in place that occur in Brewster that are related to Natural Resource Conservation Service or Conservation District programs. The jurisdiction does not anticipate leading most restoration projects or programs. However, the SMP represents an important vehicle for facilitating and encouraging restoration projects and programs that could be led by public, private and/or non-profit entities.

B. THE BREWSTER SMP

INTRODUCTION

The City of Brewster is located along the main stem of the Columbia River, immediately downstream of the outflow of the Okanogan River; both are Shorelines of Statewide Significance. Shoreline areas include the banks of the Columbia River along Wells Pool running upstream from RM 526-527 to the confluence with the Okanogan River.

The shoreline is characterized by the inundation zone of Wells Pool, an impoundment created by the Douglas PUD's AZ Wells Dam on the Columbia River, within the city and its future service area. Because of the reservoir, the shorelines in Brewster are functionally categorized as lake shores.

These shorelines do not experience typical river dynamics marked by seasonal fluctuations in flows. The pool level is controlled and fluctuations can occur seasonally or in some instances daily in response to flooding, power generation and fish passage. These fluctuations and wave action from winds and boat traffic are the primary forces that affect the shoreline physical environment. The shorelines in Brewster have been heavily altered by filling and armoring. This highly manipulated shoreline provides for recreational (including overwater structures), residential, commercial and industrial development. Docks, floats and bridges contribute to a total count of at least seven (7) over water structures throughout the city. These impacts compromise the biological functions resulting in shorelines that generally exhibit high stressors. Still, anadromous fish utilize these waters for migration and rearing, so the importance of management of these shorelines is vital for protection of remaining ecological integrity.

The shorelines within or adjoining the Future Service Area (FSA) of the city of Brewster are characterized by tree fruit agriculture, residential and commercial uses. The majority of the waterfront shoreline area is owned by the Douglas County PUD. Access can be found at Columbia Cove Park, including two docks, two lane launch, swimming and picnic areas, and along the river walk in downtown Brewster. The shoreline along this portion has been greatly modified as part of the development of the Wells Dam impoundment. The entire shoreline has been stabilized with rip rap and supports a narrow band of riparian species in some areas. Fluctuations of the pool create variable habitat zones along the water's edge, and some side bar islands and limited wetlands do exist; however, the shoreline has been greatly simplified and is more reflective of lakeside environments than river systems.

The southern part of the City and it's FSA encompasses the shoreline area parallel to US 97 and the Genesee and Wyoming Railroad along the Columbia River between Brewster and Indian Dan Canyon, RM 529- 527. The waterfront is almost entirely owned by the Douglas County PUD. Those portions not owned by the PUD are composed of residential subdivisions near Brewster and some orchards and industrial uses related to agriculture and transportation. The shoreline through this section has been highly altered from hydroelectric development and includes heavy armoring to support and protect this vital transportation corridor for the railroad and highway. There is one developed access point operated by the PUD near RM 529.

APPLICABILITY

The City of Brewster Shoreline Master Program, comprised of this Element of the Brewster Comprehensive Plan and Chapter 17.46 BMC applies to all lands owned by private parties and

public agencies including, but not limited to, individuals, corporations, trusts, partnerships, Federal (federal activities on federal lands are exempt), State, County, Public Utility Districts and Municipal lands within the incorporated boundary of the city of Brewster and is subject to administrative review for any development activities owned by public agencies within the city limits. Map VIII-1 in the Map Appendix shows ownership information for the shoreline areas in Brewster and Future Service Area.

This Element and Chapter 17.46 BMC regulates shorelines within the incorporated limits of the city of Brewster. Shoreline Areas in the adopted Future Service Area are “predesignated” with the shoreline designation that will apply upon annexation of the area. However, until such time, those areas will be designated and regulated under the Okanogan County SMP as it exists or is amended.

BACKGROUND

This Plan Element and Chapter 17.46 of the BMC are the result of an update of the City’s original 1991 SMP. The update process began in 2006 as a cooperative inter-governmental process between Okanogan County and incorporated municipalities therein. The process, funded with grants from the Department of Ecology, included the formation of a Shoreline Advisory Group (SAG), a Technical Advisory Group (TAG) and a team of consultants who provided the facilitation, planning and scientific analysis required for preparation of a draft Regional SMP.

The Regional SMP never made it past the preliminary draft stage as the County and cities and towns began going in different directions with Brewster selecting to continue working with the other municipalities in Okanogan County on completion and refinement of the draft based on early comments from the Department of Ecology.

The City’s Planning Commission then conducted a thorough review of the complete Draft Cities and Towns SMP tailoring it for Brewster and addressing additional comments from the Department of Ecology. After public hearings before the Planning Commission and City Councils, an updated SMP was officially submitted to Ecology in June of 2011.

After preliminary review of the draft, Ecology responded that it would be best for the City to withdraw its submittal and spend time reviewing a long list of “required” and “recommended” changes rather than have Ecology rewrite and adopt an SMP on behalf of the City. The City concurred and the Planning Commission went through Ecology’s comments and prepared a summary of actions taken to address the comment, offer an alternative or note for further discussion. As this process concluded in early 2013, staff at Ecology changed along with the scope and extent of comments the City needed to address.

SHORELINE CHARACTERIZATION

The characterization of the Columbia River shoreline within Brewster and its Future Service Area found that the shorelines offer limited potential for ecological restoration as the majority is owned by the Douglas County PUD to accommodate the Wells Pool fluctuations (See Characterization Report in Appendix A). These fluctuations make establishing reliable riparian zones challenging. The fact that the majority of the shoreline area has been armored and filled as part of the development of the Wells Pool also limits opportunities for restoration. Regardless, gains can be made through enhancements of shoreline natural complexity through vegetation and establishing near shore habitat structure on public lands. Most importantly, conservation and low impact development technologies

that will protect water quality and protect existing vegetation of large tracts of undeveloped lands adjacent to the waterfront should be a priority for maintaining the integrity and aesthetics of Brewster's shorelines.

It is important that the shoreline designations and regulations applied in this Element and Chapter 17.46 BMC recognize existing structures and uses, as well as the City's future land use plans.

BREWSTER SHORELINE MANAGEMENT GOALS AND POLICIES

Shoreline General Goals

1. Provide for the use, development, protection and enhancement of shoreline areas in compliance with the requirements of the Shoreline and Growth Management Acts.
2. Shoreline management planning and regulation take place in a context that includes comprehensive land use, economic development, critical areas protection, flood hazard management, salmon recovery, outdoor recreation, public utilities and watershed planning. The intent is to enhance the efficiency and effectiveness of natural resource planning processes through coordination.
3. Develop and implement permitting and management practices that will ensure the sustainability of natural shoreline systems and preserve, protect and restore unique and non-renewable resources or features including critical areas.
4. Ensure that there is no net loss of the functions and values provided by shoreline and critical areas.
5. Provide for reasonable and appropriate use of shoreline and adjacent land areas while:
 - Preserving and restoring shoreline natural resources, and protect those resources against adverse impacts, including loss of ecological functions necessary to sustain the natural resources.
 - 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;
 - Minimizing damage to the ecology, environment, critical areas and other resources of the shoreline area;
 - Minimizing interference with the public's use of the water; and
 - Balancing public interest with protection of private property rights.
6. Encourage a diversity of shoreline uses, consistent with the city of Brewster's evolving economy, patterns of land use and comprehensive plan.
7. Sustained yield of shoreline natural resources—such as fish, groundwater and agricultural products—consistent with preservation of ecological functions and protection of the public interest in shorelines of the state should be protected.
8. Avoid costly litigation that may occur as a result of non-compliance with state and federal laws.

Shoreline General Policies

1. Shorelines regulations should not deny all economic use of any property, except as the public trust doctrine would limit the use of the property. This policy should be implemented through the appropriate application of methods including but not limited to project design standards, site specific evaluation, mitigation, and variances.
2. The background, goals and policies for shorelines management should be integrated as an Element of the Brewster Comprehensive Plan
3. The standards and regulations for protection of shoreline areas should be integrated into the Brewster Municipal Code.
4. Where practical, shoreline management planning and regulation should be coordinated with other natural resource planning efforts (local, state, federal and tribal), including critical areas protection, affecting the city of Brewster, Okanogan County and Douglas County PUD; a comprehensive system of consistent policies and regulations is the desired outcome.
5. As part of a comprehensive approach to management of critical freshwater habitat and other river and stream values, the city encourages the integration of the provisions herein, including those for critical areas, shoreline stabilization, fill, vegetation conservation, water quality, flood hazard reduction, and specific uses, to protect human health and safety and to protect and restore the corridor's ecological functions and ecosystem-wide processes into other parts of the city's code.
6. In designating shoreline areas on publically-owned land, the city of Brewster should consider the uses planned, local and specific agency plans and potential leases for private uses and activities by the agency with management authority.
7. Development and uses within shoreline areas should be conditioned to ensure that the proposed use or activity does not result in unanticipated or undesired impacts to other property owners (such as increased flood or geohazards to other property(ies), either upstream, downstream and across the stream), or result in loss of shoreline ecological functions.
8. Shoreline uses and activities should be compatible with existing and planned uses on surrounding sites and in adjacent designations.
9. Permitted uses and activities should be located, sited, designed, managed, and maintained to be compatible with the shoreline designation where they are located and be protective of shoreline ecological resources, including the following:
 - Water quality;
 - Visual, cultural and historic characteristics;
 - Physical resources (including soils);
 - Biological resources (including vegetative cover, wildlife, and aquatic life);
 - Ecological processes and functions;
 - Critical areas; and
 - The natural character of the shoreline area.
10. Any use or activity that cannot be designed, mitigated and/or managed to prevent a net loss of shoreline ecological functions, values and resources and that are not designed to protect the integrity of the shoreline environment should be prohibited.

11. Shoreline regulations should favor preservation of resources and values of shorelines for future generations over development that would irrevocably damage shoreline resources.
12. Development standards, including setbacks, densities, height and bulk limits and/or minimum frontage standards, should be established to ensure that new development results in no net loss of shoreline ecological functions. Criteria considered in establishing those standards should include, but not be limited to, the following:
 - Biophysical limitations and ecological functions and values of the shoreline area;
 - Existence of critical areas;
 - Surrounding development characteristics and land division pattern;
 - Level of infrastructure and services available or planned; and
 - Other comprehensive planning considerations.
13. New uses and activities should be restricted to those that will not require extensive alteration of the land-water interface. Construction of shoreline stabilization works should be avoided. New uses and activities should be designed to preclude the need for such works. In those limited instances in which such works are found to be in the public interest and are allowed, impacts should be mitigated.
14. No new uses should be allowed in wetlands, shoreline riparian vegetation conservation areas or their buffers without following mitigation sequencing.
15. The scenic and aesthetic quality of shorelines and vistas should be preserved to the greatest extent feasible.
16. Reasonable setbacks, buffers, and stormwater management systems should be required for all shoreline development.
17. Unique, rare, fragile, and scenic natural features or landscapes should be preserved and protected from shoreline development activities.
18. Natural plant communities within and bordering shorelines should be protected and maintained to ensure no net loss of shoreline ecological functions.
19. Natural shoreline vegetation should be maintained and enhanced to reduce the hazard of bank failures and accelerated erosion. Vegetation removal that is likely to result in soil erosion severe enough to create the need for structural shoreline stabilization measures should be prohibited.
20. Restoration of degraded shoreline vegetation, whether by natural or manmade causes, should be encouraged wherever feasible.
21. Non-structural and “soft” methods of shoreline stabilization, such as vegetation enhancement and bioengineering, are preferred to hardened structures to control the processes of erosion, sedimentation, and flooding. Along the shoreline, these methods can only be done to protect legally established structures, development, utilities and other infrastructure (e.g. roads). The need for bank stabilization should show that the erosion/migration processes are beyond natural rates through geotechnical evaluation. Allowed shoreline stabilization structures should be designed as to not interfere with natural hydrologic and geomorphic processes.
22. Development should comply with local stormwater management regulations or the Stormwater Management Manual for Eastern Washington (Washington Department of

Ecology Publication 04-10-076, as amended) whichever will provide the greatest protection of shoreline functions.

23. Removal of vegetation should be limited to the minimum necessary to reasonably accommodate the permitted use or activity.
24. The physical and aesthetic qualities of the natural shoreline should be maintained and enhanced.
25. Preference should be given to preserving and enhancing natural vegetation closest to the ordinary high water mark.
26. Aquatic weed management should emphasize prevention as a first step in control and utilize science-based monitoring to determine eradication methods.
27. Standards to ensure that new development does not result in a net loss of shoreline ecological functions or further degradation of shoreline values should be established for shoreline stabilization measures, vegetation conservation, and shoreline modifications.
28. All shoreline developments should be designed, constructed, operated, and maintained to ensure no net loss of shoreline ecological functions and to protect areas and systems of cultural significance.

Shoreline Economic Development Goals

1. Ensure healthy, orderly economic growth by providing for economically productive industrial, commercial and mixed uses that are particularly dependent on or related to a shoreline location.

Shoreline Economic Development Policies

1. Commercial activities and uses in shoreline areas should result in long-term over short-term benefits to the local economy.
2. Projects of statewide economic interest such as hydroelectric development, water storage, port facilities, (including sites intended to accommodate recreation) and other developments that are particularly dependent on or related to a shoreline location or use of the shorelines of the state should be accommodated where such uses and the associated activities can be accomplished without irrevocable damage to unique shoreline character, its resources and ecological functions.
3. Proposed hydroelectric projects should be evaluated in the context of shoreline ecological functions, public access, and navigation, and should be accommodated where said projects are consistent with the public interest and intent of the policies of the SMA.
4. Water-oriented commercial and mixed used developments that provide for public access and protect/restore and/or enhance shoreline resources should be encouraged on shorelines.
5. Non-water-oriented commercial uses should be prohibited unless the use entails reuse of an existing structure or developed area, is consistent with comprehensive plan and zoning regulations, is part of a project that provides significant public benefit with respect SMA objectives or is physically separated from the shoreline by a public right of way or separate developed property. Such projects should not unnecessarily impair or detract from the public's physical or visual access to the water.

Shoreline Public Access, Circulation and Recreation Goals

1. Provide, protect, and enhance physical and visual public access to shoreline areas, consistent with the natural character, features, and resources of the shoreline, private property rights, and public safety.
2. Provide for public and private active and passive recreational use of shoreline areas.
3. Develop a safe, reasonable, and adequate vehicular and pedestrian circulation and access system, designed to minimize adverse effects on shoreline resources and ecological function wherever practical.
4. Develop a multi-modal circulation and access system that, where practical, contributes to the functional and visual enhancement of shoreline resources.
5. Preserve, create, or enhance open space and natural amenities associated with shorelines for the benefit of the public health and wellbeing which are often lost to waterfront development.
6. Protect the rights of navigation.

Shoreline Public Access and Recreation Policies

1. For the purpose of the Brewster Shoreline Master Program, locally adopted comprehensive plans and any stand alone elements thereof (e.g. Okanogan County Outdoor Recreation Plan, Douglas PUD Recreation Management Plan, City of Brewster Park and Recreation Plan) should be considered the official public access plans.
2. Brewster's shoreline area public access systems should include provisions for people of all abilities. While it may not be practical to provide specialized facilities at all access points, physical and visual access for people of all abilities should be distributed throughout the system and should provide a variety of opportunities representative of the opportunities available to able-bodied users.
3. All developments, uses, and activities on or near the shoreline should, to the extent practical, not impair or detract from the public's physical or visual access to the water.
4. Provision of public access should result in no net loss of shoreline ecological functions.
5. Public access to the shorelines afforded by street ends, public utilities, and rights-of-way should be inventoried, preserved, maintained, and, where consistent with locally adopted access plans, enhanced.
6. Public access facilities should be located and designed to provide for public safety and minimize potential impacts to private property and individual privacy. Where appropriate, there should be a physical separation or other means of clearly delineating public and private space to avoid unnecessary user conflict.
7. Where public access facilities are provided, they should be located and designed to minimize potential impacts to existing and potential uses and activities.
8. Where providing public access on site that would likely cause impacts difficult or impossible to mitigate—for instance, at sites with unique or fragile geological or biological characteristics—the SMP should encourage off-site public access based on opportunities identified in the *Shoreline Characterization Report* (see Appendix A) and other adopted documents.

9. Public views of the shoreline from upland areas should be protected from new development where not in conflict with permitted uses and activities. Enhancement of views should not be interpreted as authorizing excessive removal of vegetation that impairs views.
10. When large subdivisions, planned developments and/ or binding site plans containing 5 or more lots or units are proposed in shoreline areas, public open space and shoreline access should be encouraged and be commensurate to the impacts of the proposed development as well as, consistent with locally adopted comprehensive plans and, meet new needs that will be generated by the proposed development. Where possible the public open space requirements provided in this SMP should be integrated with any open space requirements in local land use regulations. Innovative public access proposals are encouraged.

Shoreline Historic, Cultural, Scientific, and Educational Goals

1. Recognize and protect important archaeological, historic, and cultural structures, sites, and areas and other resources having historic, cultural, or educational values that are located in the shoreline area for educational, scientific, and enjoyment uses of the general public. (This goal recognizes that identification of some culturally sensitive sites may not be feasible. It is the city of Brewster's intention to exercise due diligence in protecting cultural and archaeological resources.)
2. 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 (DAHP).

Shoreline Historic, Cultural, Scientific and Educational Policies

1. All uses and activities (public and private) should comply with local, state, federal, and tribal requirements for protection of any resources that have significant archeological, historic, cultural, scientific, or educational value as identified by the relevant authorities, including the Confederated Tribes of the Colville Reservation (CCT) and the Washington State Department of Archaeology and Historic Preservation (DAHP).
2. Where permitted by law, sites containing archaeological, cultural, and historic resources should be identified to avoid damage to the resources and the delay and expense associated with discovery of resources during development. Where disclosure of the location of such sites is restricted, relevant authorities, including the CCT and the DAHP should be notified of permit applications within 500' (five hundred feet) of known archaeological and historic resources.
3. Development within 500' (five hundred feet) of an identified historic, cultural, or archaeological site should be inspected or evaluated by a profession archaeologist, in coordination with affected Indian tribes, and designed and operated to be compatible with continued protection of the historic, cultural, or archaeological resources.
4. Archaeological sites located both inside and outside shorelines 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 Element and Chapter 17.46 BMC. The provisions of this section apply to archaeological and historic resources that are either recorded at the state historic preservation office and/or by local jurisdictions or have been inadvertently uncovered. Additionally, these policies apply on any other sites identified by

the DAHP or the CCT as having a high probability of containing significant archaeological and historic resources, consultation with the DAHP and the CCT should be required before issuance of any permits or exemptions. This policy applies to all uses and activities, including individual single-family residences.

5. Where feasible, sites containing archaeological, cultural, or historic resources should be permanently protected and preserved for study, education, and public observation. Feasibility should be assessed in consultation with the CCT and the DAHP and in the context of the proposed development or activity, the location and planned use of the site, and the nature and quality of the shoreline resources present. The CCT and the DAHP should be consulted regarding possible impacts of public access and/or interpretation. In those places where access is deemed feasible and appropriate, such access should be designed and managed to protect the resources.
6. Access to educational, cultural, or historic sites should not reduce their resource value or degrade the quality of the environment.
7. Historic, cultural, and archaeological site development should be planned and carried out so as to prevent impacts to the resource. Impacts to neighboring properties and other shoreline uses should be limited to temporary and reasonable levels.
8. Sites deemed to have educational, cultural, or historic value should be prioritized for purchase or acquisition by gift to ensure their protection and preservation.
9. Significant educational or cultural features or historic sites should be prioritized for restoration to further enhance the value of the shorelands.

SHORELINE MANAGEMENT SPECIFIC USE AND ACTIVITY POLICIES

Agriculture

1. New agricultural uses should be allowed where they are consistent with the comprehensive plan and be subject to all applicable provisions of this Element and Chapter 17.46 BMC.
2. A vegetative buffer of native plants should be maintained, or established and maintained between agricultural lands and water bodies or wetlands in order to protect water quality and to maintain habitat for fish and wildlife.
3. Animal feeding operations, retention and storage ponds for agricultural run-off, feed lots, feed lot waste, and manure storage should be located outside of shoreline areas and constructed to prevent contamination of water bodies and degradation of the shoreline environment.
4. Appropriate farm and soil management techniques should be employed to prevent fertilizers, herbicides, and pesticides from contaminating water bodies and wetlands and from having a harmful effect on other shoreline resources such as vegetation and soil.
5. Provisions for public access to shorelines should not restrict current agricultural uses. In the event new public access poses a threat to on-going agricultural uses, the jurisdiction shall facilitate the coordination of activities between conflicting users of the shorelines.

6. Development on agricultural lands not meeting the definition of agricultural activities or the conversion of agricultural land to nonagricultural uses, should be consistent with the environment designation and the general and specific use regulations of this Element and Chapter 17.46 BMC and should not result in a net loss of ecological functions.

Aquaculture

1. Aquaculture should not be allowed in the shoreline areas of Brewster.

Boating Facilities

1. Boating facilities (docks, piers, ramps, marinas, etc...) should be located, designed, and operated to provide maximum feasible protection and enhancement of aquatic and terrestrial life including animals, fish, birds, plants, and their habitats and migratory routes.
2. Boating facilities, including minor accessory buildings and haul-out facilities, shall be in character and scale with the surrounding shoreline and shall be designed so their structures and operations will be aesthetically compatible with or will enhance existing shoreline features and uses. Boating facilities should be proposed at the time of subdivision or planned development application.
3. Boating facilities should be located and designed so their structures and operations will be aesthetically compatible with the area visually affected and will not unreasonably impair shoreline views. Use of natural non-reflective materials should be encouraged.
4. Public and community (private) boating facilities are preferred over individual private facilities.
5. Individual private launches/ramps for motorized watercraft shall be prohibited.
6. Community or group facilities shall be required of developments that serve at least four dwelling units if such developments intend to provide moorage.
7. Private and/or commercial boating facilities shall be sited in the appropriate environmental designation.
8. Regional as well as local needs should be considered when determining the location of marinas, boat launches and community docks. Potential sites should be identified near high-use or potentially high-use areas.
9. Dry boat storage should not be considered a water-oriented use. Boat hoists, boat launch ramps, and access routes associated with a dry boat storage facility should, however, be considered to constitute a water-oriented use.
10. Floating homes should be prohibited. Liveaboards are only allowed per the time and regulatory standards established by Department of Natural Resources. For those marinas not located on DNR jurisdictional bed lands, liveaboards are limited to 10% of total moorage and marina should seek to be certified as a clean marina.
11. Because docks can have a significant impact on shoreline habitat and functions the impacts of all docks should be reviewed to ensure that the proposed structure is suitably located and designed and that all potential impacts have been recognized and mitigated.
12. Multiple use and expansions of existing docks should be encouraged over the addition and/or proliferation of new facilities. Joint-use facilities are preferred over new single-use docks.

13. New commercial docks and marinas should be encouraged and designed to accommodate public access and enjoyment of the shoreline location.
14. Docks should be designed to cause minimum interference with navigation and the public's use of the shoreline.
15. The proposed site of the structure and intensity of use or uses of any dock should be compatible with the surrounding environment and land and water use.
16. Docks not attached to the shoreline (floats) should not extend into waters where they pose a hazard to navigation. Such docks may be allowed by conditional use permit in special situations where the use for such a dock serves a water- oriented use and measures have been taken to reduce the hazard to navigation.
17. Buoys associated with boating facilities should not impede existing navigational routes, infringe on swimming beaches, or other public access areas. Buoys should be limited to the minimum number needed to provide moorage to the development.

Commercial Uses

1. New commercial development in shoreline areas should be consistent with the applicable local Comprehensive Plan.
2. Because shorelines are a limited resource, preference should be given to water-dependent and oriented uses, especially those uses particularly dependent on a shoreline location or those that will provide the opportunity for substantial numbers of people to enjoy the shoreline.
3. Over-water construction for non-water-dependent commercial developments should be prohibited.
4. Commercial development should be designed to provide physical or visual shoreline access or other opportunities for the public to enjoy the shoreline location. Public access should include amenities appropriate to the type and scale of the development and the qualities and character of the site, which may include walkways, viewpoints, restrooms, and other recreational facilities. Where possible, commercial facilities should be designed to permit pedestrian waterfront activities.
5. Site plans for commercial developments should incorporate multiple-use concepts that include open space and recreation where appropriate to the scope and scale of the project.
6. Commercial developments should be aesthetically compatible with the surrounding area. Aesthetic considerations should be actively promoted by means such as sign control regulations, appropriate development siting, screening and architectural standards, planned unit developments, and landscaping with native plants, including, where appropriate, enhancement of natural vegetative buffers.

Industrial Uses

1. No new non-water-dependent industrial development should be allowed to locate within shoreline areas except when:
 - The use entails reuse of an existing structure or developed area.
 - The use is consistent with the comprehensive plan and zoning regulations.

- The use is part of a mixed-use project that includes water-dependent uses and provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration; or
 - Navigability is severely limited at the proposed site; and the industrial use provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration.
 - In areas designated for industrial use, nonwater-oriented industrial uses can be allowed if the site is physically separated from the shoreline by another property, public right of way or entails the reuse of an existing structure or developed area.
2. New industrial development in shoreline areas should be consistent with the applicable local Comprehensive Plan and should be located to minimize sprawl and inefficient use of shoreline areas and, where applicable, to promote trip reduction.
 3. New over-water construction for industrial uses should be prohibited unless it can be shown to be essential to a water-dependent industrial use.
 4. New industrial development should be designed to provide physical or visual shoreline access or other opportunities for the public to enjoy the shoreline location unless such access would be incompatible for reasons of safety, security, or impact to the shoreline environment. Where public access is incompatible with the proposed use, any loss of public access opportunity should be mitigated. Where public access is provided, it should include amenities appropriate to the type and scale of the development and the qualities and character of the site, which may include walkways, viewpoints, restrooms, and other recreational facilities. Where possible, industrial developments should be designed to permit pedestrian waterfront activities.
 5. Site plans for industrial developments should incorporate multiple-use concepts that include open space and recreation where appropriate to the scope and scale of the project.
 6. To the extent feasible, industrial developments should be aesthetically compatible with the surrounding area. Aesthetic considerations should be actively promoted by means such as sign control regulations, appropriate development siting, screening and architectural standards, planned unit developments, and landscaping with native plants, including, where appropriate, enhancement of natural vegetative buffers.

In-stream Uses or Structures

1. In-stream structures for the benefit of public shall be permitted and subject to all state and federal regulations for in-stream uses,
2. Any permitted in-stream structure shall provide for the protection and preservation of ecological and ecosystem-wide services including, but not limited to, fish and fish passage, wildlife and water resources, shoreline critical areas, hydrogeological processes, and natural scenic vistas.
3. In-stream structures for the benefit of fish enhancement and recovery adjacent to or visible from publically-owned shorelines, including bridges and overlooks, shall incorporate a public education element.
4. 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.

Mining

1. Commercial mining should not be allowed. Mineral prospecting and placer mining should be allowed subject to the *Gold and Fish Rules and Regulations* as they now exist or hereinafter amended.

Municipal Uses

1. New municipal uses in shoreline areas should be consistent with the comprehensive and recreation plans of the city of Brewster.
2. No municipal uses should be allowed in wetlands, shoreline riparian vegetation conservation areas or their buffers without following mitigation sequencing.
3. Because shorelines are a limited resource, preference should be given to water-dependent and oriented uses, especially those uses particularly dependent on a shoreline location or those that will provide the opportunity for substantial numbers of people to enjoy the shoreline.
4. Over-water construction for non-water-dependent municipal uses shall be prohibited.
5. Where appropriate, municipal uses should be designed to provide physical or visual shoreline access or other opportunities for the public to enjoy the shoreline location. Public access should include amenities appropriate to the type and scale of the development and the qualities and character of the site, which may include walkways, viewpoints, restrooms, and other recreational facilities.
6. Municipal uses should be aesthetically compatible with the surrounding area.
7. Municipal uses should include shoreline enhancement and restoration activities that will visually enhance the shoreline area and contribute to shoreline functions and values.
8. Favorable consideration should be given to proposals that complement their environment and surrounding land and water uses, and that protect natural areas.

Overwater Structures (Docks and Piers)

1. Design and construction standards for docks and piers should be as defined by the Douglas County PUD and U.S. Army Corps of Engineers.
2. Overwater structures shall only be permitted for water-dependent and recreational uses only. As used here, a dock associated with a single-family residence is a water-dependent use provided that it is designed and intended as a facility for access to watercraft and otherwise complies with the provisions of this section. Dock construction should be restricted to the minimum size necessary to meet the needs of the proposed water-dependent use.
3. Structures for the purpose of public access shall be permitted in areas that do not alter the natural character of the shoreline and be associated with appropriate environmental designation and underlying land uses.
4. Overwater and in water structures are subject to all state regulations and permits, this Element and Chapter 17.46 BMC and those requirements set forth by the WA State Department of Natural Resources and Fish and Wildlife, as well as US Army Corps of Engineers, possibly PUD rules, docks should be designed with these rules in mind and should be constructed of materials approved by those agencies.

5. Group and community docks and piers shall be encouraged during the planning for platting of land through short and long subdivisions and through planned developments where more than two dwelling units are proposed.
6. Water-related and water-enjoyment uses should not be allowed, but in limited circumstances may be allowed as part of mixed-use development in existing over-water structures where they are necessary and auxiliary to the support of water-dependent uses, provided the minimum size requirement needed to meet the water-dependent use is not violated.
7. Overwater structures built for the benefit of public access on publically owned shorelines such fishing docks and platforms must be designed in a manner to provide universal access to people of varying physical abilities.

Parking & Transportation

1. Parking facilities in shorelines are not a preferred use and should be allowed only as necessary to support an authorized use. Parking in shoreline areas should be located upland of the permitted use. Parking located between the Zone 2 buffer and the development may be allowed if the proposed parking location follows:
 - An adopted downtown master plan, neighborhood or sub-area plan; or
 - Current development patterns; or
 - The parking area and development are located behind a certified or licensed flood control device such as levee
2. In any of the above instances, the applicant must demonstrate that measures to protect ecological function and visual impacts of parking located between the required buffers and building can be addressed through a stormwater management plan, planting plan and appropriate mitigation.
3. Parking facilities should be located, designed and landscaped to minimize adverse impacts, including those related to stormwater runoff, water quality, aesthetics, public access, and vegetation and habitat maintenance.
4. Parking should be planned to achieve optimum use of land within the area under shoreline jurisdiction. Where practical, parking should serve more than one use, such as recreational use on weekends and commercial use on weekdays.
5. Transportation and parking plans and projects shall be consistent with this master program's public access policies, public access plan, and environmental protection provisions.
6. Circulation system planning should include systems for pedestrian, bicycle, and public transportation where appropriate. Circulation planning and projects should support existing and proposed shoreline uses that are consistent with this master program.
7. Plan, locate, and design proposed transportation and parking facilities 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. Where other options are available and feasible, new roads or road expansions should not be built within shoreline jurisdiction.

Recreational Uses

1. The location and design of shoreline recreational developments should be consistent with the comprehensive plan and recreation plan of the City.
2. Local, regional, state, and federal recreation planning should be coordinated. Shoreline recreational developments should be consistent with applicable park, recreation, and open space plans of other jurisdictions.
3. A variety of compatible recreational experiences and activities should be encouraged to satisfy diverse recreational needs.
4. Recreational developments should be located, designed, operated, and maintained to cause no net loss of shoreline ecological functions and to be compatible with, and minimize adverse impacts on, valuable cultural and natural features and on nearby land and water uses. Favorable consideration should be given to proposals that complement their environment and surrounding land and water uses, and that protect natural areas.
5. Priority should be given to developments that provide water-oriented recreational uses and other improvements facilitating public access to shoreline areas.
6. Recreational developments should be located and designed to preserve, enhance, or create scenic views and vistas.
7. No Recreational uses should be allowed in wetlands, shoreline riparian vegetation conservation areas or their buffers without following mitigation sequencing.
8. All recreational developments should make adequate provisions for:
 - Vehicular and pedestrian access, both on and off site, including, where appropriate, access for people with disabilities.
 - Proper water supply and solid and sanitary waste disposal.
 - Security and fire protection for the permitted recreational use.
 - The prevention of overflow and trespass onto adjacent properties, by methods including but not limited to landscaping, fencing, and posting of the property.
 - Buffering from adjacent private property or natural areas.
 - Trails and paths on steep slopes should be located, designed, and maintained to protect bank stability and comply with applicable Critical Areas regulations.

Residential Development

1. Residential development on overwater structures is prohibited
2. Development of four or more residential units, whether single-family or multi-family, should provide for public access in the form of physical access and visual access unless it can be shown that public access is adequately provided for on public property within ¼ mile walking distance of the proposed development. Public access is considered adequately provided for if all the following criteria are met:
 - The access is part of a locally adopted parks, recreation and or public access plan.
 - The general public has physical and visual access to access to the water
 - Additional use of the access does not pose additional public safety hazard.

- The public access can accommodate anticipated additional uses and impacts as a result of the proposed residential development.
 - An existing public access area is provided for on applicant's deed or parcel declaration(s) legally recorded at the County records.
3. Residential development, including appurtenant structures and uses, should be sufficiently set back from steep slopes and shorelines vulnerable to erosion (e.g., geologically hazardous areas Map VII-6 in the Map Appendix) so that shoreline stabilization structural improvements, including bluff walls and other stabilization structures, are not required to protect such structures and uses.
 4. Residential development or mixed use developments shall be sited so as to prevent the need for new shoreline stabilization or flood hazard reduction measures that would cause significant impacts to other properties or public improvements or a net loss of shoreline ecological functions.

Subdivision and Land Segregation

1. All proposed plats and lots, including assessor assigned subdivisions, whether for agricultural, residential, commercial or industrial uses or activities, should be of sufficient size that development will not cause the need for structural shoreline stabilization.
2. All proposed plats and lots should be designed with enough area to provide a building site with appurtenant uses (parking, outbuildings etc...), accessory utility needs and fire defensible space to meet the minimum bulk dimensional standards established in Chapter 17.46 BMC for the shoreline designation within which the lot is located, without requiring shoreline variances.
3. Plats and subdivisions, including assessor assigned subdivisions, should be designed, configured and developed in a manner that assures that no net loss of ecological functions results from the plat or subdivision at full build-out of all lots.
4. Plats and subdivisions, including assessor assigned subdivisions should prevent the need for new flood hazard reduction measures that would cause significant impacts to other properties or public improvements or a net loss of shoreline ecological functions.

Signs

1. Signs to be placed or erected in shoreline jurisdiction should be designed and placed so that they are compatible with the aesthetic quality of the existing shoreline and adjacent land and water uses and in compliance with applicable local sign regulations.
2. Signs should not block or otherwise interfere with visual access to the water or shoreline areas.
3. Generally, signs should be of a permanent nature and be linked to the operation of existing or permitted uses. Temporary signs and interpretive signs related to shoreline functions should be allowed where they comply with the other policies of this Element and Chapter 17.46 BMC and, in the case of temporary signs, where adequate provisions are made for timely removal.
4. Signs attached to buildings are preferred over free-standing signs.
5. Lighting associated with signs should be stationary, non-blinking and non-revolving. Signs should not be erected nor maintained upon trees, or drawn or painted upon rocks or other

natural features and artificial lighting of signs should be directed away from adjacent properties and the water.

6. Signs, other than those required for water-dependent use and navigation should not be allowed in the Zone 1 Buffer (Chapter 17.46.060 D)

Utilities and Accessory Utilities

1. All utilities should be designed and located to assure no net loss of shoreline ecological functions, preserve the shoreline character, protect water quality and habitats, and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.
2. Utilities that are non water-oriented including transmission facilities for communications and power plants, or parts of those facilities should not be allowed in shoreline areas unless it can be demonstrated that no other feasible option is available.
3. Transmission facilities for the conveyance of services, such as power lines, cables, and pipelines, shall be located outside of the shoreline area where feasible and when necessarily located within the shoreline area shall assure no net loss of shoreline ecological functions.
4. Existing rights-of-way and corridors should be used whenever possible to accommodate the location of utilities.
5. Whenever possible, utilities shall be located to minimize obstructions of views and vistas. This includes, but is not limited to, views of the shoreline environment from the water, views of the water from shorelines, and views extending beyond the shoreline of other scenic features of local importance such as rock walls, talis slopes, cliffs and perches from the shoreline or water. To preserve views and vistas and shoreline character, placement of utilities underground shall be preferred and mitigated as appropriate with vegetation measures.
6. Accessory utilities necessary to serve shoreline uses should be properly installed so as to protect the shoreline and water from contamination and degradation.
7. Accessory utilities and associated rights-of-way should be located outside the shoreline area to the maximum extent feasible, complying with shoreline setbacks and/or buffers whichever are more protective. When utility lines require a shoreline location, they should be placed underground.
8. Accessory utilities should be designed and located in a manner that preserves the natural landscape and shoreline ecology and minimizes conflicts with present and planned land uses.
9. Accessory utilities should be designed and located to eliminate the need for topping or pruning trees.
10. Wherever possible, existing utility systems should be improved to enhance shoreline appearance and use.

Shoreline Modification Policies

1. All shoreline modifications should be in support of an allowed shoreline use that is in conformance with the provisions of this master program.
2. Shoreline modifications should cause as few environmental impacts as possible and should be limited in size and number.

3. The type of shoreline and the surrounding environmental conditions should be considered in determining whether a proposed shoreline modification is appropriate.
4. Projects that include shoreline modifications should contribute to enhancement of shoreline ecological functions, when possible.
5. As shoreline modifications are allowed to occur, measures to protect and restore ecological functions should be implemented.
6. Development, uses and modifications should plan for the enhancement of impaired ecological functions where feasible and appropriate while accommodating permitted uses. As shoreline modifications occur, incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes.
7. Shoreline developments, uses and modifications should avoid and reduce significant ecological impacts according to the mitigation sequence in WAC [173-26-201](#) (2)(e)).
8. Assure that shoreline modifications individually and cumulatively do not result in a net loss of ecological functions. This is to be achieved by giving preference to those types of shoreline modifications that have a lesser impact on ecological functions and requiring mitigation of identified impacts resulting from shoreline modifications.

Clearing and Grading Policies

1. Clearing and grading activities should only be allowed in association with an allowed shoreline use.
2. Clearing and grading in shoreline areas should be limited to the minimum necessary to accommodate permitted shoreline development.
3. Clearing and grading should be discouraged in required shoreline setbacks.
4. All clearing and grading activities should be designed and conducted to minimize sedimentation and impacts to shoreline ecological functions, including wildlife habitat functions and water quality. Negative environmental and shoreline impacts of clearing and grading should be avoided or minimized through proper site planning, construction timing and practices, vegetative stabilization or (where required) soft structural stabilization, use of erosion and drainage control methods, and by adequate maintenance.
5. For clearing and grading proposals, a plan addressing species removal, re-vegetation, irrigation, erosion and sedimentation control, and other plans for protecting shoreline resources from harm should be required.
6. After completion of construction, those cleared and disturbed sites should be promptly re-stabilized, and should be replanted as required by a mitigation management plan. Vegetation from the recommended list is preferred.

Dredging and Dredge Material Disposal Policies

1. New development should be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.
2. Dredging and dredge material disposal should be located and conducted in a manner that minimizes damage to existing ecological functions and processes, including those in the area to be dredged, at the dredge material disposal site, and in other parts of the watershed.

Impacts that cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions.

3. Dredging of bottom materials for the primary purpose of obtaining material for fill or other purposes should be prohibited, except when the material is necessary for the restoration of ecological functions.
4. Dredging operations should be planned and conducted to minimize interference with water and shoreline uses, properties, and values.
5. Dredging for the purpose of establishing, expanding, or 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.
6. Maintenance dredging of established navigation channels and basins should be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.
7. Dredge material disposal in water bodies should be discouraged, except for habitat improvement or where depositing dredge material on land would be more detrimental to shoreline resources than deposition in water areas.
8. Where dredge material has suitable organic and physical properties, dredging operations should be encouraged to recycle dredged material for beneficial use in enhancement of beaches that provide public access, habitat creation or restoration, aggregate, or clean cover material at a landfill.

Fill Policies

1. Fills waterward of the ordinary high water mark should be allowed only when necessary to facilitate water-dependent use, public access, or cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan, disposal of dredged material considered suitable under, and conducted in accordance with the dredged material management program of the department of natural resources, expansion or alteration of transportation facilities of statewide significance currently located on the shoreline and then only upon a demonstration that alternatives to fill are not feasible, mitigation action, environmental restoration, beach nourishment or enhancement projects and uses that are consistent with this master program.
2. Shoreline fills should be designed and located so that there will be no significant damage to existing ecological systems or natural resources, and no alteration of local currents, surface water drainage, or flood waters that would result in a hazard to adjacent life, property, or natural resource systems.
3. In evaluating fill projects, such factors as potential and current public use of the shoreline and water surface area, navigation, water flow and drainage, water quality, and habitat should be considered and protected to the maximum extent feasible.
4. The perimeter of any fill should be designed to avoid or eliminate erosion and sedimentation impacts, both during initial fill activities and over time. Natural-appearing and self-sustaining control methods are preferred over structural methods.
5. Where permitted, fills should be the minimum necessary to provide for the proposed use and should be permitted only when they are part of a specific development proposal that is

permitted by this master program. Placing fill in water bodies or wetlands to create usable land should be prohibited.

Shoreline Stabilization Policies

1. Stabilization measures should be designed, located, and constructed primarily to prevent damage to existing development.
2. No structural stabilization measures should be allowed for a vacant lot.
3. New development should be located and designed to eliminate the need for future shoreline stabilization.
4. Shoreline vegetation, both on the bank and in the water, is very effective at stabilizing shorelines. For this reason, property owners are strongly encouraged to protect existing shoreline vegetation and restore it where it has been removed. Preserving and restoring shoreline vegetation should be the preferred method of shoreline stabilization.
5. Structural solutions to shoreline erosion should be allowed only if non-structural and vegetative methods would not be able to reduce existing or ongoing damage.
6. Public projects should be models of good shoreline stabilization design and implementation.

Bulkheads Policies

1. A bulkhead is not a preferred method of stabilizing the shoreline, because bulkheads tend to significantly degrade fish and wildlife habitat by the removal of shoreline vegetation, increase erosion on neighboring properties, and change the natural sedimentation process.
2. Cumulative impacts of bulkheads should be considered, since over time and as more shoreline is lost to bulkheading, the resulting loss of habitat may have long-term impacts on fish populations as well as to the overall ecological value of the shoreline.
3. Most areas along the shorelines in Brewster can be adequately stabilized using softer, more natural means, such as vegetation enhancement, rather than a bulkhead.
4. If the purpose is not stabilization, a retaining wall, set back from shoreline vegetation, should be used rather than a bulkhead at the water's edge. (Retaining walls for purposes other than shoreline stabilization must comply with the setback and buffering requirements in Chapter 17.46.060 D BMC.)
5. Because a bulkhead on one property can accelerate erosion on adjacent properties, the impacts of a proposed bulkhead on adjacent properties should be analyzed and considered before the bulkhead is approved.
6. A bulkhead should be allowed only for existing development for shoreline stabilization, and only if all more ecologically-sound measures are proven infeasible.
7. Property owners are encouraged to remove existing bulkheads and restore the shoreline to a more natural state. As an incentive, such projects should be processed without a fee charged for the shoreline permit.

Breakwaters, Jetties, Groins & Weirs Policies

1. Breakwaters, jetties, groins, and weirs located waterward of the ordinary high-water mark should be allowed only where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose. Breakwaters, jetties, groins, weirs, and similar structures should require a conditional use permit, except for those structures

installed to protect or restore ecological functions, such as woody debris installed in streams. Breakwaters, jetties, groins, and weirs should be designed to protect critical areas and shall provide for mitigation according to the sequence defined in WAC [173-26-201](#) (2)(e).

Vegetation Conservation Policies

1. Natural plant communities within and bordering shorelines should be protected and maintained to ensure no net loss of shoreline ecological functions.
2. Natural shoreline vegetation should be maintained and enhanced to reduce the hazard of bank failures and accelerated erosion. Vegetation removal that is likely to result in soil erosion severe enough to create the need for structural shoreline stabilization measures should be prohibited.
3. Shoreline vegetation degraded by natural or manmade causes should be restored wherever feasible.
4. Non-structural and “soft” methods of shoreline stabilization, such as vegetation enhancement and soil bioengineering, are preferred to hard structures to diminish the processes of erosion, sedimentation, and flooding.
5. Removal of vegetation should be limited to the minimum necessary to reasonably accommodate the permitted use or activity.
6. The physical and aesthetic qualities of the natural shoreline should be maintained and enhanced.
7. Preference should be given to preserving and enhancing natural vegetation closest to the ordinary high water mark and within shoreline setback and buffer areas.
8. Aquatic weed management should stress prevention first.

SHORELINE DESIGNATIONS

Shoreline Designations are intended to encourage uses and activities that will protect or enhance present or desired character of the shoreline and critical areas within shorelines and allow appropriate uses consistent with local land use patterns. The city of Brewster’s original Shoreline Master Program (SMP) was adopted in 1991. It used a classification system composed of four Shoreline Designations intended to accommodate different levels and types of development: “Natural”, “Conservancy”, “Rural”, “Suburban”, and “Urban.”

The State’s 2004 SMP guidelines recommend a new classification system to better reflect the most current scientific and technical information, planning concepts and to support requirements of the Growth Management Act (GMA). Brewster used the State’s new classification system as a starting point and tailored it to suit local conditions, local interests, and local land use planning. The result is a system that includes five Shoreline Designations intended for application to all shoreline areas within the incorporated and adopted Future Service Area.

The Shoreline Designation system in this Element is based on a combination of factors including ecological function and value, existence of designated critical areas, development and planning factors, and local interests. The designations reflect the combined results from the inventory, analysis and characterization along with input gathered through the public participation process.

The assessment of ecological function and value was derived from the Shoreline Characterization prepared by ENTRIX, Inc., incorporated as Appendix A.

Development and Planning factors are a function of:

- a. Development Patterns (parcel size and level of subdivision)
- b. Current land use
- c. Existing Building Setbacks and Number of Structures
- d. Public Access and Recreation
- e. Transportation/Circulation systems/facilities
- f. Current Comprehensive Plans and Zoning maps
- g. Local Knowledge (input from SAG and TAG + staff and consultants)
- h. Ownership Patterns
- i. Other built elements (Over-water Structures, levees, dikes)

The following section describes the criteria used to assign Shoreline Designations to water bodies (the classification criteria), lists specific policies and regulations that apply to each designation, and explains the rationale for each designation. Finally, the text describes the process used to assign designations to the shorelines in Brewster. Allowed uses and development standards for each designation follow in tabular form. The policies specific to each designation and the general policies provide the basis for the uses and activities allowed in each shoreline designation. The development standards and criteria specify how and where permitted development can take place within each shoreline designation.

It is important to note that all lands within shoreline jurisdiction, regardless of designation, have inherent resource, ecological and economic value. Therefore, a natural tension exists between opportunities for protection and development. The SMA requires ecological functions and processes to be retained in all shoreline designations. Where changes in land use or development result in a loss of function and values, those losses must be mitigated.

Parallel environments (where more than one designation is applied to the same area) are used throughout the City and Future Service Area as a result of the public ownership (Douglas County PUD) of most of the land bordering on the ordinary-high-water-mark (OHWM). The City recognizes the ownership and stewardship responsibilities of the PUD and has applied shoreline designations to PUD owned lands that emphasize protection of natural resources on the limited riparian lands along the City's highly altered shorelines with the intent of allowing more diverse and higher intensity development on adjoining private lands. The Legal Descriptions contained in Appendix C provide a clear delineation of the boundaries between parallel designations.

This Shoreline Master Program establishes a system of five shoreline designations for all shoreline areas within the incorporated areas and adopted Future Service Area. The system was derived from the State's recommended classification system, tailored to reflect local conditions and serve local interests. The default designation for undesignated shorelines in the City of Brewster is Urban Conservancy.

Aquatic

Purpose

The purpose of this designation is to protect, restore, and manage the unique characteristics and resources of areas waterward of the Ordinary High Water Mark (OHWM).

Designation Criteria

All shorelines areas waterward of the OHWM of rivers, lakes and streams and associated

wetlands shall be designated “Aquatic.”

Policies

1. Developments within the Aquatic Designation should be compatible with the adjoining upland designation.
2. Diverse opportunities for public access to the water should be encouraged and developed where such access is compatible with the existing shoreline and water uses and environment.
3. Over-water structures should be allowed only for water-dependent uses, public access, or ecological restoration. The size of such structures should be limited to the minimum necessary to support the structure’s intended use. Structures that are not water-dependent should be prohibited.
4. Multiple-use of over-water facilities should be encouraged.
5. Under-water uses should be designed, developed, operated and mitigated with the least possible impact to the aquatic environment and should show that there is no feasible above water alternatives.
6. Aquaculture should be allowed where the use can be undertaken without interfering with surface navigation, public access, or shoreline ecological functions.
7. Hydroelectric projects of regional or statewide significance (including development of new hydroelectric projects, renovation of existing hydroelectric facilities, and operation of existing hydroelectric projects) should be allowed where impacts to surface navigation, public access, shoreline ecological functions, and the visual quality of the shoreline area can be adequately mitigated.
8. Fishing and other recreational uses of the water should be protected against competing uses that would interfere with recreation.
9. All developments and activities under the jurisdiction of this Element and Chapter 17.46 BMC should be located and designed to minimize interference with surface navigation. Hydroelectric projects licensed by the Federal Energy Regulatory Commission should provide for portage consistent with project operations, safety, and security of the project facilities.
10. All developments and activities using water bodies under the jurisdiction of this Element and Chapter 17.46 BMC should be located and designed to minimize adverse visual impacts and to allow for the safe passage of fish and animals (consistent with federal and state agency approved recovery plans), particularly those whose life cycles are dependent on such migration. Hydroelectric projects licensed by the Federal Energy Regulatory Commission should address visual impacts and fish and wildlife passage while at the same time providing for project operations, safety, and security of the project facilities.
11. Uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.
12. Abandoned and neglected structures that cause adverse visual impacts or are a hazard to public health, safety, or welfare should be removed or restored to a usable condition consistent with the provisions of this master program.

13. Activities that substantially degrade priority habitats should not be allowed. Where such activities are necessary to achieve the objectives of the Shoreline Management Act, RCW 90.58.020, impacts should be mitigated to provide a net gain of critical ecological functions.
14. Shoreline modifications should be considered only when they serve to protect or enhance a significant, unique, or highly valued feature that might otherwise be degraded or destroyed. Exceptions may be made for hydroelectric projects licensed by the Federal Energy Regulatory Commission. Such projects should be located and designed to minimize impacts to shoreline functions and values.
15. Shoreline jurisdictional areas within the Aquatic Designation shall not be used for calculating land area for the purposes of subdivision and short subdivision.

Urban Conservancy

Purpose

The purpose of this designation is to protect and restore ecological functions of open space, floodplains, and other sensitive lands within the City and/Future Service Area, while allowing a variety of compatible uses.

Designation Criteria

Areas suitable and planned primarily for public uses that are compatible with maintaining or restoring the ecological functions of the area, and are not generally suitable for water-dependent uses, if any of the following characteristics apply:

1. They are suitable for water-related or water-enjoyment uses;
2. They are publically-owned open space, flood plain or other critical areas that may be suited for low levels of development associated with water-related or water-enjoyment uses but are unsuitable for high intensity development;
3. They have potential for ecological restoration; or
4. They retain important ecological functions (such as riparian or wetland habitat, buffers, stormwater and wastewater abatement, and open space– e.g. designated critical areas) even though partially developed.
5. Existence of critical areas

Policies

1. Uses that preserve the natural character of the area or promote preservation of open space, floodplain, or sensitive lands, either directly or over the long term, should be the primary allowed uses. Uses that result in restoration of ecological functions should be allowed if the use is otherwise compatible with the purpose of the environment, the setting, and the local comprehensive plan and development regulations.
2. The following uses should be allowed in shoreline areas designated as “Urban Conservancy”, where consistent with local comprehensive plans and development regulations, provided that the use is consistent with maintaining or restoring the ecological functions of the area: aquaculture; low-intensity water-oriented commercial and industrial uses, where those uses already exist; water-dependent and water-enjoyment recreational facilities; residential development.

3. Mining and associated uses should be allowed on lands that are designated as “mineral resource lands” pursuant to RCW 36.70A.170 and WAC 365-190-070. Otherwise resource extraction should not be allowed.
4. Water-oriented uses should be given priority over non-water oriented uses.
5. Adjacent to the shoreline waters, water-dependent uses should be given the highest priority.
6. Opportunities for public access, including developed trails, overlooks and viewing platforms, etc..., to shorelines and water bodies should be encouraged for all developments, including subdivisions, short subdivisions, planned unit developments, commercial uses, public services, and recreational uses.
7. Public or community access to shorelines and water bodies should be required for new subdivisions of more than four lots and for recreational uses, provided any adverse impacts can be mitigated.
8. Public access to shorelines and water bodies should be required for new commercial uses and public services where it can be accommodated without risk to public safety, provided any adverse impacts can be mitigated.
9. Public and private recreational facilities and uses that are compatible with residential uses should be encouraged, provided that no net loss of shoreline ecological resources will result.
10. Standards to ensure that new development does not result in a net loss of shoreline ecological functions or further degradation of shoreline values should be established for shoreline stabilization measures, vegetation conservation, and shoreline modifications.
11. Subdivision should be allowed in shoreline areas designated as “Urban Conservancy.”

Shoreline Recreation

Purpose

The purpose of the Shoreline Recreation designation is to accommodate mixed-use recreation-oriented development that is consistent with the goals and purpose of the Shoreline Management Act; and to provide appropriate public access and recreational uses, especially where those uses are part of a master-planned system and support healthy physical activity.

Designation Criteria

This designation is assigned to shoreline areas that support or are planned for mixed-use recreation oriented development. The designation is intended to provide flexibility for water oriented mixed-use planned or clustered development with varying densities.

Policies

1. The following uses should be allowed in shoreline areas designated as “Shoreline Recreation”, where consistent with local comprehensive plans and development regulations, provided that the use is consistent with maintaining or restoring the ecological functions of the area: residential development; public access and recreational uses; water-oriented mixed-use development; master-planned resorts, and other development consistent with preservation of low-density recreation-oriented character.
2. Dedication and improvement of public access to shorelines should be required for all new uses, with the exception of residential developments of four lots or fewer, including development by public entities (including local governments, state agencies, and public

utility districts). Where a master-planned public access system, such as a lakeshore trail system, exists or is planned, participation in the system and provision of facilities that promote physical activity should be encouraged.

3. All multi-family and multi-lot residential developments should provide joint-use community recreational facilities.
4. Docks, boat ramps, boat lifts, and other boating facilities serving individual single-family residences should be prohibited. Where boating facilities are allowed, community facilities should be required.
5. The number of boating facilities allowed within the SRec designation on each water body should be limited to protect shoreline ecological resources and preserve the character of the shoreline area.
6. Mixed-use water-oriented recreational/residential developments should be encouraged in the SRec designation where such developments are consistent with zoning and comprehensive plan designations and can be accommodated without damage to shoreline ecological resources.
7. Standards for density or minimum frontage width, setbacks, lot coverage limitations, buffers, shoreline stabilization, vegetation conservation, critical areas protection, and water quality should be set to ensure that new development does not result in a net loss of shoreline ecological functions. Such standards should take into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and other services available, and other comprehensive planning considerations.
8. Adequate public facilities and services should be required in conjunction with development in the SRec designation. Within the Future Service Area, such development should be required to connect to municipal water and sewer utilities. Outside of the Future Service Area, private community utility systems may be allowed. Concurrent development of transportation facilities, including facilities to promote physical activity, should be required.
9. Subdivision should be allowed in shoreline areas designated as “Shoreline Recreation.”

Shoreline Residential

Purpose

The purpose of the Shoreline Residential designation is to accommodate residential development and appurtenant structures that are consistent with the goals and purpose of the Shoreline Management Act; and provide appropriate public access and recreational uses.

Designation Criteria

This designation is assigned to shoreline areas within the City and Future Service Area that support a predominance of single-family residential development with some duplex and multi-family, are platted for residential development, or are planned for residential development exceeding 1 dwelling unit per acre.

Policies

1. The following uses should be allowed in shoreline areas designated as “Shoreline Residential”, where consistent with local comprehensive plans and development regulations, provided that the use is consistent with maintaining or restoring the ecological functions of

the area: residential development (including both single and multi-family development); water-oriented commercial uses. .

2. Residential developments of more than four lots and all recreational developments should provide public access to shorelines and water bodies. Opportunities for public access to shorelines and water bodies should be encouraged for all other developments, including subdivisions, planned developments, commercial uses, and public services.
3. All multi-family and multi-lot residential developments should provide joint-use community recreational facilities.
4. Docks, boat ramps, boat lifts, and other boating facilities serving individual single-family residences should be prohibited. Where boating facilities are allowed, community facilities should be required.
5. Public and private recreational facilities and uses that are compatible with residential uses and with the applicable comprehensive plan and development regulations should be allowed.
6. Access (including transportation facilities and rights of way or easements), utilities, and public services should be available and adequate to serve any existing needs and planned future development.
7. Standards for density or minimum frontage width, setbacks, lot coverage limitations, buffers, shoreline stabilization, vegetation conservation, critical areas protection, and water quality should be set to ensure that new development does not result in a net loss of shoreline ecological functions. Such standards should take into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and other services available, and other comprehensive planning considerations.
8. Subdivision should be allowed in shoreline areas designated as “Shoreline Residential.”

High Intensity

Purpose

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

Designation Criteria

Shoreline areas within the City and Future Service Area shall be designated “High Intensity” if they currently support high-intensity uses related to commerce, transportation, or navigation; or are suitable or planned for high-intensity water-oriented uses, including multi-family residential development.

Policies

1. Although they are among the most heavily developed shoreline lands in Okanogan County, High Intensity lands retain resource value and present opportunities for protection and restoration.
2. Because shorelines are a finite resource and because high-intensity uses tend to preclude other shoreline uses, emphasis should be given to directing new development into areas that are already developed or where high-intensity uses can be developed consistent with this

master program and the applicable Comprehensive Plan, and to uses requiring a shoreline location. Full utilization of existing high-intensity areas should be encouraged before further areas are designated as High Intensity.

3. Priority should be given to water-dependent, water-related, and water-enjoyment uses over other uses, with highest priority given to water-dependent uses. Uses that derive no benefit from a water location should require a shoreline conditional use permit.
4. Where consistent with other policies and with local comprehensive plans and development regulations, the following uses should be allowed in shoreline areas designated as “High Intensity”, provided that the use is consistent with maintaining or restoring the ecological functions of the area: water-oriented commercial uses, transportation, navigation, and other high-intensity water-oriented uses, including multi-family residential development.
5. Visual public access should be required, where feasible.
6. Physical public access should be encouraged where it can be accommodated without risk to public safety.
7. Aesthetic objectives should be implemented by means such as sign control regulations; appropriate development siting, screening and architectural standards; and maintenance of natural vegetative buffers.
8. Implementation of local plans for acquisition or use through easements of land for permanent public access to the water in the High Intensity Environment should be encouraged.
9. In order to make maximum use of the available shoreline resources and to accommodate future water-oriented uses, the redevelopment and renewal of substandard, degraded, under-used, or obsolete urban shoreline areas should be encouraged.
10. Subdivision should be allowed in shoreline areas designated as “High Intensity.”

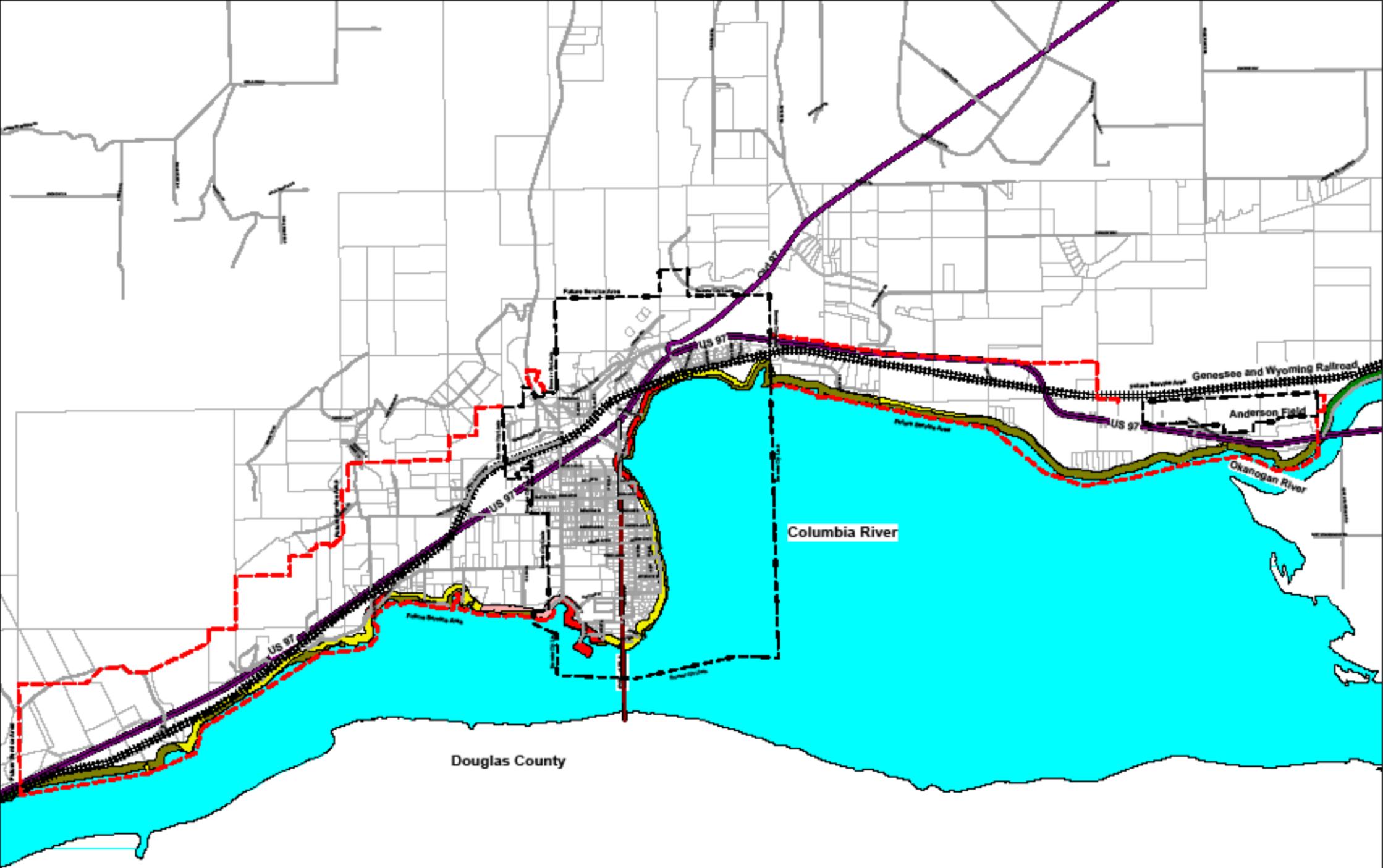
SHORELINE DESIGNATIONS MAP

The *Shoreline Designations* map for the city of Brewster shows the areas under the jurisdiction of this Master Program and the boundaries of the five shoreline designations. Shoreline areas within Future Service Area have been pre-designated—that is, the shoreline designations shown in Future Service Areas are those that have been assigned by the city.

The *Shoreline Designations* map shall be the official map of Shoreline Designations and is maintained by the City and by the Department of Ecology. Any other copies, including copies that may be distributed either as part of this Element or separately, shall be unofficial.

The MapVIII-2 Shoreline Designations for the city of Brewster is found on the following page and in the Map Appendix to the Comprehensive Plan.

**City of Brewster
Comprehensive Plan
Map ___
Shoreline Designations**



**City of Brewster
Shoreline Designations**

- AQUATIC
- HIGH INTENSITY
- SHORELINE RECREATION
- SHORELINE RESIDENTIAL
- URBAN CONSERVANCY

Appendix A.1
Okanogan County
Shoreline Characterization

Prepared for
Okanogan County

Prepared by
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November 20, 2008

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1 INTRODUCTION

1.1 Purpose

There are three basic policy areas to the Shoreline Management Act (SMA, 1971, Chapter 90.58 RCW, as amended): shoreline use, environmental protection and public access. The SMA emphasizes accommodation of reasonable and appropriate uses, protection of shoreline environmental resources and protection of the public's right to access and use the shorelines (*see* [RCW 90.58.020](#)). ENTRIX has performed the following shoreline characterization analysis to deliver key technical products necessary to update the Okanogan Shoreline Master Program (SMP). The methodology of this analysis follows the guidance provided by the Washington Department of Ecology (<http://www.ecy.wa.gov/programs/sea/sma/guidelines/index.html>) for development of SMPs. The shoreline characterization will be the basis for assigning environment designations; developing policies, regulations; a use chart; development standards; writing a restoration plan; and conducting a cumulative impact analysis. Designation is a process that is informed by analysis products through planning processes and public involvement and is purposefully distinct from the objective characterization of streams, lakes and watersheds described here. Potential uses of analytical results are presented in concept and example but are not intended to direct or in any way limit decisions made in designation processes or ultimate policy decisions.

1.2 Shoreline Jurisdictional Area

1.2.1 Streams

This analysis addresses streams with a mean annual flow (MAF) of 20 cubic feet per second (cfs) or greater, and lakes 20 acres or greater within Okanogan County as specified in the SMA. See Appendix A.3, Table 2 for coordinates/datum and elevations. (ft) Determinations for the 20 cfs MAF points were derived from the United States Geological Survey (USGS) (1998) publication for northeastern Washington streams.

1.2.2 Stream Shorelines of Statewide Significance

There are six rivers of statewide significance in Okanogan County. Five are subject to the provisions of this SMP; the sixth, the Pasayten River, is not. That portion of the Pasayten River that is within the United States is located within the boundary of the Okanogan National Forest on land administered by the U.S. Forest Service and is not subject to the provisions of this SMP.

Part of the West Fork of the Sanpoil River is a river of statewide significance. However, that part is located in Ferry County. The stretch of the West Fork of the Sanpoil River that is located in Okanogan County has a mean annual flow of less than 20 cfs.

Rivers of statewide significance subject to the provisions of this SMP are:

- Chewuch—from the Okanogan National Forest (NF) boundary downstream to the Chewuch River's confluence with the Methow River
- Methow—from the Okanogan NF boundary downstream to the Methow River's confluence with the Columbia River (Lake Pateros)

- Okanogan—from the Canadian border to the Okanogan River’s confluence with the Columbia River (Lake Pateros—the entire length of the Okanogan River within the United States)
- Similkameen—from the Canadian border to the Similkameen River’s confluence with the Okanogan River (the entire length of the Similkameen River within the United States)
- Twisp—from the Okanogan NF boundary downstream to the Twisp River’s confluence with the Methow River

1.2.3 Columbia River Impoundments

The shorelines of the Columbia River are shorelines of state-wide significance. There are three impoundments on the Columbia River that are partially located within Okanogan County. One, Lake Pateros, is subject to the provisions of this SMP; the other two are not, as explained below. Columbia River impoundments that are not subject to the provisions of this SMP:

- Franklin D. Roosevelt Lake—Franklin D. Roosevelt Lake is that portion of the Columbia River that is impounded behind Coulee Dam. The lake forms the boundary between Okanogan County to the north and Grant and Lincoln counties to the south. That portion of the shoreline of Franklin D. Roosevelt Lake that is located within Okanogan County is also located within the boundary of the Colville Indian Reservation and so is not subject to the provisions of this SMP.
- Rufus Woods Lake—Rufus Woods Lake is the portion of the Columbia River that is impounded behind Chief Joseph Dam. The lake forms a portion of the boundary between Okanogan County to the north and Douglas County to the south. The portion of the shoreline of Rufus Woods Lake that is located within Okanogan County is also located within the boundary of the Colville Indian Reservation and so is not subject to the provisions of this SMP.

1.2.4 Lakes

Lakes were identified using existing GIS data on file with Okanogan County and proofed for accuracy by knowledgeable local experts. The requirements of the SMA apply to private projects on privately owned lands, and to private, local government, and state government actions on local or state government lands. Shorelines on federal and tribal lands are not included in this analysis.

1.2.5 Lake Shorelines of Statewide Significance

There are three lakes of statewide significance in Okanogan County. Two are subject to the provisions of this SMP. The third, Omak Lake, is located within the boundary of the Colville Indian Reservation and is not subject to the provisions of this SMP. Lakes of statewide significance subject to the provisions of this SMP are:

- Lake Osoyoos
- Palmer Lake

2 REGIONAL SETTING

2.1 Climate

Okanogan County's climate is arid to semiarid, characterized by hot, dry summers and cold winters. The county is located directly east of the crest of the Cascade Range, a major mountain range extending from southern British Columbia to northern California. The range acts as a barrier to marine air moving eastward from the Pacific Ocean. It also exerts a rain-shadow effect, resulting in heavy precipitation at high elevations. Precipitation rates throughout the county are a function of elevation and of distance from the Cascade crest, and vary widely, from less than 10 inches along the Columbia River to 80-100 inches or more in the Cascades.

Most of the land subject to this SMP is at relatively low elevation; precipitation ranges from 8 to 35 inches per year, on average, with most falling from October through March. However, many of the county's rivers, streams, and lakes are fed by runoff from higher elevations, where much of the annual precipitation is retained as snowpack and released during the spring and summer months.

2.2 Topography

Okanogan County topography ranges from mountainous alpine and sub-alpine terrain to gently sloping valleys. Elevation varies from over 8,500 feet in the Cascade Range to approximately 750 feet where the Columbia River crosses the County line south of Pateros.

The landscape below 5,000 feet was sculpted by glaciers about 10,000 years ago. Large areas remain covered with rocks and other sediments deposited by glaciers or by rivers and lakes that formed when the glaciers began to melt. While most soils are coarsely textured and fast draining, volcanic ash and fine-textured sediments have contributed to less permeable soils in some places.

Where impermeable soil layers occur, they have sometimes created perched aquifers—areas of groundwater that are not connected to rivers and streams. However, in most parts of Okanogan County, groundwater is connected to rivers and streams. Groundwater flows into those water bodies during periods when soil moisture is high (generally during the spring snow-melt season). When moisture levels are low, water moves out of rivers and streams to replenish groundwater.

Because soils are generally coarse (which means water moves through them quickly and easily), and because most water is available for a short period every year, river and stream levels tend to fluctuate a great deal, rising and even overtopping streambanks in the spring, and dropping so low in the summer and fall that some stream segments become completely dry. Healthy riparian areas can help retain water so that it is more available during the dry season. Water that is held in floodplains and wetlands can seep into soils far from streams and lakes, helping to keep wells productive year round, as well as feeding the water bodies themselves.

2.2.1 Hydrology

The *Soil Survey of Okanogan County Area* provides a good introduction to Okanogan County's hydrology:

[Okanogan County] is drained by two principal streams—the Okanogan river and the Methow River. All the drainage water ultimately flows into the Columbia River. The Okanogan is a slow flowing, meandering stream that drains the eastern part of the Area. A considerable part of its flow originates in Canada. The Methow River is a clear, fast flowing stream that drains the western part of the Area.... Okanogan County is well supplied with lakes at all elevations.

As noted above, river and stream flows and some lake levels vary seasonally. Flow rates are highest in the spring when snow is melting fast. Snow melt continues to supply rivers and streams with water through much of the year. (Even after most of the snow is gone, melted snow continues to percolate through the soil to the groundwater and perched aquifers, supplying rivers, streams, lakes, and wells with water.)

Shoreline ecological health is very important because it determines how much water stays in local watersheds and for how long. Shoreline vegetation and wetlands help hold water and allow it to seep gradually into water bodies.

Because Okanogan County is arid, availability of water is very important. Both the economy and the ecosystem are dependent on water resources. Agriculture, an important component of the local economy, depends on irrigation. Sources of irrigation water include groundwater, rivers and streams, and lakes and impoundments.

2.3 Vegetation

Okanogan County is generally forested at higher elevations, with shrub-steppe habitat dominating the landscape at lower elevations. Shoreline areas and other wet areas support riparian and wetland vegetation.

As noted above, most of the land subject to this SMP is at relatively low elevation; however, this SMP does apply to some forested areas. In those areas, ponderosa pine (*Pinus ponderosa*) generally dominates at lower elevations, where annual precipitation ranges from 14-16"; Douglas-fir (*Pseudotsuga menziesii*) is dominant in areas with higher levels of precipitation.

Forested areas are subject to fire, and years of fire suppression have resulted in heavy fuel loads. Severe fires have been relatively common in recent years. Forest fires affect runoff and sedimentation patterns and may have significant effects on shoreline areas.

Sagebrush, rabbitbrush, and bitterbrush are the dominant native plant species in much of the county's shrub steppe. In the driest areas, where annual precipitation is below 15", grasses (including Idaho fescue, bluebunch wheatgrass, and wild rye) become more important.

Trees common to riparian areas are cottonwood, aspen, water birch, and alder; shrubs include willows, dogwood, spirea, hawthorne, rose, and snowberry. Grasses, forbs, and other herbaceous plants (cattails, for instance) dominate many wetlands. Wetland and riparian vegetation is often quite dense; it helps to retain water in shoreline areas and provides food and cover for wildlife.

Invasive plant species are a problem in some areas, competing with native species and diminishing habitat value.

2.4 Wildlife

Okanogan County is home to several hundred species of amphibians, birds, fish, mammals, and reptiles, as well as numerous invertebrates (animals without backbones, such as insects and spiders).

Some of the animals found in the county are listed below:

- Amphibians: frogs, newts, salamanders, and toads.
- Birds: migratory and resident species include marine species, herons, waterfowl, hawks, falcons, eagles, corvids, upland game birds, cranes, shorebirds, owls, woodpeckers, hummingbirds, and perching birds (e.g., sparrows, orioles, grosbeaks).
- Fish: anadromous and resident, including three federally-listed species: spring Chinook, summer steelhead, and bull trout. Many lakes and streams also support introduced species that compete with native fish.
- Invertebrates: butterflies, beetles, mollusks, spiders, ticks, and benthic macroinvertebrates (stream-dwelling animals that are important food sources for fish).
- Mammals: ungulates, including deer, moose, elk, mountain goat, and bighorn sheep; carnivores such as cougar, lynx, wolf, coyote, bobcat, bear, wolverine, and ermine; rodents, including squirrels, gophers, moles, voles, and mice; lagomorphs (rabbits and hares), including snowshoe hare; shrews; and bats. The Methow subbasin is home to the State's largest migratory mule deer herd.
- Reptiles: lizards, turtles, snakes

Game species, especially deer, are very important to the local economy.

The biotic structure and composition of shorelines (including aquatic, riparian, and nearby wetland areas) depend largely on the hydrologic regime. The annual variation in hydrology is essential to many species life-cycle and necessary to sustain biodiversity and plays a role in population dynamics (Mitsch and Gosselink, 2000). Most animals use these shoreline areas and some spend their entire lives there. Wetlands and other shoreline areas provide important habitat for migratory birds, including those that nest and raise young in the county and those that pass through en route to and from more northerly nesting grounds.

Okanogan County’s wildlife population includes a number of species designated by the Washington Department of Fish and wildlife as priority species—those that “require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority species include State Endangered, Threatened, Sensitive, and Candidate species; animal aggregations considered vulnerable; and those species of recreational, commercial, or tribal importance that are vulnerable.” The County’s land base also includes priority habitats—“those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element.”

The hydroelectric facilities on the Columbia River have had very significant impacts on fish and wildlife, particularly on anadromous salmonids, several species of which breed and rear young in Okanogan County streams.

2.5 Geology

The geology of the area is complex, developed from marine invasions, volcanic deposits, and glaciations. The area consists of four differing geologic provinces. The Cascade Range, to the west, was created by ancient seabed uplift. Both the Okanogan highlands on the east and the Columbia basalt plateau to the south were created by volcanic activity. Finally, the oldest is the ridge of ancient seabed rocks that were folded and then carved by erosion into its present forms. During the ice age, ice spread over these dissimilar landforms and when receded, left valleys, canyons, waterfalls, benches, and cliffs (Widel, 1973).

2.6 Land Uses

Okanogan County is the largest county in Washington, comprising 5,821 square miles—almost 8% of the state’s land mass. Development in Okanogan County is concentrated in the Methow and Okanogan valleys and along the Columbia River. The mountainous areas to the west of the Methow valley and between the Methow and Okanogan valleys are mostly federally-owned. Mining, forestry, agriculture, and recreation are the major land-use activities. Residential development is also significant. Much of that development is attributable to non-resident landowners building vacation houses, and so is not reflected in population statistics.

3 ANALYSIS METHODS

3.1 Analysis Overview

A characterization framework that incorporates and properly applies current knowledge of ecological processes can help to identify how and to what extent different shoreline areas are functioning at their natural capacity. A conceptual model developed by Thom *et al.* (2004) provides a means of estimating the impairment to ecological function in a cost-effective way using existing data (Figure 1). This model states that small scale controlling factors, such as hydrology and water quality, create larger scale habitat structure, habitat processes, and ultimately ecosystem functions. Stressor impacts to controlling factors, caused mainly by human disturbance, are used to assess the potential impacts to ecological function in each unit as well as at the watershed level.

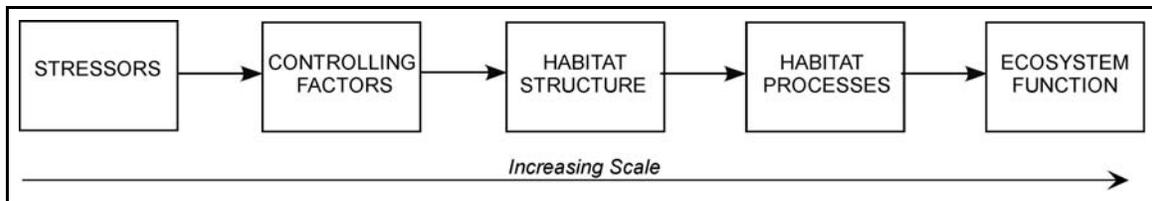


Figure 1: Conceptual Model of Inputs to Ecosystem Function

The conceptual model (Thom et al. 2004; Evans et al. 2006) was modified slightly to create a list of controlling factors used for this characterization framework. The factors are listed below and individual stressors are described later in this document.

- Hydrology
- Floodplain connectivity
- Water quality
- Physical disturbance
- Riparian buffer

This shoreline assessment is largely a GIS-based analysis. Data inventoried was compiled from existing geo-referenced sources. Data calculations were performed in Excel to derive scores which were re-linked to the geographical analysis units in GIS for a visible display of the characterization of shoreline units. The data and scores can further be analyzed in a geospatial context.

3.2 Site-Scale Analysis

3.2.1 Define Analysis Units

Stratification of applicable shoreline areas into geomorphic site analysis units provides the capability to group site units with similar physical processes. The structure and variability of streams and their shorelines is a function of channel slope, which is determined largely by topography (Montgomery 1999). Rivers generally decrease in gradient with longitudinal distance downstream. In addition to changes in linear physical

characteristics, some biological characteristics are also predictable (Vannote et al. 1980). Since slope is a controlling factor on channel morphology and physical habitat, slope was used as one of the primary variables to classify Aus within Okanogan County.

The concept here is that analysis units of similar geomorphology (e.g., broad valley bottoms with extensive floodplains) attract specific types of development within shoreline areas that are likely to require similar designations under the SMA. By stratifying the shoreline areas into relatively homogenous analysis units, resulting characterizations are most meaningful and consistent and a ready link between science and policy is provided for public input and discussion. While data are not available at this time to provide a comprehensive geomorphic classification of each site, three variables are used to provide a useful geomorphic context for the definition of analysis unit (AU) boundaries of the County's SMP jurisdictional rivers: slope classes, stream order, and stream sinuosity. As noted above, shorelines within Okanogan County that are on federal or tribal lands are not included in this analysis.

The Aus in this analysis are based on interpretations from a low-resolution digital elevation models (DEM) and general, published geologic maps. ENTRIX or its employees are not responsible for specific delineation boundaries in any way unless and until a thorough analysis that includes higher resolution mapping, photogrammetric interpretation, and field calibration is accomplished. Provision of such a rigorous analysis for delineation of Aus was beyond the scope and budget of this project. Analysis units are provided as a general guide to channel conditions based on available information and are not intended for use in other jurisdictional delineations.

Slope classes were based on slope gradients that can be estimated from DEMs. These classes were broken into categories of 0 to 2 percent, 2 to 4, and over 4 percent. Stream order is a measure of the relative size of streams that range from the smallest (first-order), to the largest (twelfth-order). In Okanogan County, the shoreline jurisdiction encompasses stream orders from third-order to fifth-order.

Stream sinuosity is a river's tendency to move back and forth across the floodplain, in an S-shaped pattern, over time (Leopold, 1994). The variation of stream sinuosity is characterized by a number within the range of 0 to 1, with 0 representing no sinuosity and 1 representing high sinuosity. All the characteristics were based on re-projected, filled 10-meter DEMs of Okanogan County. Data on hillshade, flow direction, flow accumulation, streams, stream order and slope were all derived from these DEMs.

Lakes of 20 acres or more were analyzed as individual units. Lakes greater than 200 acres were subdivided longitudinally into separate Aus and by bathymetry. Large lakes and reservoirs were then divided lengthwise based on the knowledge that shorelines on either side of large water bodies may be dissimilar. Bathymetry provides an indication of shallow shorelines where emergent vegetation would grow versus shorelines with deeper water.

Shorelands are under the Jurisdiction of the SMA and are defined in relation to geographic proximity to stream and lake shorelines (WAC 173-22-040). All Aus were

then given a 200 foot buffer to include shorelands extending landward above the ordinary high water mark (OHWM). All wetlands within or associated with the 200 foot buffer are considered jurisdictional and are included in the Aus.

Associated wetlands beyond the 200 foot buffer were included in the SMA because significant amounts of water are exchanged laterally (saturated sediments beneath the stream channel) with saturated sediments surrounding the stream and riparian areas. This process has been defined as the hyporehic zone but only recently been researched as to the importance both chemically and biologically (Brunke and Gonser, 1997; Findlay, 1995).

3.2.2 Shoreline Function Calculations

For each AU, two estimates of shoreline function were calculated; an aggregate condition index and an aggregate resource index. The following steps were taken to calculate the aggregate condition index:

- Step 1: Identification of AU Stressors
- Step 2: Scoring of AU Stressors
- Step 3: Weighting of AU Stressors
- Step 4: Calculation of AU Condition Index

Much in the same way as the calculation index, the following steps were taken to calculate the aggregate resource index:

- Step 1: Identification of AU Resources
- Step 2: Scoring of AU Resources
- Step 3: Weighting of AU Resources
- Step 4: Calculation of AU Resource Index

The details of each of these steps and examples are provided in the text below.

3.2.3 Aggregate Condition Index

Step 1: Identification of AU Stressors

An evaluation of the main ecological impacts, or stressors, was performed in order to assess the ecological condition of each AU. The stressor data used in this analysis were drawn from a pool of potential stressors to shoreline function. Ideally, important and influential stressors would be readily available and represented in extant data sets. However, through the process of data inventory, a set of potential stressors was identified that provide a direct linkage to, or index of, factors that are controlling or likely to significantly affect ecological function.

Bank Hardening. Bank hardening (e.g., riprap) stresses the shoreline by limiting riparian function, disconnecting the floodplain and limiting the lateral movement of the river channel. To prevent stream bank erosion, riprap, has been used for over a century.

Most of these activities were unregulated prior to the recognition of potential environmental impact of bank hardening activities (Fischenich, 2003). Data on bank hardening, specifically riprap, were provided by Golder and Associates (Golder 2007), who completed a field survey of man-made structures along the mainstem of Okanogan River for Okanogan County. Aus with insufficient data on bank hardening were not analyzed for this stressor.

Levees. Levees also stress the shoreline by limiting riparian function, disconnecting the floodplain and limiting the lateral movement of the river channel. Data on levees were provided by Golder and Associates, who completed a field survey of man-made structures along the mainstem of Okanogan River for Okanogan County. Additionally, further levee dimensions were provided in digital form from Highland Associates based on local knowledge. Aus with insufficient data on levees were not analyzed for this variable.

Water Quality. The Washington Department of Ecology has compiled and assessed available water quality data on a statewide basis and generated a GIS layer entitled *2004 Washington Water Quality Assessment/303(d) List*. The streams and waterbodies contained within this GIS layer are the result of the assessment submitted to the Environmental Protection Agency (EPA) as an “integrated report” to satisfy federal Clean Water Act requirements of sections 303(d) and 305(b). Category 5 of the Assessment is the list of known polluted waters in the state, sometimes referred to as the 303(d) list. Contaminants identified in the 303(d) list for Washington are temperature, fecal coliform, nutrients, toxic substances, erosion, and organic waste. All sites were evaluated for inclusion of waterways listed on the 303(d) list of contaminated waterbodies as required by the Clean Water Act.

Permitted Facilities. This data layer was also obtained from the Washington State Department of Ecology and includes all Ecology permitted sites. Facilities identified in this layer are locations or operations of interest that have an active or potential impact on the environment. These sites include state cleanup sites, federal superfund sites, hazardous waste generators, solid waste facilities, and underground storage tanks.

Agricultural Development. Agricultural development is sub-categorized into dispersed agriculture and intensive agriculture due to the different impacts these activities produce. Dispersed agricultural activity, specifically grazing, can impact riparian health and function. Intensive agriculture has a greater impact on riparian function and can also involve agricultural runoff of pesticides, impairing water quality. The GIS layer used for this analysis was created by Okanogan County.

Residential Development. Residential development, typically small parcels dominated by site modifications for residential structures and appurtenances, can cause a significant localized effect to riparian and upland functions. The GIS layer used for this analysis was created by Okanogan County.

Industrial Development. Industrial development was sub-categorized into light industry and heavy industry due to the different impacts these activities produce. Light industrial

development can result in significant modifications to natural conditions, where as heavy industrial development can produce near-total modification of the natural environment. The GIS layer used for this analysis was created by Okanogan County.

Bridges. Bridges have a localized effect on ecosystem function based on abutments and constriction of stream flow. They also negatively affect sediment routing and instream aquatic habitats, interrupting the natural flow regime. Data for analysis of this stressor were obtained from Okanogan County.

Overwater Structures. Overwater structures, specifically docks and piers, cause seasonal disturbance to aquatic and riparian wildlife. These structures modify instream habitats and provide cover for aquatic predators. Information on motorized boat launch facilities was provided the Washington State Recreation and Conservation Office and Okanogan County.

Rail. Rail line and right of way management interrupts riparian and floodplain connectivity and is associated with longstanding and sustained use of herbicides. The GIS data for railroads were provided by Okanogan County. .

Roads. Like rail lines, road and right of way management interrupts riparian and floodplain connectivity. Key ecological processes, such as the transport of sediment and water along with the distribution of organisms, are modified by roads (Trombulak and Frissell, 2000). In addition, assessing biotic impacts of roads can be difficult since the affect covers a broad range of spatial and temporal scales (Angermeier et al., 2004). Along with common use of pesticides, roads concentrate and transport stormwater runoff into adjacent waterways, affecting water quality and aquatic species health. The GIS data layer was provided by Okanogan County.

Culverts. Culverts can cause seasonal fish transport problems and interrupt the flow of energy and material through the aquatic system (e.g. wood and sediment transport). Information on this stressor was obtained through a visual inspection of aerial photos within Okanogan County.

Geologically Hazardous Areas. This stressor variable indexes slope instability by identifying slopes greater than 30 percent. Under natural conditions, these areas are sources of sediment and large woody debris (LWD). Under developed conditions, the volume and frequency of slope failure increases, and there is the potential for catastrophic modifications of riparian and floodplain functions. Data for this stressor were obtained from the Natural Resource and Conservation Service (NRDS) soil survey geographic database. Aus with insufficient data on geologically hazardous areas were not analyzed for this stressor.

Boat Launches. Boat ramps are localized shoreline modifications associated with recreational development. Boat ramp use creates a concentration of seasonal disturbance to aquatic and riparian wildlife as well as water quality impacts due to periodic oil discharge. Information on motorized boat launch facilities was provided the Washington State Recreation and Conservation Office and Okanogan County.

Mines. Mines provide a broad range of potential effect depending upon mine type and proximity to active channels. Surface mining of gravel provides the potential for channel avulsion and unnatural evolution of floodplain riparian area. Mine data originated from the U.S. Geological Survey and the Interior Columbia Basin Ecosystem Management Project.

Step 2: Scoring AU Stressors

Scores for each stressor ranged from 0, which indicates no ecological impact to the AU, to 1, which indicates a strong ecological impact. Continuous coverage data were quantified by area percentages for the stressor variables listed below:

- Agricultural development – dispersed
- Agricultural development – intensive
- Residential development
- Industrial development – light
- Industrial development – heavy
- Geologically hazardous areas

All scores for the above variables ranged from 0 to 1 based on the area percentage. For example, an AU with land use composed of 70% dispersed agricultural development was assigned a score of 0.70 for the *agricultural development – dispersed* stressor variable.

To assign scores to the point and line data, such as bridges and roads, AUs were originally divided into 3 class sizes to account for data skewing due to varying unit size. Class 1 AU size ranged from 0 to 100 acres (145 AUs); class 2 sizes ranged from 101 to 250 acres (58 AUs); and class 3 was composed of AUs greater than 250 acres (30 AUs). However, variance among different-sized AUs was not observed to be significant. Comparison and review of the data distributions were performed through the evaluation of histograms for each variable and size class. Individual variables were scored on a scale between 0 and 1. A score of 0 indicated that the AU contained none of the specific variable. The remaining scores were based on a low (0.25), medium (0.50) and high (0.75) scale. Roads and rail were calculated by dividing the total length of road or rail in feet by the square footage of land in each AU, and then scored. Bridges and permitted facilities were scored based on the number of these points within each AU, as shown in Table 1.

Mines, levees, riprap, culverts, boat launches, and overwater structures were assessed by presence (1) / absence (0) within each AU based on available data. In certain areas, no data were available for levees and bank hardening, and so these variables were left out of the final condition index calculation. The AUs that were not analyzed for levees and/or bank hardening are specified as “no data” under the raw scores listings of the AU results catalog located in Appendix A.2.

Finally, water quality was scored in the following way: Aus were given a score of 1 if a 303(d) listed waterbody was present within its boundary, regardless of the contaminant; Aus with 50% or less listed as a 303(d)-listed waterbody or unit containing a confluence with a 303(d)-listed stream were scored a value of 0.5; if no 303(d) listed waterbody was present, a score of 0 was assigned. The scoring approach for each stressor variable is provided in Table 1.

AU Example

The analysis unit identified as S OKA 08, located on Okanogan River, was 15.3 acres in size. As can be seen in the AU report page in Appendix A.2, potential stressors were identified as water quality, residential development, intensive agriculture, and geologically hazardous areas. Analysis of the other potential stressors resulted in raw data sets of zero, indicating that these stressors were not present in the unit.

The identified stressors were scored in the following way (see Table 1):

- *Water quality: 1 (the entire stream in the unit was 303(d) listed);*
- *Residential development: 0.14 (14% of the land use was residential);*
- *Intensive agriculture: 0.31 (31% of the land use for intensive agriculture);*
- *Geologically hazardous areas: 0.04 (4% of the land within the analysis unit had slopes greater than 30%).*

Table 1: Analysis Unit Stressor Scoring and Weighting

AU Stressor	Score	Scoring	Weight
Agricultural dev-dispersed	0 to 1	Percentage of disperse agricultural land in unit	25
Agricultural dev-Intensive	0 to 1	Percentage of intensive agricultural land in unit	50
Residential dev	0 to 1	Percentage of residential area in unit	75
Industrial dev-light	0 to 1	Percentage of disperse light industrial activity area in unit	50
Industrial dev-heavy	0 to 1	Percentage of disperse heavy industrial activity area in unit	75
Mines	0	No mines	25
	1	1 or more mines in unit	-
Levees	0	No levees	75
	1	Has levees in unit	-
Riprap	0	No riprap	75
	1	Has riprap in unit	-
Culverts	0	No culverts in unit	50
	1	1 or more culverts in unit	-
Boat launches	0	No boat launches in unit	25
	1	1 or more boat launches in unit	-
Overwater structures	0	No overwater structures in unit	25
	1	1 or more overwater structures in unit	-
Water quality class	0	No 303(d)-listed waterbodies	75
	0.5	50% or less listed as a 303(d)-listed waterbody or unit containing a confluence with a 303(d)-listed stream	
	1	Entire unit 303(d)-listed	
Facilities – Permitting	0.00	No permitted facilities in unit	25
	0.25	1 to 5 facilities in unit	-
	0.50	6 to 10 facilities in unit	-
	0.75	11 or more in unit	-
Bridges	0.00	No bridges in unit	25
	0.25	1 bridge in unit	-
	0.50	Up to 3 bridges in unit	-
	0.75	4 or more bridges in unit	-
Rail	0.00	No rail (Rail evaluated by feet of rail per square footage of land in AU)	75
	0.25	up to 0.0005	-
	0.50	up to 0.0010	-
	0.75	0.0011 or more	-
Roads	0.00	No roads (Roads evaluated by feet of road per square footage of land in AU)	75
	0.25	up to 0.0005	-
	0.50	up to 0.0010	-
	0.75	0.0011 or more	-

Step 3: Weighting of AU Stressors

A relative weight (based on impacts to the shorelines ecological function) was given to each stressor variable based on the relative percentage of estimated impact. The weights were divided into low (.25), medium (.50), and high value (.75) categories. The development of these weighting factors for stressors and resources involved literature review, consultation with local experts, and professional opinion. The weighting categories are summarized below:

High Impact (0.75):

- Water quality
- Rail
- Roads
- Levees
- Bank hardening
- Industrial development – heavy
- Residential development

Medium Impact (0.50):

- Culverts
- Agricultural development – intensive
- Industrial development – light

Low Impact (0.25):

- Agricultural development – dispersed
- Facilities – permitting
- Bridges
- Overwater structures
- Mines
- Boat launches

For each AU, index weights were calculated by dividing the weight of each identified potential stressor by the summed weight of all stressors, causing the summed stressor weight for each AU to equal 1. For an AU with data gaps such as lack of information on levees and riprap, the weighting was redistributed among the other variables, so that all stressor index weights totaled to 1 as exemplified in Table 2.

AU Example

The analysis unit identified as S OKA 08 (AU # 153), previously scored, was weighted as described above. Data were available on the Okanogan River for levees and riprap and so index weights provided in the third column of Table 2 were used to weigh each of the four identified stressors for this unit.

- *Water quality: $1.0 \times 0.085714 = 0.086$*
- *Residential development: $0.14 \times 0.085714 = 0.012$*

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- *Intensive agriculture: $0.31 \times 0.057143 = 0.018$*
- *Geologically hazardous areas: $0.04 \times 0.057143 = 0.002$*

Table 2: Example of Variation in Index Weighting Based on Data Availability

Stressor Variables	Stream Aus with Levee Data		Stream Aus without Levee and Riprap Data	
	Weight	Index Weights	Weight	Index Weights
Water quality	0.75	0.085714	0.75	0.10345
Permitted facilities	0.25	0.028571	0.25	0.03448
Bridges	0.25	0.028571	0.25	0.03448
Overwater structures	0.25	0.028571	0.25	0.03448
Mines	0.25	0.028571	0.25	0.03448
Culverts	0.50	0.057143	0.50	0.06897
Boat launches	0.25	0.028571	0.25	0.03448
Rail	0.75	0.085714	0.75	0.10345
Roads	0.75	0.085714	0.75	0.10345
Levees	0.75	0.085714	NA	0
Riprap	0.75	0.085714	NA	0
Geologically hazardous areas	0.50	0.057143	0.50	0.06897
Agricultural dev-Intensive	0.50	0.057143	0.50	0.06897
Agricultural dev – Dispersed	0.25	0.028571	0.25	0.03448
Residential dev	0.75	0.085714	0.75	0.10345
Industrial dev – Light	0.50	0.057143	0.50	0.06897
Industrial dev – Heavy	0.75	0.085714	0.75	0.10345

TOTAL

1.000

1.000

NA – Not analyzed

Step 4: Calculation of AU Condition Index

For each AU, the stressor scores were multiplied by the index weight values and added. The result was a stressor index value for each AU that ranged from 0 to 1. The condition index value for each AU was then calculated by subtracting the combined stressor score from 1. This inverted the ranking of sites from higher values signifying greater impacts to higher values signifying greater overall condition health. In this way, higher condition values indicate a less altered condition, while lower condition values indicate a more altered condition.

AU Example

The analysis unit identified as S OKA 08 (AU # 153), previously scored and weighted, had a stressor index value calculated by adding the products of the scores and index weights: 0.086 (water quality) + 0.012 (residential development) + 0.018 (intensive agriculture) + 0.002 (geologically hazardous areas) = 0.118. The condition index value was calculated by subtracting the stressor index value from 1: $1 - 0.118 = 0.88$.

3.2.4 Aggregate Resource Index***Step 1: Identification of AU Resources***

The resource data identified for use in this analysis were chosen for their indication of the relative ecological function of the shoreline. County wide coverage was the basis for selecting variables and datasets to the extent possible. These data were the most comprehensive public data available at the time of analysis. Individual variables are described below.

Species. Species of Concern in Washington, as identified by the Washington Department of Fish and Wildlife (WDFG), include all State Endangered, Threatened, Sensitive, and Candidate species as well as Federal Endangered, Threatened, and Candidate species. Additionally, Priority Species listed by WDFW includes the above species as well as game species and organisms crucial to tribal cultural values. Some species distribution data could not be obtained, due either to data gaps or absence of the species within the SMP study area. The number of distributions of these aquatic, riparian, and upland species were totaled for each AU. Certain species were assigned to more than one habitat. Data for the species distributions were obtained from NOAA Fisheries, the Washington GAP Project created by Washington Cooperative Fish and Wildlife Research Unit, the StreamNet Project, and the Priority and Species Database and Wildlife Heritage Database created by WDFG. A complete list of species used in this analysis is provided in Table 3.

Table 3: Species Included in AU Resource Scoring

<i>Common Name</i>	<i>Scientific Name</i>	<i>Animal Type</i>	<i>Federal Status</i>	<i>State Status</i>	<i>WA Priority Sp. Status</i>	<i>Habitat</i>
Aquatic Species						
AMERICAN WHITE PELICAN	<i>Pelecanus erythrorhynchos</i>	Bird	none	SE	y	a
BARROW'S GOLDENEYE	<i>Bucephala islandica</i>	Bird	None	none	y	a,r
BULL TROUT	<i>Salvelinus confluentus</i>	Fish	FT	SC	y	a
COLUMBIA SPOTTED FROG	<i>Rana luteiventris</i>	Amphibian	none	SC	y	a,r
COMMON LOON	<i>Gavia immer</i>	Bird	none	SS	y	a,r
GIANT COLUMBIA RIVER LIMPET	<i>Fisherola nuttalli</i>	Mollusk	none	SC	y	a
GREAT BLUE HERON	<i>Ardea herodias</i>	Bird	None	none	y	a,r
GREAT COLUMBIA SPIRE SNAIL	<i>Fluminicola columbiana</i>	Mollusk	Fco	SC	y	a
HARLEQUIN DUCK	<i>Histrionicus histrionicus</i>	Bird	None	none	y	a,r
LARGEMOUTH BASS	<i>Micropterus salmoides</i>	Fish	None	none	y	a
OREGON SPOTTED FROG	<i>Rana pretiosa</i>	Amphibian	FC	SE	y	a,r
PYGMY WHITEFISH	<i>Prosopium coulteri</i>	Fish	Fco	SS	y	a
SMALLMOUTH BASS	<i>Micropterus dolomieu</i>	Fish			y	a
SOCKEYE SALMON OR KOKANEE	<i>Oncorhynchus nerka</i>	Fish	FE	SC	y	a
UMATILLA DACE	<i>Rhinichthys umatilla</i>	Fish	none	SC	y	a
WALLEYE	<i>Stizostedion vitreum</i>	Fish	none	none	y	a
WESTERN GREBE	<i>Aechmophorus occidentalis</i>	Bird	none	SC	y	a,r
WESTERN TOAD	<i>Bufo boreas</i>	Amphibian	Fco	SC	y	a,r
WESTSLOPE CUTTHROAT	<i>Oncorhynchus clarki lewisi</i>	Fish	none	none	y	a
WHITE STURGEON	<i>Acipenser transmontanus</i>	Fish	None	none	y	a
Riparian Species						
BALD EAGLE	<i>Haliaeetus leucocephalus</i>	Bird	Fco	ST	y	u,r
BARROW'S GOLDENEYE	<i>Bucephala islandica</i>	Bird	None	none	y	a,r
COLUMBIA SPOTTED FROG	<i>Rana luteiventris</i>	Amphibian	none	SC	y	a,r
COMMON LOON	<i>Gavia immer</i>	Bird	none	SS	y	a,r
GREAT BLUE HERON	<i>Ardea herodias</i>	Bird	none	none	y	a,r
HARLEQUIN DUCK	<i>Histrionicus histrionicus</i>	Bird	none	none	y	a,r
OREGON SPOTTED FROG	<i>Rana pretiosa</i>	Amphibian	FC	SE	y	a,r

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WESTERN GREBE	<i>Aechmophorus occidentalis</i>	Bird	none	SC		a,r
WESTERN TOAD	<i>Bufo boreas</i>	Amphibian	Fco	SC	y	a,r
Upland Species						
BALD EAGLE	<i>Haliaeetus leucocephalus</i>	Bird	Fco	ST	y	u,r
BURROWING OWL	<i>Athene cunicularia</i>	Bird	Fco	SC	y	u
FISHER	<i>Martes pennanti</i>	Mammal	FC	SE	y	u
FLAMMULATED OWL	<i>Otus flammeolus</i>	Bird	none	SC	y	u
GOLDEN EAGLE	<i>Aquila chrysaetos</i>	Bird	none	SC	y	u
GRAY WOLF	<i>Canis lupus</i>	Mammal	FE	SE	y	u
GRIZZLY BEAR	<i>Ursus arctos</i>	Mammal	FT	SE	y	u
LEWIS' WOODPECKER	<i>Melanerpes lewis</i>	Bird	none	SC	y	u
LOGGERHEAD SHRIKE	<i>Lanius ludovicianus</i>	Bird	Fco	SC	y	u
LYNX	<i>Lynx canadensis</i>	Mammal	FT	ST	y	u
MARTEN	<i>Martes americana</i>	Mammal	none	none	y	u
MOOSE	<i>Alces alces</i>	Mammal	none	none	y	u
NORTHERN GOSHAWK	<i>Accipiter gentilis</i>	Bird	Fco	SC	y	u
PILEATED WOODPECKER	<i>Dryocopus pileatus</i>	Bird	none	SC	y	u
SAGE SPARROW	<i>Amphispiza belli</i>	Bird	none	SC	y	u
SAGE THRASHER	<i>Oreoscoptes montanus</i>	Bird	none	SC	y	u
SAGEBRUSH LIZARD	<i>Sceloporus graciosus</i>	Reptile	Fco	SC	y	u
SHARP-TAILED GROUSE	<i>Tympanuchus phasianellus</i>	Bird	Fco	ST	y	u
SPOTTED OWL	<i>Strix occidentalis</i>	Bird	FT	SE	y	u
TOWNSEND'S BIG-EARED BAT	<i>Corynorhinus townsendii</i>	Mammal	Fco	SC	y	u
VAUX'S SWIFT	<i>Chaetura vauxi</i>	Bird	none	SC	y	u
WESTERN GRAY SQUIRREL	<i>Sciurus griseus</i>	Mammal	Fco	ST	y	u
WHITE-TAILED JACKRABBIT	<i>Lepus townsendii</i>	Mammal	none	SC	y	u
WILD TURKEY	<i>Meleagris gallopavo</i>	Bird			y	u
WOLVERINE	<i>Gulo gulo</i>	Mammal	Fco	SC	y	u

Key: a= aquatic, u= upland, r=riparian

Status Codes:

FE: Federal Endangered

SE: State Endangered

FT: Federal Threatened

ST: State Threatened

FC: Federal Candidate

SC: State Candidate

Fco: Federal Species of Concern

SS: State Sensitive

Salmon Spawning and Rearing Habitat. It has been argued that biological diversity, in relation to large-scale ecological processes versus just a mix of species, should focus on keystone species (focal) or those essential for ecosystem resilience. Salmonids have been used as focal species in several local watershed planning documents for the area (NPCC, 2004a; NPCC, 2004b). Therefore, for this shoreline characterization analysis, Aus containing salmonid habitat represent vital areas.

Habitat loss and change are among the major factors determining the current status of salmonid populations. Salmonids depend on diverse habitats with connections among those habitats for their life history cycle from rearing to spawning. Data for this analysis were provided the National Oceanic and Atmospheric Administration (NOAA), Streamnet, and WDFW. Lake Aus were not analyzed for this variable.

ESA Salmon Critical Habitat. NOAA fisheries Northwest Region critical habitat designations include habitat for Chinook salmon and rainbow trout/steelhead species within Okanogan County. These are specific areas that have been found to be critical to conservation of salmonid species, and include not only spawning and rearing habitat but also important migration habitat. Loss of this habitat reduces the diversity in salmon and steelhead life histories, which influences the ability of these fish to adapt to natural and man-made change. Critical habitat designation data were provided by NOAA. Lake Aus were not analyzed for this variable.

Riparian Vegetation. Riparian habitat is especially important in the western United States due to the presence of water and vegetation, typically surrounded by harsher, drier, less productive environments (Chaney et al., 1990). Riparian vegetation provides several benefits to shorelines. Tree roots uptake nutrients along with pollutants that ordinate from the land and are stored in leaves, limbs, and roots. Riparian vegetation stabilizes the soil along shorelines, reduces the risk of flooding, and provides large woody debris to the aquatic environment. The canopy provides shade that keeps water cool and retains more dissolved oxygen both of which are needed for many of the life stages of aquatic species. The score was based on the percentage of riparian vegetation within each AU and was calculated from the U.S. Geological Survey (USGS) Land Cover GIS data layer.

Wetlands. Wetlands are essential in assisting in flood control as they can store water and also filter pollutants and retain sediments. Many species depend on wetlands for some part of their life cycle (breeding, nesting, feeding, shelter). Data were obtained from the National Wetland Inventory which provides information on the characteristics, extent, and status of US wetlands and deepwater habitats. The National Wetland Inventory created by WDFG was accessed to provide the location and extent of wetlands in Okanogan County.

Potential Migration Zones. The area where the stream channel is most likely to move across the floodplain, over time, has the ability to reduce flood hazards and create habitat for a wide range of species. This area is commonly referred to as the channel migration zone but, for this analysis this zone is referred to as the Potential Migration Zone (PMZ). The PMZ layer was created based on interpretations from a low-resolution digital

elevation models (DEM) and general published geologic maps. ENTRIX or its employees are not responsible for specific delineation boundaries in any way unless and until a thorough analysis that includes higher resolution mapping, photogrammetric interpretation, and field calibration is accomplished. Provision of such a rigorous analysis for delineation of lateral channel movement was beyond the scope and budget of this project. The PMZ is provided as a general guide to channel conditions based on available information and is not intended for use in other jurisdictional delineations. This PMZ can be considered some index of the potential for a channel to migrate, but cannot be directly interpreted as the defined probability of lateral channel movements. Lake Aus were not analyzed for this variable.

Step 2: Scoring of AU Resources

Scores for resources range from 0, which estimates an absence of identified resources, to 1, which estimates a strong presence of identified resources (Table 4). In this way, higher scores indicate a relatively higher value of resources in an analysis unit, while lower scores indicate a lower value of resources.

Continuous coverage data were quantified by area percentages for the stressor variables listed below:

- Wetlands
- Riparian vegetation
- Potential migration zone

All scores for the above variables ranged from 0 to 1 based on the area percentage. For example, an AU composed of 30% riparian vegetation was assigned a score of 0.30 for the *riparian vegetation* resource variable.

To assign scores to the aquatic, riparian, and upland species distributions data, Aus were originally divided into 3 class sizes to account to account for data skewing due to varying unit size as described above. However, variance among different-sized Aus were not observed to be significant, and so class sizes were eliminated from the analysis. Individual variables were scored on a scale between 0 and 1. The scores were based on a low (0.25), medium (0.50) and high (0.75) number of species found within each AU as described in Table 5.

Finally, due to the nature of the data used in this analysis, the following variables were assessed based on presence (1)/ absence (0) within each AU:

- Salmon spawning / rearing habitat
- NOAA critical habitat

Table 4: Analysis Unit Resource Scoring and Weighting

AU Resource	Score	Scoring	Weight
Riparian vegetation	0 to 1	Percentage of riparian vegetation in unit	75
Wetlands	0 to 1	Percentage of wetlands in unit	75
Potential migration zone	0 to 1	Percentage of potential migration zone in unit	50
Salmon spawning/rearing habitat	0	None in unit	75
	1	Unit contains spawning/rearing habitat	-
NOAA critical habitat	0	None in unit	75
	1	Unit contains NOAA critical habitat	-
Aquatic species	0.00	None in unit	75
	0.25	Up to 3 aquatic species in unit	-
	0.50	Up to 6 aquatic species in unit	-
	0.75	7 or more aquatic species in unit	-
Riparian species	0.00	None in unit	75
	0.25	1 riparian species in unit	-
	0.50	Up to 3 riparian species in unit	-
	0.75	4 or more riparian species in unit	-
Upland species	0.00	None in unit	25
	0.25	Up to 5 upland species in unit	-
	0.50	Up to 10 upland species in unit	-
	0.75	11 or more upland species in unit	-

AU Example

As seen before, the analysis unit identified as S OKA 08 (AU #153), located on Okanogan River was 15.3 acres in size. Identified potential resources were identified as aquatic, riparian, and upland species, salmon spawning and rearing habitat, NOAA critical habitat, riparian vegetation, wetlands, and potential migration zone. The identified resources were scored in the following way (see Table 5):

- Aquatic species: 0.75 (data on 10 species distributions in unit);
- Riparian species: 0.50 (data on 3 species distributions in unit);
- Upland species: 0.75 (data on 15 species distributions in unit)
- Salmon spawning/rearing habitat: 1.0 (present in unit);
- NOAA critical habitat: 1.0 (present in unit);
- Riparian vegetation: 0.30 (30% of the land within unit had riparian vegetation);
- Wetlands: 0.074 (7.4% of the land within unit was composed of wetlands);
- Potential migration zone: 1.0 (100% of the AU within the potential migration zone)

Step 3: Weighting of AU Resources

A relative weight (based on the value of each resource to shoreline ecological function) was given to each resource variable. The score was multiplied by this weighting factor based on the relative percentage of estimated value. The weights were divided into low (.25), medium (.50), and high value (.75) categories. The development of these weighting factors for resources involved literature review, consultation with local experts, and professional opinion. The weighting categories are summarized below:

High Resource Value (0.75):

- Aquatic species
- Riparian species
- Salmon spawning / rearing habitat
- NOAA critical habitat
- Wetlands
- Riparian vegetation

Medium Resource Value (0.50):

- Potential migration zones

Low Resource Value (0.25):

- Upland species

Resource index weights were calculated by dividing the weight of each analyzed resource by the summed weight of all analyzed resources in each unit, causing the summed resource weights for each AU to equal 1. The resource scores were then multiplied by

the index weight values. Lake and stream Aus were analyzed for a different number of total resource variables due to the applicability of these variables. Lake Aus were not analyzed for salmon spawning and rearing habitat, NOAA critical habitat, or potential migration zones. Examples of index weighting for stream Aus verses lake Aus is provided in Table 5.

AU Example

The analysis unit identified as S OKA 08 (AU # 153), previously scored, was weighted as described above. This AU was located on a stream and so index weights provided in the third column of Table 6 were used to weigh each of the identified resource variables for this unit.

- *Aquatic species: $0.75 \times 0.142857 = 0.11$;*
- *Riparian species: $0.50 \times 0.142857 = 0.071$;*
- *Upland species: $0.75 \times 0.047619 = 0.036$;*
- *Salmon spawning/rearing habitat: $1.0 \times 0.142857 = 0.14$;*
- *NOAA critical habitat: $1.0 \times 0.142857 = 0.14$;*
- *Riparian vegetation: $0.30 \times 0.142857 = 0.043$;*
- *Wetlands: $0.074 \times 0.142857 = 0.011$;*
- *Potential migration zone: $1.0 \times 0.095238 = 0.095$.*

Step 4: Calculation of AU Resource Index

The combined resource score for each AU was calculated by adding the individual weighted resource scores. The result, a resource index score for each AU that ranged from 0 to 1, was used to assess the relative ecological health of each shoreline unit.

AU Example

The analysis unit identified as S OKA 08 (AU # 153), previously scored and weighted, had a resource index value calculated by adding the products of the scores and index weights: 0.11 (aquatic species) + 0.071 (riparian species) + 0.036 (upland species) + 0.14 (salmon spawning/rearing habitat) + 0.14 (NOAA critical habitat) + 0.043 (riparian vegetation) + 0.011 (wetlands) + 0.095 (potential migration zone) = 0.65 .

Table 5: Weighting of Lake and Stream AUs

Resource Variables	Stream AUs		Lake AUs	
	Start Weights	Index Weights	Start Weights	Index Weights
Aquatic species	0.75	0.142857	0.75	0.230769
Riparian species	0.75	0.142857	0.75	0.230769
Upland species	0.25	0.047619	0.25	0.076923
Salmon spawning/ rearing habitat	0.75	0.142857	NA	0
NOAA critical habitat	0.75	0.142857	NA	0
Wetlands	0.75	0.142857	0.75	0.230769
Riparian vegetation	0.75	0.142857	0.75	0.230769
Potential migration zone (PMZ)	0.50	0.095238	NA	0
TOTAL		1.000		1.000

NA – Not analyzed

3.2.5 AU Characterization Quadrant Analysis

Resource indices can be plotted against condition indices for each AU and the results interpreted in a general way. A simple approach to interpretation that facilitates discussions about designation is to divide a scatter plot of AU scores into quadrants to give an indication of types of potential future SMA actions that might be taken for each grouping of units (see Figure 2).

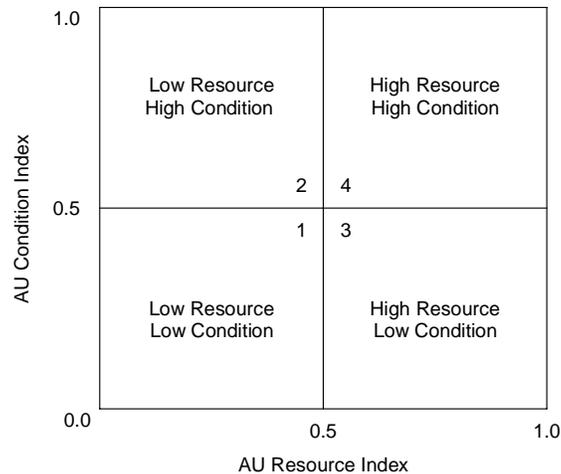


Figure 2: Conceptual Interpretation of Quadrant Assignments; Analysis Unit Condition Index vs. Resource Index

Quadrants characterization can be described further as the potential for successful future planning efforts to maintain shoreline ecological functions. For example, quadrant 3, with high resource and low condition index, shows that these units may represent AUs with higher levels of existing natural resources, such as containing viable populations of Species of Concern, but, also having a lower shoreline condition. These AUs will benefit from planning activities that increase or enhance those limiting ecological functions associated with the AU shoreline condition. An example would be to minimize certain types of shoreline development or emphasize specific designations for these areas in order to improve ecosystem processes and functions which will preserve existing high resource condition. However, in quadrant 2, with low resource and high condition index, these AUs are recognized as relatively intact shoreline condition but relatively lower inherent resources. In this case, the AU in quadrant 2 may benefit from planning efforts geared toward resource enhancement activities. These AUs may naturally contain fewer resources (e.g. no Chinook salmon critical habitat or wetlands) while still being less impacted by human activities.

3.3 Watershed-Scale Analysis

The purpose of this broader scale analysis is to place analysis units in context with watershed processes. In contrast to the AU scale analysis detailed above, the watershed analysis considers near stream and upslope conditions without constraint of parcel and

ownership inclusion in the shoreline management jurisdiction. The primary value of watershed scale analysis is the identification of AUs and stressor functions that might be used to identify restoration actions as well as to evaluate the relative intactness of AUs within each watershed. This analysis will be a part of the final report.

The method to highlight watershed key processes and describe the effects of land use on those key processes will be modified from Ecology's 2005 document, available at: <http://www.ecy.wa.gov/biblio/0506027.html>. The goal is to identify and map areas important to sustain shoreline functions and to determine degree of alteration to key processes. The following is a list of the three key watershed process and likely indicators that will be used to evaluate them:

- Sediment supply and erosion - soil erodibility index, dams, mass wasting areas;
- Riparian inputs (heat/light) - riparian vegetation, fire history;
- Hydrology - precipitation, recharge areas, soil permeability (PCMZ).

Indicators of alteration that may be used are, roads 100' of streams, dams, urban land cover, non-forest cover 100' of streams, agriculture cover, urban cover on high soil permeability, and impervious surfaces. The indicators of key processes and indicators of alteration will be overlaid spatially in order to highlight minimally altered areas and impaired areas within each watershed.

3.3.1 Watershed Boundaries

In general terms, watersheds are an area of land that drains water, sediment and dissolved materials to a common receiving body or outlet. Watersheds vary from the largest river basins to just acres or less in size. Watershed delineations have been completed for the Methow and Okanogan Subbasin plans and limiting factor analysis (ENTRIX and Golder 2002, MWG et al. 1995; NPCC 2004a, NPCC 2004b). However, these were created under a different set of goals where, for example, the project focused on focal salmonid distributions. This watershed analysis used boundaries were meaningful descriptions of upslope factors (vegetation, wetlands, land use etc.) interact to describe the AU shoreline zone. This characterization framework used best professional judgment in defining watersheds.

Watershed boundaries were primarily determined by utilizing the USGS 5th Field Hydrologic Unit (HUC 10) which represent major watershed delineations (i.e., large tributaries and HUC 12. The watersheds evaluated within Okanogan County are:

Upper Methow Watershed

Mazama Watershed

Lower Chewuch Watershed

Middle Methow River Watershed

Beaver Watershed

Twisp Watershed

Lower Methow River Watershed

Upper Columbia/Swamp Creek Watershed
Sinlahekin Watershed
Lower Similkameen River Watershed
Upper Okanogan River Watershed
Okanogan River watershed
Bonaparte Watershed
Okanogan River/ Omak Watershed
Salmon Watershed
Lower Okanogan Watershed
Myers Watershed
Toroda Watershed
West Fork Sanpoil Watershed

4 CHARACTERIZATION RESULTS

4.1 Introduction

The results of site-scale analyses of the shoreline area of Okanogan County are presented in the AU characterization summary reports located in Technical Appendix A.2. Maps depicting the relative locations of each AU within Okanogan County are provided in the Map Portfolio (Appendix A.4). Tables summarizing the lakes and streams evaluated in this characterization are located in Technical Appendix A.3, Tables 1 and 2. Tables providing a complete catalog list of all AUs for lakes and streams that serve as a roadmap for the AU characterization results catalog can be found in Technical Appendix A.3, Tables 3 and 4. Appendix A.3, Table 5 lists the descriptive statistics for each analysis variable. Appendix A.3 Table 6 provides a list of data sources used in this analysis.

4.2 AU Characterization Results Catalog

Each of the 233 analysis units have an individual one-page report that identifies information unique to each AU such as AU number, AU code, latitude and longitude of each AU center point, waterbody name, and watershed. Along with this identifying information, both raw and final scores are presented for each variable, the aggregate condition and resource indices for each AU, and quadrant results. Maps of Watersheds and AUs are included as a companion to the AU catalog (Map Portfolio).

4.3 Characterization Quadrant Analysis Results

The AU condition index values were plotted against the AU resource index values as specified in the Methods section (Section 3.2.6). The data points are arrayed within four quadrants that give further guidance on planning approaches for the AUs. The layout provides a means for assessing continuity of ecological function within each AU, which may be a factor in assigning shoreline environment designations of points. The distribution of points also supports identification of the most effective restoration options.

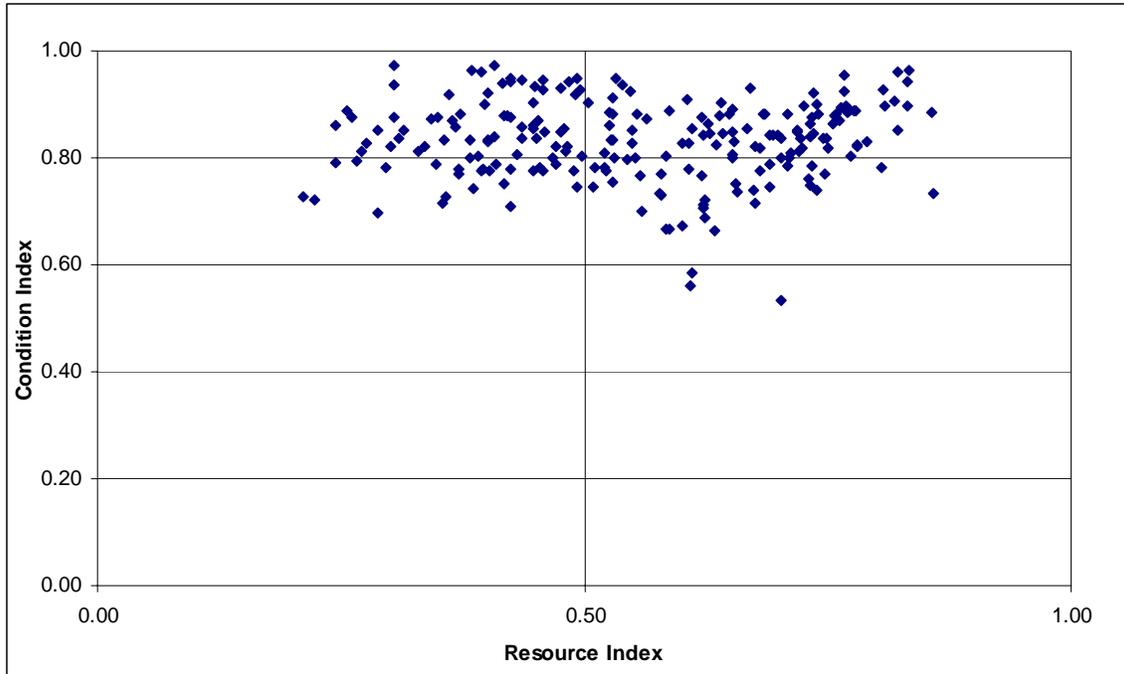


Figure 3: Plot of AU Condition and Resource Indices, Okanogan County, WA (n=233)

A scatter plot of AU condition and resource indices is provided in Figure 3 and 4. Condition indices of all AUs ranged from 0.53 to 0.97. Resource indices for all AUs ranged from 0.21 to 0.86. As can be seen in Figure 3, this caused all of the values to be located in the upper half of the scatter plot.

Figure 5 shows the distribution of AUs within each quadrant. Quadrant results by AU are located in Technical Appendix A.3, Table 4.

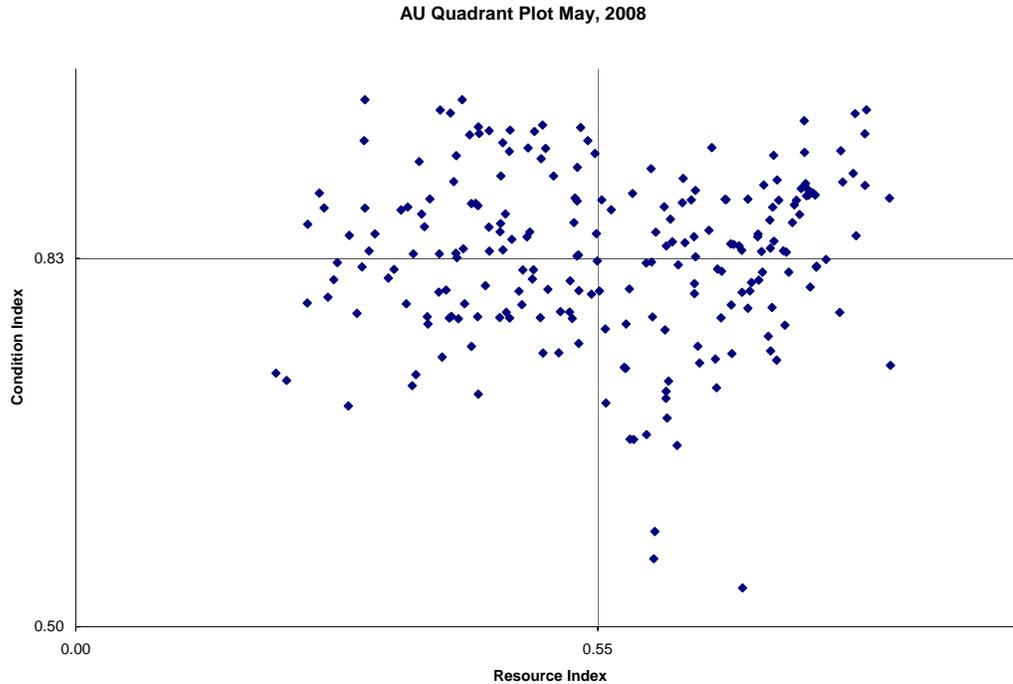


Figure 4: Modified AU condition and resource Indices’ Plot Showing Approximate Location of Quadrant Boundaries for Characterization Results

The total numbers of AUs within each quadrant are the following:

1. *Low Condition , Low Resource* (lower left quadrant) – 43 AUs
2. *High Condition, Low Resource* (upper left quadrant) – 56 AUs
3. *Low Condition, High Resource* (lower right quadrant) – 51 AUs
4. *High Condition, High Resource* (upper right quadrant) – 83 AUs

A brief summary highlighting trends in the quadrant analysis results is provided below. For the Sanpoil River, most all AUs fall within the quadrant 2 with a higher level of existing shoreline environmental functions, but they also have a low resource index. For the Twisp River, 4 out of 6 AUs were located in quadrant 4, high condition and high resources. The Similkameen River has 8 out of 10 AUs in quadrant 1, low condition, low resources. Forty-five percent of the lake AUs in Okanogan County fell in quadrant 1, 30% quadrant two, 10% quadrant 3, and 13 % of lake AUs in quadrant 4. Figure 5 presents a visual example of AUs, within the middle Methow River, by quadrant assignment.

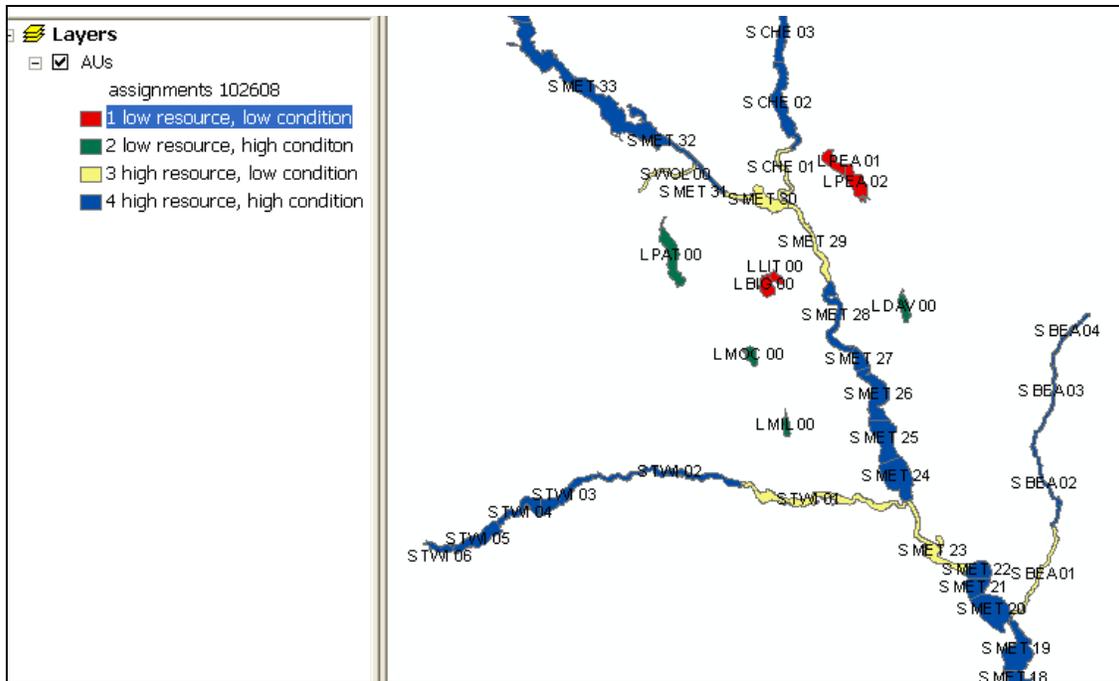


Figure 5: Graphic Example Representing AUs near the Middle Methow River by Quadrant Assignment

4.4 Potential Use of Quadrant Analysis

The grouping of analysis units into characterization quadrants provides an initial approach for planners to explore the large body of data that supports the process of environmental designation. For example, an AU with a high condition value and a high resource value might be conserved and preserved. These units likely represent AUs with high levels of function and significant natural resource and human values of significance. Planning through the SMA might, for example, minimize shoreline development or emphasize specific designations for these areas in order to keep the high quality ecosystem processes and functions intact. Units with a high condition index and a lower resource index (upper left quadrant) might be maintained and conserved to recognize their ecosystem value of relatively intact condition but relatively lower inherent natural and resources. It is possible that these regions may naturally contain fewer resources while still being less impacted by human activities. Regions with higher resource values located in areas with a lower condition index (lower right quadrant) may present opportunities for restoration by minimizing or removing the environmental impacts. Moreover, these units may be a starting point for the identification of types and sites for restoration activities. Finally, for analysis units showing both low condition and low resource values, an effort to recover shoreline elements might be considered. The term *recovery* is used here to indicate that remaining functions are low and likely missing key elements necessary to provide human and natural values when considered in a context relative to some historic condition.

4.5 Summary

The methodology developed by ENTRIX for characterizing shoreline functions in Okanogan County resulted in the identification of 233 analysis units. These analysis units are distributed across nineteen watersheds. Analyses of characterization results are focused on the presentation and grouping of results by watershed and by descriptive statistical and narrative treatments to assist subsequent planning efforts. A complete catalog of analysis units and attributes for Okanogan County is provided as appendices.

5 CONTINUED SCIENCE SUPPORT FOR SMP UPDATE

5.1 Environmental Designation Determination

The data provided in the AU characterization reports will be used as a road map to identify appropriate environmental designations of each reach of shoreline within the County. The ENTRIX science team will coordinate with the planning team to preserve the ecological function of the shoreline area and ensure that no net loss of ecological function occurs.

5.2 Cumulative Effects

The cumulative effects analysis will address the effects of all reasonably foreseeable future development on the Okanogan shoreline area. The overall purpose for cumulative impact analysis is to assess the commonly occurring and foreseeable impacts of development that would be allowed and determine whether the net effect of shoreline planning will be to address legislative intent by preventing net loss of shoreline ecological functions and other beneficial uses.

5.3 Restoration Plan

The characterization of AU sites suggests shorelines that might be considered as sites for restoration efforts. These opportunities will be explored in the final SMP document.

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Technical Appendix A.2
AU Characterization Summary Reports

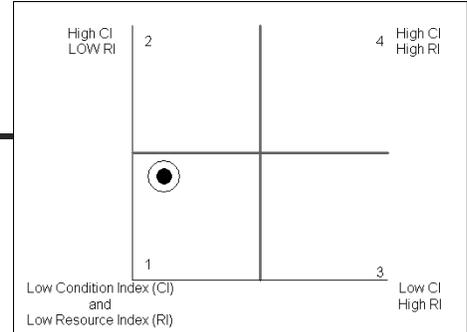
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 1
 Analysis Unit Code L AEN 00
 River / Lake Name AENEAS LAKE
 Coordinates Lat, Long 48.6787766-119.509851
 Acres of SMP land 31.946923
 length water feet 2478.303996

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.30 %	0.30	0.069	0.021
Agricultural dispersed	0.02 %	0.02	0.034	0.001
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.30 %	0.30	0.103	0.031
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.58554 9 %	0.59	0.069	0.040
Boat ramps	1 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.77

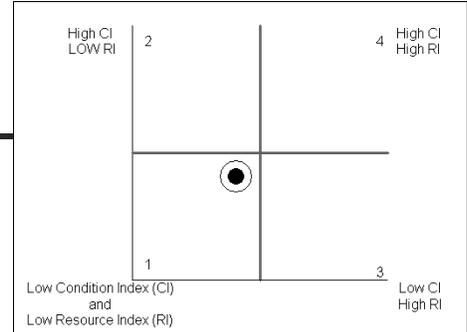
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	1 #	0.25	0.231	0.058
Upland Species	4 #	0.25	0.077	0.019
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.09 %	0.09	0.231	0.021
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.48 %	0.48	0.231	0.111
Aggregate Resource Index				0.27

Unique ID 2
 Analysis Unit Code L ALB 00
 River / Lake Name ALBRIGHT LAKE (PENINSULA LAKE)
 Coordinates Lat, Long 48.5421063-119.610063
 Acres of SMP land 29.757780
 length water feet 2502.91218484

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.03 %	0.03	0.034	0.001
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.36 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.34638 1 %	0.35	0.069	0.024
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.79

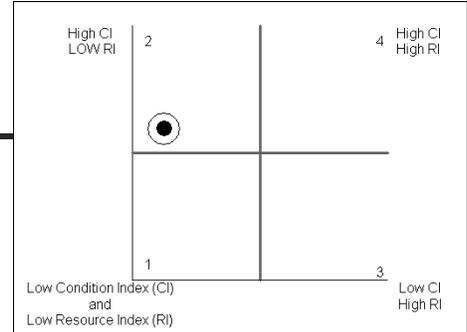
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.17 %	0.17	0.231	0.039
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.95 %	0.95	0.231	0.220
Aggregate Resource Index				0.47

Unique ID 3
 Analysis Unit Code L ALK 00
 River / Lake Name ALKALI LAKE
 Coordinates Lat, Long 48.5215687 -119.545115
 Acres of SMP land 45.291528
 length water feet 3905.41326278

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.29	%	0.29	0.103	0.030
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.13	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.60595 3	%	0.61	0.069	0.042
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	1	#	0.25	0.231	0.058
Riparian Species	1	#	0.25	0.231	0.058
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.85	%	0.85	0.231	0.196
Aggregate Resource Index					0.35

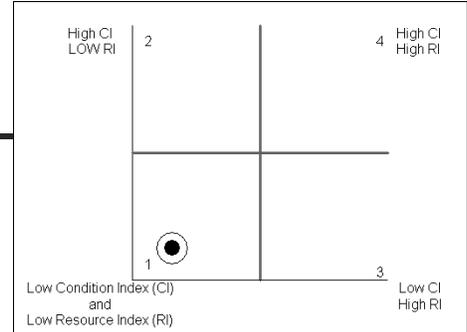
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 4
 Analysis Unit Code L ALT 00
 River / Lake Name ALTA LAKE
 Coordinates Lat, Long 48.0114200-119.936548
 Acres of SMP land 49.751608
 length water feet 7088.53300834

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.06 %	0.06	0.069	0.004
Agricultural dispersed	0.11 %	0.11	0.034	0.004
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.30 %	0.30	0.103	0.031
Industrial development-heavy	0.00 %		0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	19 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.84 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.17767 1 %	0.18	0.069	0.012
Boat ramps	6 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.70

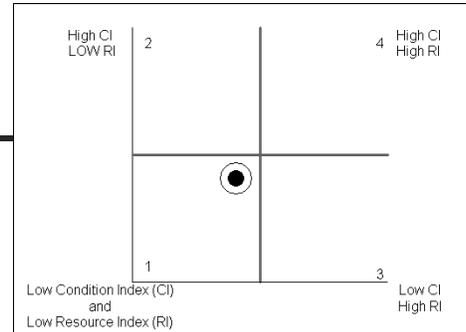
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	13 #	0.75	0.077	0.058
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.05 %	0.05	0.231	0.011
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.49 %	0.49	0.231	0.113
Aggregate Resource Index				0.35

Unique ID 5
 Analysis Unit Code L BIG 00
 River / Lake Name BIG TWIN LAKE
 Coordinates Lat, Long 48.4466915-120.193323
 Acres of SMP land 38.23877
 length water feet 2803.95900891

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.17	%	0.17	0.103	0.018
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.22	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.73392	%	0.73	0.069	0.051
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.231	0.058
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.06	%	0.06	0.231	0.015
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.72	%	0.72	0.231	0.167
Aggregate Resource Index					0.39

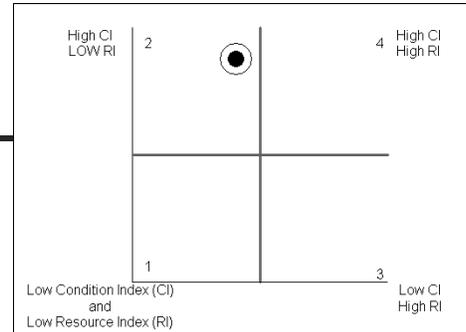
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 6
 Analysis Unit Code L BLS 01
 River / Lake Name BLUE LAKE (SINLAHEKIN)
 Coordinates Lat, Long 48.6872776-119.691917
 Acres of SMP land 47.593184
 length water feet 4297.5569943

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.037	0.009
Agricultural- intensive	0.00 %	0.00	0.074	0.000
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %		0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.08 Mi.	0.25	0.111	0.028
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	— %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.96

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	7 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.03 %	0.03	0.231	0.007
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.72 %	0.72	0.231	0.166
Aggregate Resource Index				0.38

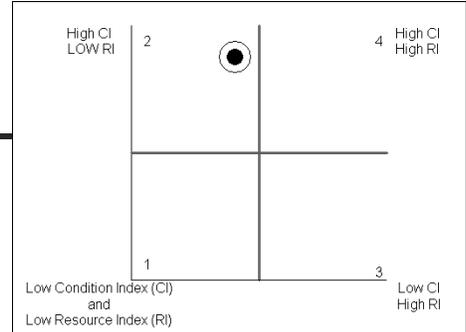
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 7
 Analysis Unit Code L BLS 02
 River / Lake Name BLUE LAKE (SINLAHEKIN)
 Coordinates Lat, Long 48.6752865-119.688028
 Acres of SMP land 49.017474
 length water feet 5155.48386793

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.00 %	0.00	0.074	0.000
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.03 Mi.	0.25	0.111	0.028
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.97

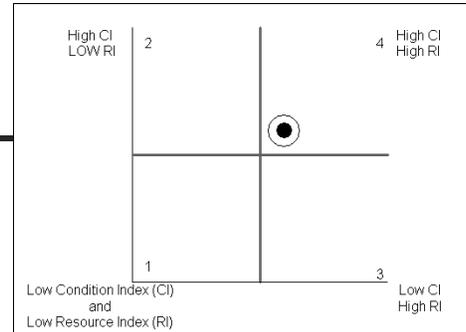
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	5 #	0.25	0.077	0.019
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.19 %	0.19	0.231	0.044
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.74 %	0.74	0.231	0.171
Aggregate Resource Index				0.41

Unique ID 8
 Analysis Unit Code L BLU 00
 River / Lake Name BLUE LAKE
 Coordinates Lat, Long 48.9072809-119.489523
 Acres of SMP land 56.535425
 length water feet 4942.42104319

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.56	%	0.56	0.034	0.019
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.10	%	0.10	0.103	0.010
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.41	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.50490 2	%	0.50	0.069	0.035
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

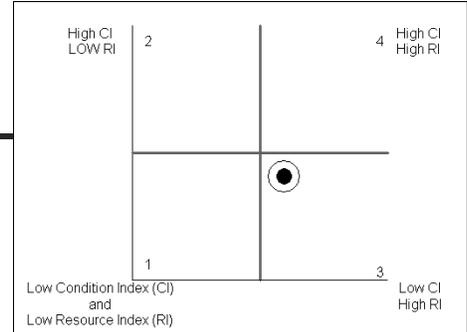
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.231	0.058
Riparian Species	4	#	0.75	0.231	0.173
Upland Species	11	#	0.75	0.077	0.058
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.17	%	0.17	0.231	0.039
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.86	%	0.86	0.231	0.199
Aggregate Resource Index					0.53

Unique ID 9
 Analysis Unit Code L BON 01
 River / Lake Name BONAPARTE LAKE
 Coordinates Lat, Long 48.7958253-119.059027
 Acres of SMP land 8.8715546
 length water feet 3627.37698861

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.93	%	0.93	0.034	0.032
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.07	%	0.07	0.103	0.007
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.01	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	3	#	1.00	0.034	0.034
Mines	1	#	1	0.034	0.034
Aggregate Condition Index					0.75

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.231	0.115
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	10	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.35	%	0.35	0.231	0.080
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	1.00	%	1.00	0.231	0.231
Aggregate Resource Index					0.58

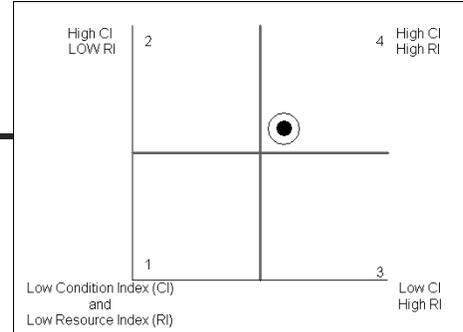
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Unique ID 10
 Analysis Unit Code L BON 02
 River / Lake Name BONAPARTE LAKE
 Coordinates Lat, Long 48.8020480-119.052032
 Acres of SMP land 4.4030856
 length water feet 3674.36746848

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0 %	0.00	0.069	0.000
Boat ramps	0 #	0.00	0.034	0.000
Mines	1 #	1	0.034	0.034
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	6 #	0.50	0.231	0.115
Riparian Species	5 #	0.75	0.231	0.173
Upland Species	11 #	0.75	0.077	0.058
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.78 %	0.78	0.231	0.179
Aggregate Resource Index				0.53

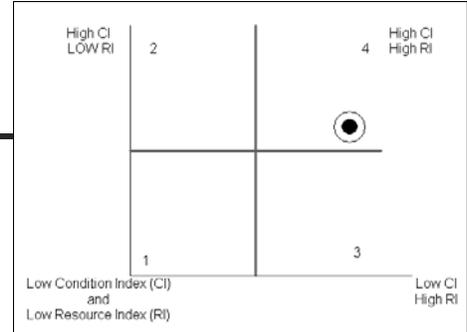
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ENVIRONMENTAL CONSULTANTS

Unique ID 11
 Analysis Unit Code L BON 03
 River / Lake Name BONAPARTE LAKE
 Coordinates Lat, Long 48.8060946-119.042285
 Acres of SMP land 9.7500337
 length water feet 2280.56245533

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.01	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.26989 3	%	0.27	0.069	0.019
Boat ramps	0	#	0.00	0.034	0.000
Mines	1	#	1	0.034	0.034
Aggregate Condition Index					0.82

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.231	0.115
Riparian Species	4	#	0.75	0.231	0.173
Upland Species	10	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.86	%	0.86	0.231	0.199
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.98	%	0.98	0.231	0.225
Aggregate Resource Index					0.75

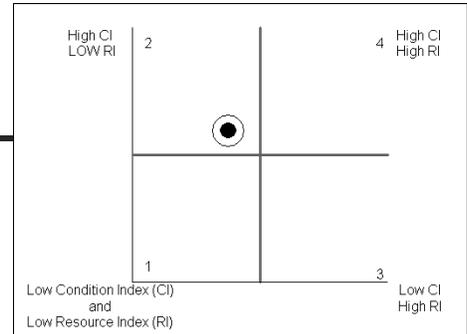
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ENVIRONMENTAL CONSULTANTS

Unique ID 12
 Analysis Unit Code L BOO 00
 River / Lake Name BOOHER LAKE
 Coordinates Lat, Long 48.5547878-119.547408
 Acres of SMP land 30.648759
 length water feet 2672.41262375

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	1.00 %	1.00	0.034	0.034
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.11926 / 3 %	0.12	0.069	0.008
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	1 #	0.25	0.231	0.058
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.49 %	0.49	0.231	0.113
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.78 %	0.78	0.231	0.181
Aggregate Resource Index				0.45

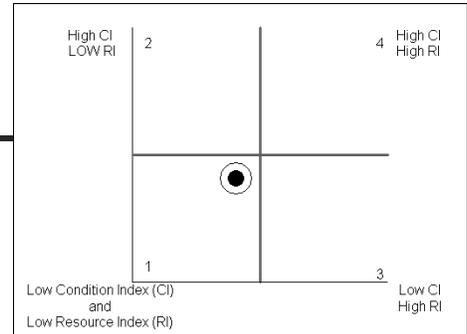
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 13
 Analysis Unit Code L BRO 00
 River / Lake Name BROWN LAKE
 Coordinates Lat, Long 48.4662445 -119.623352
 Acres of SMP land 54.522069
 length water feet 4856.60748896

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	1.00 %	1.00	0.034	0.034
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.68 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.30405 / 3 %	0.30	0.069	0.021
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.76

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.26 %	0.26	0.231	0.060
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.60 %	0.60	0.231	0.138
Aggregate Resource Index				0.41

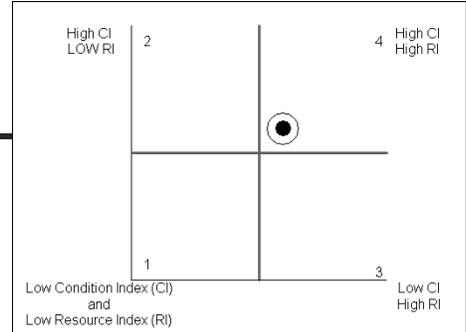
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ENVIRONMENTAL CONSULTANTS

Unique ID 14
 Analysis Unit Code L CHO 00
 River / Lake Name CHOPAKA LAKE
 Coordinates Lat, Long 48.9108195 -119.695992
 Acres of SMP land 63.470916
 length water feet 11180.9462506

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.037	0.000
Agricultural- intensive	0.00	%	0.00	0.074	0.000
Agricultural dispersed	0.53	%	0.53	0.037	0.020
Water quality	1.00	%	1.0	0.111	0.111
Residential development	0.00	%	0.00	0.111	0.000
Industrial development-heavy	0.00	%	0.00	0.111	0.000
Industrial development-light	0.00	%	0.00	0.074	0.000
Bridges	0	#	0.00	0.037	0.000
Overwater structures	0	#	0.00	0.037	0.000
Rail	0	Mi.	0.00	0.111	0.000
Roads	0.03	Mi.	0.25	0.111	0.028
Culverts	0	#	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient	%	0.00	0.000	0.000
Boat ramps	1	#	1.00	0.037	0.037
Mines	0	#	0	0.037	0.000
Aggregate Condition Index					0.80

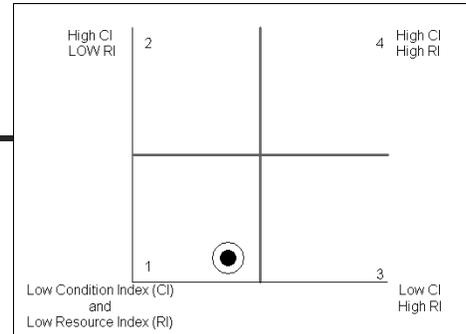
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	13	#	0.75	0.077	0.058
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.33	%	0.33	0.231	0.076
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.96	%	0.96	0.231	0.222
Aggregate Resource Index					0.53

Unique ID 15
 Analysis Unit Code L CON 01
 River / Lake Name CONCONULLY RESERVOIR
 Coordinates Lat, Long 48.5499834-119.749574
 Acres of SMP land 29.038386
 length water feet 3749.79989909

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	2 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.25 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.61388 / 4 %	0.61	0.069	0.042
Boat ramps	2 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.70

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.231	0.115
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.31 %	0.31	0.231	0.071
Potential migration zones	Z data %		0.000	0.000
Riparian vegetation	0.51 %	0.51	0.231	0.117
Aggregate Resource Index				0.46

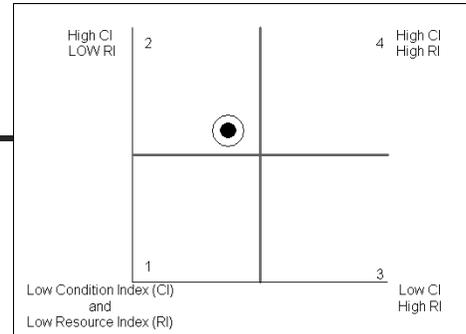
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 16
 Analysis Unit Code L CON 02
 River / Lake Name CONCONULLY RESERVOIR
 Coordinates Lat, Long 48.5419999 -119.746421
 Acres of SMP land 18.097332
 length water feet 3654.46896293

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	5	#	0.25	0.034	0.009
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.02	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.09257 68	%	0.09	0.069	0.006
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.86

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.231	0.115
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	10	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	Z data	%		0.000	0.000
Riparian vegetation	0.82	%	0.82	0.231	0.190
Aggregate Resource Index					0.46

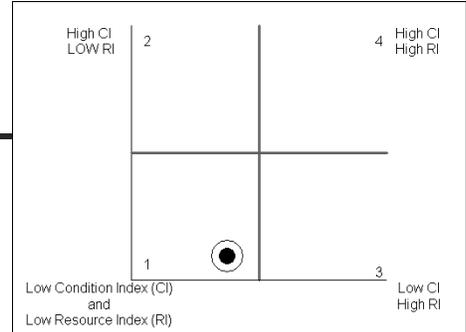
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 17
 Analysis Unit Code L CON 03
 River / Lake Name CONCONULLY RESERVOIR
 Coordinates Lat, Long 48.5424467 -119.757224
 Acres of SMP land
 length water feet 3654.46896293

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.99 %	0.99	0.069	0.068
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.18 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.31055 / 4 %	0.31	0.069	0.021
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.72

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.231	0.115
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	11 #	0.75	0.077	0.058
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	Z data %		0.000	0.000
Riparian vegetation	0.57 %	0.57	0.231	0.132
Aggregate Resource Index				0.42

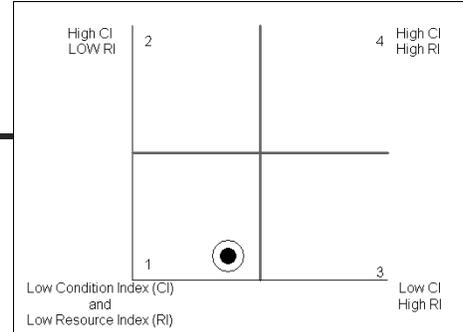
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 18
 Analysis Unit Code L CON 04
 River / Lake Name CONCONULLY RESERVOIR
 Coordinates Lat, Long 48.5509689-119.754683
 Acres of SMP land
 length water feet 3749.79989909

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.21	%	0.21	0.069	0.014
Agricultural dispersed	0.64	%	0.64	0.034	0.022
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	1	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.36	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01304 67	%	0.01	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.74

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.231	0.115
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	11	#	0.75	0.077	0.058
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	Z data	%		0.000	0.000
Riparian vegetation	0.70	%	0.70	0.231	0.162
Aggregate Resource Index					0.45

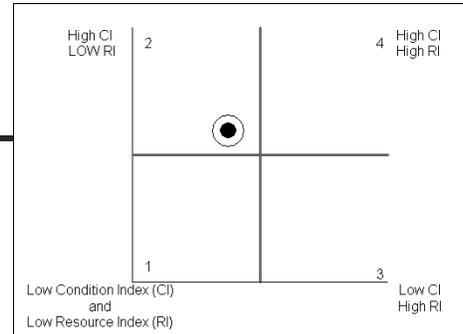
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 19
 Analysis Unit Code L CRA 00
 River / Lake Name CRAWFISH LAKE
 Coordinates Lat, Long 48.4822762 -119.215276
 Acres of SMP land 8.2866086
 length water feet 3584.52995544

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.73 %	0.73	0.103	0.076
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.18 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.02167 / 76 %	0.02	0.069	0.001
Boat ramps	1 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.81

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	10 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.97 %	0.97	0.231	0.224
Aggregate Resource Index				0.44

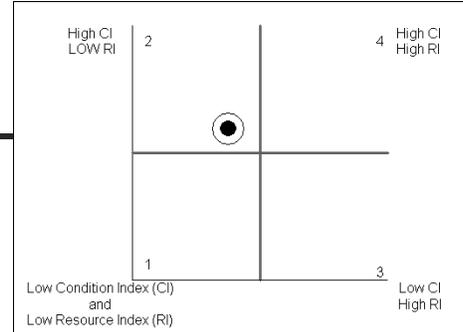
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 20
 Analysis Unit Code L DAV 00
 River / Lake Name DAVIS LAKE
 Coordinates Lat, Long 48.4378351 -120.119431
 Acres of SMP land 35.823685
 length water feet 4474.2927253

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.46	%	0.46	0.103	0.047
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.39	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.714778	%	0.71	0.069	0.049
Boat ramps	1	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.81

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.09	%	0.09	0.231	0.021
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.73	%	0.73	0.231	0.168
Aggregate Resource Index					0.40

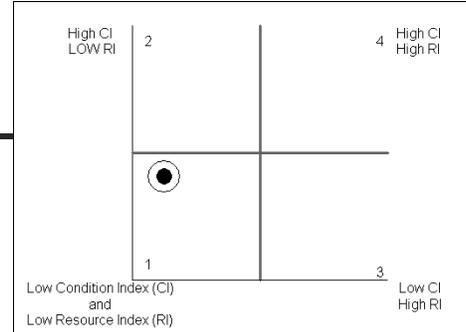
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 21
 Analysis Unit Code L DUC 00
 River / Lake Name DUCK LAKE
 Coordinates Lat, Long 48.4552608-119.539014
 Acres of SMP land 34.250293
 length water feet 2644.44996582

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.13	%	0.13	0.069	0.009
Agricultural dispersed	0.09	%	0.09	0.034	0.003
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.11	%	0.11	0.103	0.011
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.10	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.59048 7	%	0.59	0.069	0.041
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	1	#	0.25	0.231	0.058
Riparian Species	1	#	0.25	0.231	0.058
Upland Species	6	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.11	%	0.11	0.231	0.026
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.51	%	0.51	0.231	0.117
Aggregate Resource Index					0.30

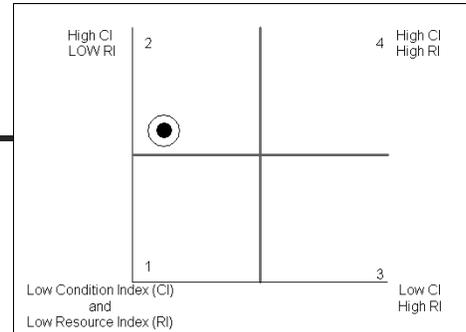
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 22
 Analysis Unit Code L EVA 00
 River / Lake Name EVANS LAKE
 Coordinates Lat, Long 48.5120161 -119.572267
 Acres of SMP land 27.831185
 length water feet 2589.7765982

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.86 %	0.86	0.034	0.030
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.07 %	0.07	0.103	0.007
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.571205 %	0.57	0.069	0.039
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.82

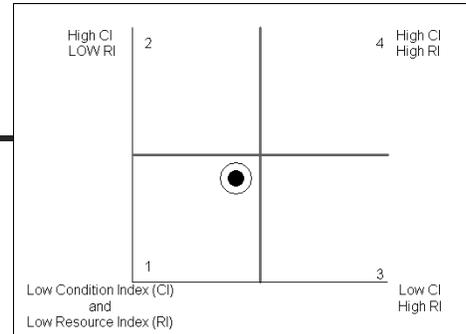
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	1 #	0.25	0.231	0.058
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.03 %	0.03	0.231	0.007
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.76 %	0.76	0.231	0.174
Aggregate Resource Index				0.34

Unique ID 23
 Analysis Unit Code L FAN 00
 River / Lake Name FANCHER DAM RES
 Coordinates Lat, Long 48.8277049-119.257186
 Acres of SMP land 39.551325
 length water feet 4464.62466115

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.29	%	0.29	0.069	0.020
Agricultural dispersed	0.71	%	0.71	0.034	0.024
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.12	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.67226 9	%	0.67	0.069	0.046
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.75

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.22	%	0.22	0.231	0.050
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	1.00	%	1.00	0.231	0.230
Aggregate Resource Index					0.49

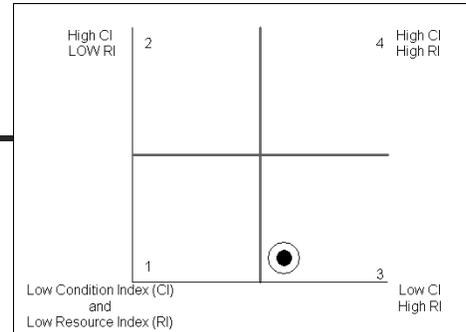
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 24
 Analysis Unit Code L FIE 00
 River / Lake Name FIELDS LAKE
 Coordinates Lat, Long 48.938668-119.127435
 Acres of SMP land 44.72423
 length water feet 2864.34900037

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	1.00	%	1.00	0.069	0.069
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.44	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.642967	%	0.64	0.069	0.044
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.71

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.231	0.115
Riparian Species	4	#	0.75	0.231	0.173
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.12	%	0.12	0.231	0.027
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.98	%	0.98	0.231	0.226
Aggregate Resource Index					0.58

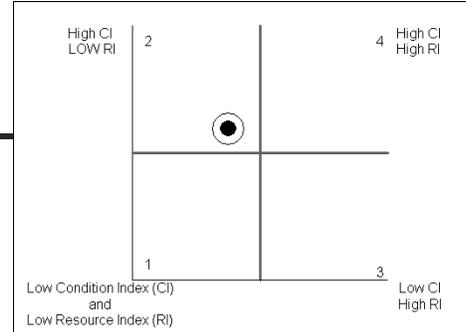
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 25
 Analysis Unit Code L FIS 00
 River / Lake Name FISH LAKE
 Coordinates Lat, Long 48.6135653-119.696392
 Acres of SMP land 64.422080
 length water feet 7272.5438775

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.94 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.26985 %	0.27	0.069	0.019
Boat ramps	3 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.231	0.115
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	7 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.18 %	0.18	0.231	0.041
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.60 %	0.60	0.231	0.138
Aggregate Resource Index				0.45

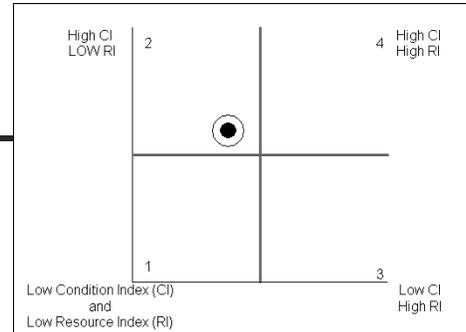
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 26
 Analysis Unit Code L GRE 00
 River / Lake Name GREEN LAKE
 Coordinates Lat, Long 48.4480429 -119.628199
 Acres of SMP land 53.848869
 length water feet 5793.10536019

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.39 %	0.39	0.034	0.013
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.64 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.692769 %	0.69	0.069	0.048
Boat ramps	3 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.12 %	0.12	0.231	0.027
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.93 %	0.93	0.231	0.214
Aggregate Resource Index				0.45

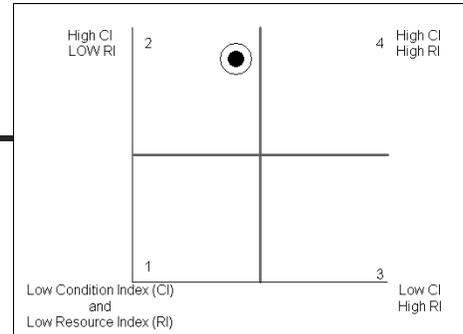
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Unique ID 27
 Analysis Unit Code L HOR 00
 River / Lake Name HORSESHOE LAKE
 Coordinates Lat, Long 48.5410953-119.600372
 Acres of SMP land 33.646944
 length water feet 2903.41642165

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.46 %	0.46	0.034	0.016
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.07 %	0.07	0.103	0.007
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.505228 %	0.51	0.069	0.035
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.94

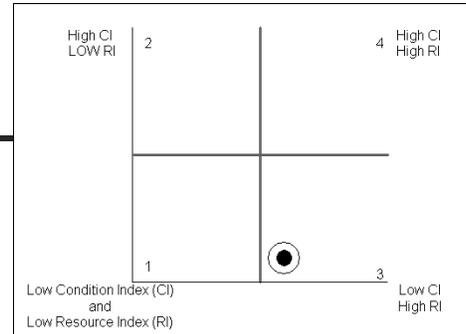
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.92 %	0.92	0.231	0.213
Aggregate Resource Index				0.42

Unique ID 28
 Analysis Unit Code L LEA 00
 River / Lake Name LEADER LAKE
 Coordinates Lat, Long 48.3602811 -119.683554
 Acres of SMP land 77.155731
 length water feet 6277.10273227

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.69 %	0.69	0.069	0.047
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.37 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.50454 7 %	0.50	0.069	0.035
Boat ramps	2 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.72

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	6 #	0.50	0.231	0.115
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.31 %	0.31	0.231	0.072
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.73 %	0.73	0.231	0.168
Aggregate Resource Index				0.51

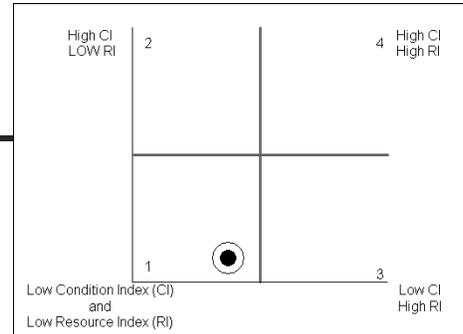
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Unique ID 29
 Analysis Unit Code L LEM 00
 River / Lake Name LEMANASKI LAKE
 Coordinates Lat, Long 48.7051346-119.62435
 Acres of SMP land 43.636615
 length water feet 3608.6482472

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.83 %	0.83	0.069	0.057
Agricultural dispersed	0.09 %	0.09	0.034	0.003
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.09 %	0.09	0.103	0.009
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.68 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.357016 %	0.36	0.069	0.025
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.73

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	1 #	0.25	0.231	0.058
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.14 %	0.14	0.231	0.032
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	1.00 %	1.00	0.231	0.231
Aggregate Resource Index				0.42

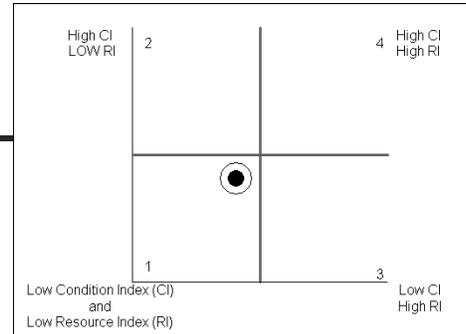
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ENVIRONMENTAL CONSULTANTS

Unique ID 30
 Analysis Unit Code L LIT 00
 River / Lake Name LITTLE TWIN LAKE
 Coordinates Lat, Long 48.4496742 -120.188333
 Acres of SMP land 23.528141
 length water feet 2003.61699507

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.09	%	0.09	0.103	0.009
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.07	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.83659 2	%	0.84	0.069	0.058
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.01	%	0.01	0.231	0.003
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.91	%	0.91	0.231	0.209
Aggregate Resource Index					0.42

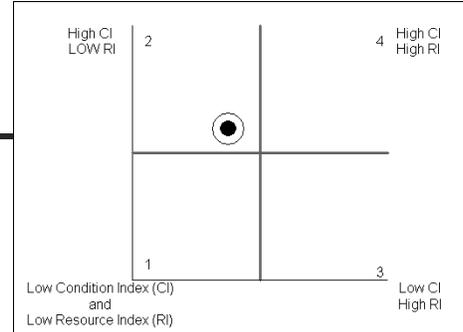
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ENVIRONMENTAL CONSULTANTS

Unique ID 31
 Analysis Unit Code L MED 00
 River / Lake Name MEDICINE LAKE
 Coordinates Lat, Long 48.5580904-119.589784
 Acres of SMP land 30.566376
 length water feet 2764.46229009

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	1.00 %	1.00	0.034	0.034
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.40360 / 2 %	0.40	0.069	0.028
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.01 %	0.01	0.231	0.002
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.74 %	0.74	0.231	0.170
Aggregate Resource Index				0.38

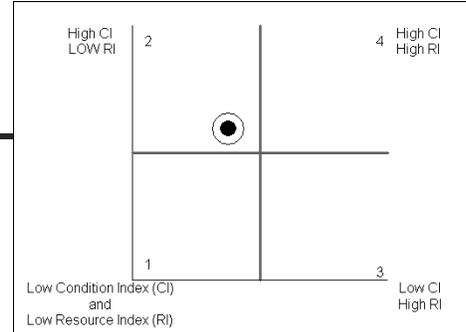
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ENVIRONMENTAL CONSULTANTS

Unique ID 32
 Analysis Unit Code L MIL 00
 River / Lake Name MILES LAKE (aka Big Buck?)
 Coordinates Lat, Long 48.3966432 -120.183735
 Acres of SMP land 28.408174
 length water feet 3569.88106923

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.70 %	0.70	0.069	0.049
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.19 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.473289 %	0.47	0.069	0.033
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	1 #	0.25	0.231	0.058
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.15 %	0.15	0.231	0.036
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.77 %	0.77	0.231	0.178
Aggregate Resource Index				0.37

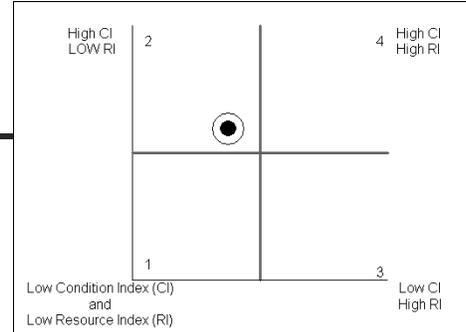
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ENVIRONMENTAL CONSULTANTS

Unique ID 33
 Analysis Unit Code L MOC 00
 River / Lake Name MOCCASIN LAKE
 Coordinates Lat, Long 48.4222433-120.202915
 Acres of SMP land 31.867051
 length water feet 2595.15636312

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	1.00 %	1.00	0.069	0.069
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.65551 / 3 %	0.66	0.069	0.045
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.88

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.10 %	0.10	0.231	0.023
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.82 %	0.82	0.231	0.190
Aggregate Resource Index				0.42

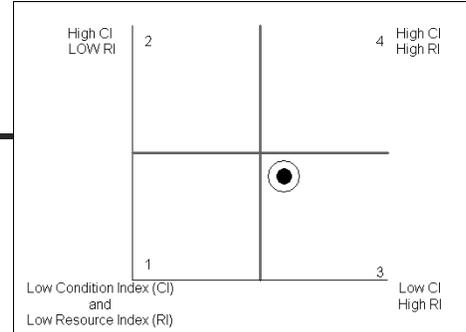
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ENVIRONMENTAL CONSULTANTS

Unique ID 34
 Analysis Unit Code L MOL 00
 River / Lake Name MOLSON LAKE
 Coordinates Lat, Long 48.9844329-119.205862
 Acres of SMP land 27.320726
 length water feet 2364.77637538

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.19	%	0.19	0.069	0.013
Agricultural dispersed	0.59	%	0.59	0.034	0.020
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.06	%	0.06	0.103	0.006
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.48	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.37087 7	%	0.37	0.069	0.026
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.75

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.231	0.115
Riparian Species	5	#	0.75	0.231	0.173
Upland Species	7	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.88	%	0.88	0.231	0.203
Aggregate Resource Index					0.53

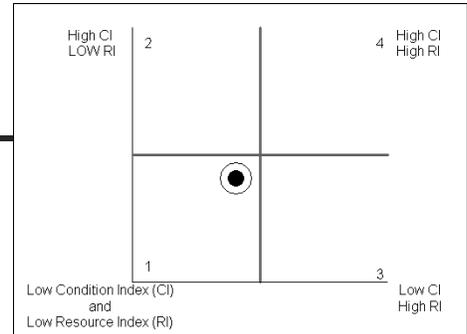
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ENVIRONMENTAL CONSULTANTS

Unique ID 35
 Analysis Unit Code L MUS 00
 River / Lake Name MUSKRAT LAKE
 Coordinates Lat, Long 48.8805129-119.158153
 Acres of SMP land 57.720868
 length water feet 3459.63213363

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.94 %	0.94	0.069	0.065
Agricultural dispersed	0.06 %	0.06	0.034	0.002
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.04 Mi.	0.25	0.103	0.026
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.02239 59 %	0.02	0.069	0.002
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.80

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	4 #	0.25	0.077	0.019
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.40 %	0.40	0.231	0.092
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.92 %	0.92	0.231	0.213
Aggregate Resource Index				0.50

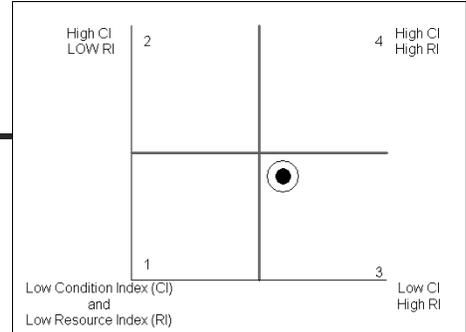
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ENVIRONMENTAL CONSULTANTS

Unique ID 36
 Analysis Unit Code L OSO 01
 River / Lake Name OSOYOOS LAKE
 Coordinates Lat, Long -119.4371348.96482188
 Acres of SMP land 132.13289
 length water feet 9036.7188671

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	3	#	0.25	0.034	0.009
Agricultural- intensive	0.02	%	0.02	0.069	0.001
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.42	%	0.42	0.103	0.044
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	22	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.23	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	5	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.77

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	9	#	0.75	0.231	0.173
Riparian Species	4	#	0.75	0.231	0.173
Upland Species	3	#	0.25	0.077	0.019
Salmon spawning/rearing habitat	1		1	0.000	0.000
Steelhead/ Chinook Critical habitat	1		1	0	0.000
Wetlands	0.19	%	0.19	0.231	0.043
Potential migration zones	0.70562	%		0.000	0.000
Riparian vegetation	0.44	%	0.44	0.231	0.102
Aggregate Resource Index					0.51

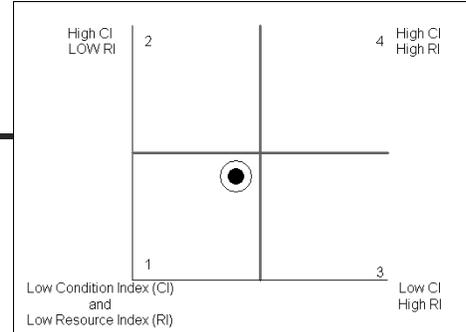
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 37
 Analysis Unit Code L OSO 02
 River / Lake Name OSOYOOS LAKE
 Coordinates Lat, Long -119.4479648.9869126
 Acres of SMP land 113.8633
 length water feet 9875.82257231

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	5	#	0.25	0.034	0.009
Agricultural- intensive	0.25	%	0.25	0.069	0.017
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.56	%	0.56	0.103	0.058
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	29	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.67	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01862 67	%	0.02	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.75

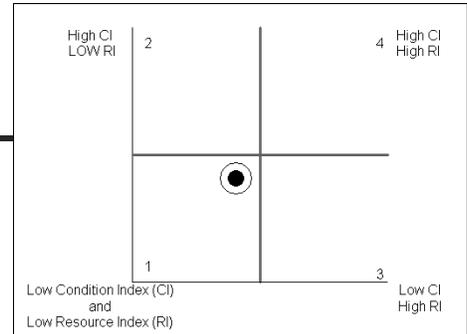
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	10	#	0.75	0.231	0.173
Riparian Species	5	#	0.75	0.231	0.173
Upland Species	6	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	1		1	0.000	0.000
Steelhead/ Chinook Critical habitat	1		1	0	0.000
Wetlands	0.09	%	0.09	0.231	0.020
Potential migration zones	.72662	%		0.000	0.000
Riparian vegetation	0.18	%	0.18	0.231	0.042
Aggregate Resource Index					0.45

Unique ID 38
 Analysis Unit Code L OSO 03
 River / Lake Name OSOYOOS LAKE
 Coordinates Lat, Long -119.43264 48.98572068
 Acres of SMP land
 length water feet 9875.82257231

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.13 %	0.13	0.069	0.009
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.24 %	0.24	0.103	0.025
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	12 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.47 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0 %	0.00	0.069	0.000
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.79

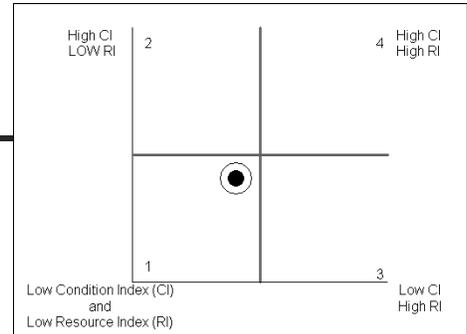
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	10 #	0.75	0.231	0.173
Riparian Species	5 #	0.75	0.231	0.173
Upland Species	6 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	1	1	0.000	0.000
Steelhead/ Chinook Critical habitat	1	1	0	0.000
Wetlands	0.07 %	0.07	0.231	0.016
Potential migration zones	0.79908 %		0.000	0.000
Riparian vegetation	0.14 %	0.14	0.231	0.033
Aggregate Resource Index				0.43

Unique ID 39
 Analysis Unit Code L OSO 04
 River / Lake Name OSOYOOS LAKE
 Coordinates Lat, Long -119.42848 48.95872972
 Acres of SMP land
 length water feet 9036.7188671

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.40	%	0.40	0.069	0.028
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.40	%	0.40	0.103	0.041
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	12	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.80	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.76

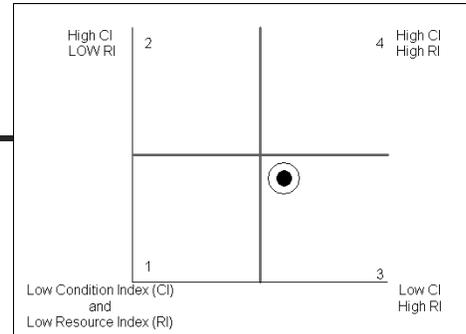
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.231	0.173
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	6	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	1		1	0.000	0.000
Steelhead/ Chinook Critical habitat	1		1	0	0.000
Wetlands	0.09	%	0.09	0.231	0.021
Potential migration zones	.80370	%		0.000	0.000
Riparian vegetation	0.25	%	0.25	0.231	0.057
Aggregate Resource Index					0.41

Unique ID 40
 Analysis Unit Code L PAL 01
 River / Lake Name PALMER LAKE
 Coordinates Lat, Long -119.6314848.91176621
 Acres of SMP land 127.16802
 length water feet 7776.07973125

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.10	%	0.10	0.069	0.007
Agricultural dispersed	0.28	%	0.28	0.034	0.010
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.18	%	0.18	0.103	0.019
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.86	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.15534 7	%	0.16	0.069	0.011
Boat ramps	1	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

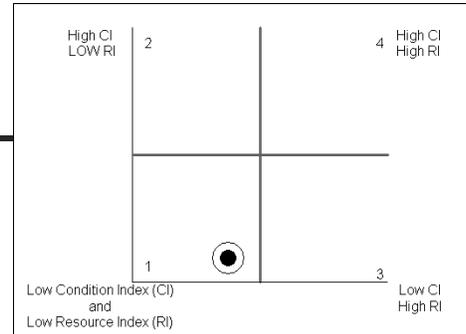
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.231	0.115
Riparian Species	4	#	0.75	0.231	0.173
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.32	%	0.32	0.231	0.073
Potential migration zones	.49237	%		0.000	0.000
Riparian vegetation	0.56	%	0.56	0.231	0.129
Aggregate Resource Index					0.53

Unique ID 41
 Analysis Unit Code L PAL 02
 River / Lake Name PALMER LAKE
 Coordinates Lat, Long -119.6154848.89109231
 Acres of SMP land 101.10107
 length water feet 10968.8436442

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.58 %	0.58	0.069	0.040
Agricultural dispersed	0.19 %	0.19	0.034	0.007
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.18 %	0.18	0.103	0.018
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	3 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.59 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.00013 / 6547 %	0.00	0.069	0.000
Boat ramps	1 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.73

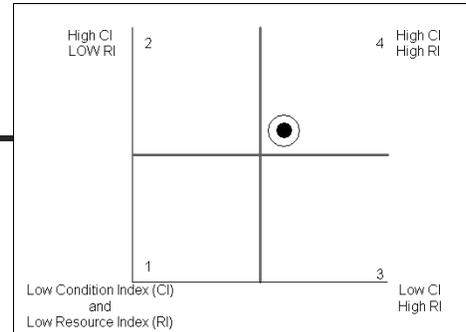
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.231	0.115
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	6 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.18 %	0.18	0.231	0.042
Potential migration zones	.37593 %		0.000	0.000
Riparian vegetation	0.26 %	0.26	0.231	0.060
Aggregate Resource Index				0.37

Unique ID 42
 Analysis Unit Code L PAL 03
 River / Lake Name PALMER LAKE
 Coordinates Lat, Long -119.62464 48.88277386
 Acres of SMP land
 length water feet 10968.8436442

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.37	%	0.37	0.069	0.026
Agricultural dispersed	0.63	%	0.63	0.034	0.022
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.61144 9	%	0.61	0.069	0.042
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.86

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.231	0.115
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	6	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.21	%	0.21	0.231	0.050
Potential migration zones	.37706	%		0.000	0.000
Riparian vegetation	0.84	%	0.84	0.231	0.193
Aggregate Resource Index					0.51

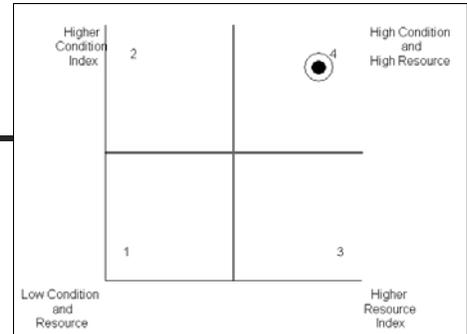
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 43
 Analysis Unit Code L PAL 04
 River / Lake Name PALMER LAKE
 Coordinates Lat, Long -119.6449348.90583730
 Acres of SMP land
 length water feet 7776.07973125

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.08	%	0.08	0.069	0.005
Agricultural dispersed	0.92	%	0.92	0.034	0.032
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.11314	%	0.11	0.069	0.008
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.231	0.115
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	10	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.94	%	0.94	0.231	0.217
Potential migration zones	0.92497	%		0.000	0.000
Riparian vegetation	0.90	%	0.90	0.231	0.208
Aggregate Resource Index					0.69

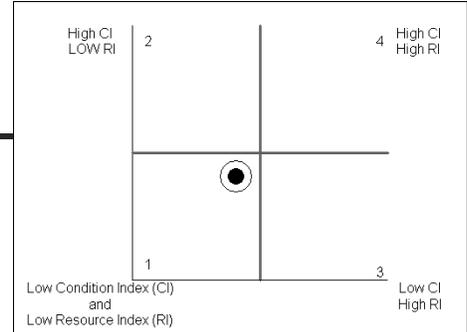
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ENVIRONMENTAL CONSULTANTS

Unique ID 44
 Analysis Unit Code L PAT 00
 River / Lake Name PATTERSON LAKE
 Coordinates Lat, Long 48.4565108 -120.244382
 Acres of SMP land 91.390802
 length water feet 9816.04238147

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.42	%	0.42	0.069	0.029
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.25	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.63658 7	%	0.64	0.069	0.044
Boat ramps	1	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.81

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	12	#	0.75	0.077	0.058
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.12	%	0.12	0.231	0.029
Potential migration zones	.21550	%		0.000	0.000
Riparian vegetation	0.76	%	0.76	0.231	0.176
Aggregate Resource Index					0.44

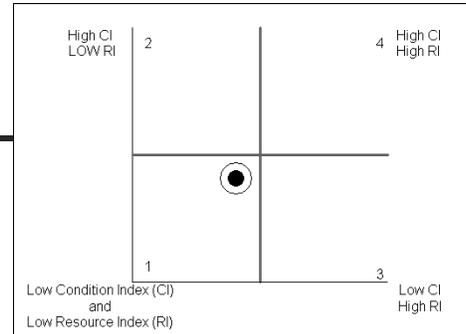
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ENVIRONMENTAL CONSULTANTS

Unique ID 45
 Analysis Unit Code L PEA 01
 River / Lake Name PEARRYGIN LAKE
 Coordinates Lat, Long 48.4906244-120.157017
 Acres of SMP land 42.541505
 length water feet 3727.4865011

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.40 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.53838 %	0.54	0.069	0.037
Boat ramps	4 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.74

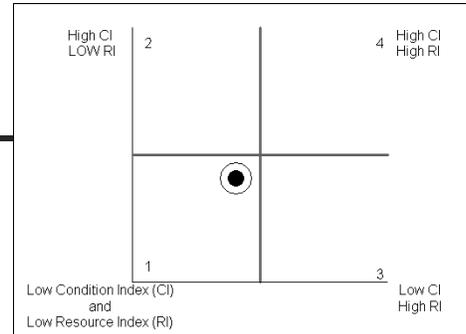
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	7 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	1	1	0	0.000
Wetlands	0.33 %	0.33	0.231	0.076
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.72 %	0.72	0.231	0.166
Aggregate Resource Index				0.45

Unique ID 46
 Analysis Unit Code L PEA 02
 River / Lake Name PEARRYGIN LAKE
 Coordinates Lat, Long 48.4823045 -120.14425
 Acres of SMP land 59.878276
 length water feet 4782.26054918

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	1 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.45 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.264889 %	0.26	0.069	0.018
Boat ramps	2 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.75

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	8 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.29 %	0.29	0.231	0.066
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.82 %	0.82	0.231	0.190
Aggregate Resource Index				0.47

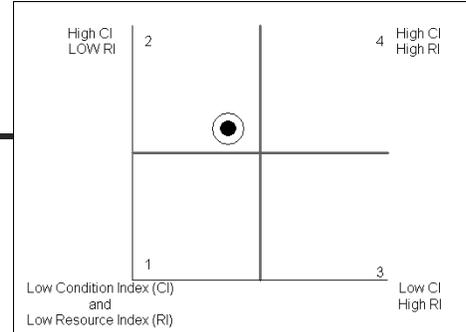
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 47
 Analysis Unit Code L RAT 00
 River / Lake Name RAT LAKE
 Coordinates Lat, Long 48.1822779-119.802448
 Acres of SMP land 31.261906
 length water feet 4626.04606308

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.04	%	0.04	0.069	0.003
Agricultural dispersed	0.94	%	0.94	0.034	0.032
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.03	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.68279 8	%	0.68	0.069	0.047
Boat ramps	1	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.86

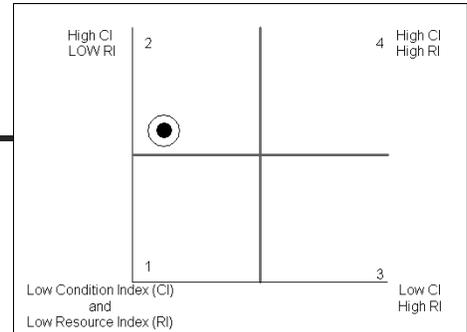
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	13	#	0.75	0.077	0.058
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	.27833	%		0.000	0.000
Riparian vegetation	0.62	%	0.62	0.231	0.142
Aggregate Resource Index					0.37

Unique ID 48
 Analysis Unit Code L ROB 00
 River / Lake Name ROBERTS LAKE
 Coordinates Lat, Long 48.5569057 -119.695871
 Acres of SMP land 29.714433
 length water feet 2539.62359069

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.59 %	0.59	0.034	0.020
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.351412 %	0.35	0.069	0.024
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.85

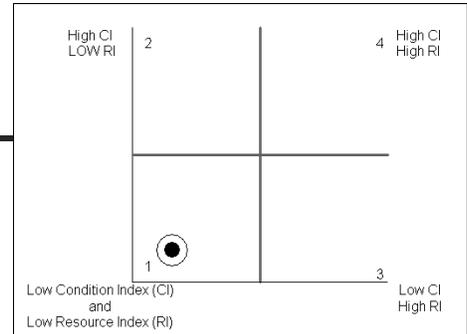
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.231	0.058
Riparian Species	1 #	0.25	0.231	0.058
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.03 %	0.03	0.231	0.006
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.67 %	0.67	0.231	0.155
Aggregate Resource Index				0.32

Unique ID 49
 Analysis Unit Code L SAL 01
 River / Lake Name SALMON LAKE (CONCONULLY LAKE)
 Coordinates Lat, Long -119.73834 48.56248046
 Acres of SMP land 5.6451135
 length water feet 4636.27024588

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	3 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.02 %	0.02	0.034	0.001
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.11 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.96640 1 %	0.97	0.069	0.067
Boat ramps	2 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.71

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	2 #	0.50	0.231	0.115
Upland Species	9 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	Z data %		0.000	0.000
Riparian vegetation	0.64 %	0.64	0.231	0.147
Aggregate Resource Index				0.36

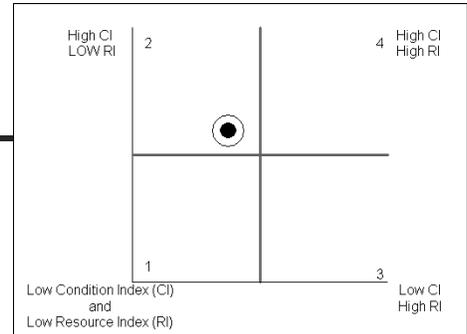
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 50
 Analysis Unit Code L SAL 04
 River / Lake Name SALMON LAKE (CONCONULLY LAKE)
 Coordinates Lat, Long -119.73844 48.55914834
 Acres of SMP land
 length water feet 4636.27024588

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.82417 2	%	0.82	0.069	0.057
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.83

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	1	#	0.25	0.231	0.058
Riparian Species	2	#	0.50	0.231	0.115
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	Z data	%		0.000	0.000
Riparian vegetation	0.97	%	0.97	0.231	0.223
Aggregate Resource Index					0.43

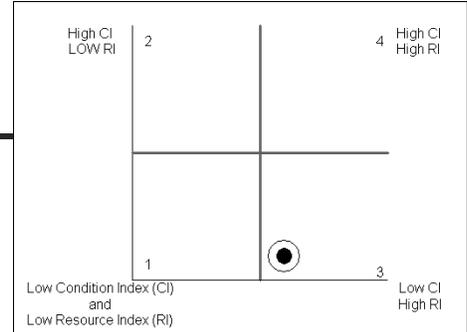
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ENVIRONMENTAL CONSULTANTS

Unique ID 51
 Analysis Unit Code L SID 00
 River / Lake Name SIDLEY LAKE
 Coordinates Lat, Long 48.9905300-119.220309
 Acres of SMP land 63.056052
 length water feet 5744.7147044

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.12	%	0.12	0.069	0.008
Agricultural dispersed	0.01	%	0.01	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.27	%	0.27	0.103	0.028
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	6	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.08	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.34406 5	%	0.34	0.069	0.024
Boat ramps	1	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.69

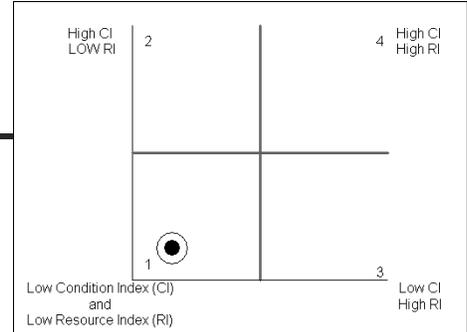
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.231	0.115
Riparian Species	6	#	0.75	0.231	0.173
Upland Species	10	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.12	%	0.12	0.231	0.027
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.97	%	0.97	0.231	0.223
Aggregate Resource Index					0.58

Unique ID 53
 Analysis Unit Code L SPE 02
 River / Lake Name SPECTACLE LAKE
 Coordinates Lat, Long -119.55297 48.80851419
 Acres of SMP land 71.245877
 length water feet 8417.51103569

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.25 %	0.25	0.069	0.017
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.18 %	0.18	0.103	0.018
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	10 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.06 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.40816 %	0.41	0.069	0.028
Boat ramps	2 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.68

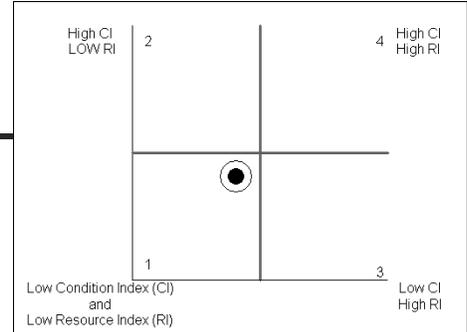
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.231	0.058
Riparian Species	3 #	0.50	0.231	0.115
Upland Species	5 #	0.25	0.077	0.019
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	.25204 %	0.00	0.000	0.000
Riparian vegetation	0.13 %	0.13	0.231	0.030
Aggregate Resource Index				0.22

Unique ID 56
 Analysis Unit Code L SPE 05
 River / Lake Name SPECTACLE LAKE
 Coordinates Lat, Long -119.553648.80634875
 Acres of SMP land
 length water feet 8417.51103569

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.06 %	0.06	0.103	0.006
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.99999 %	1.00	0.069	0.069
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.81

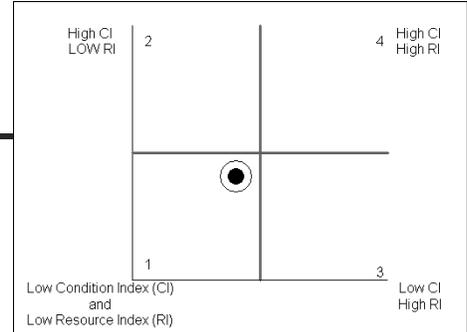
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.231	0.058
Riparian Species	4 #	0.75	0.231	0.173
Upland Species	7 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.00 %	0.00	0.231	0.000
Potential migration zones	.18014 %	0.00	0.000	0.000
Riparian vegetation	0.84 %	0.84	0.231	0.193
Aggregate Resource Index				0.46

Unique ID 57
 Analysis Unit Code L SPE 06
 River / Lake Name SPECTACLE LAKE
 Coordinates Lat, Long -119.57657 48.81360891
 Acres of SMP land
 length water feet 3460.93343493

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	3	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.01	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.96318 9	%	0.96	0.069	0.066
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.77

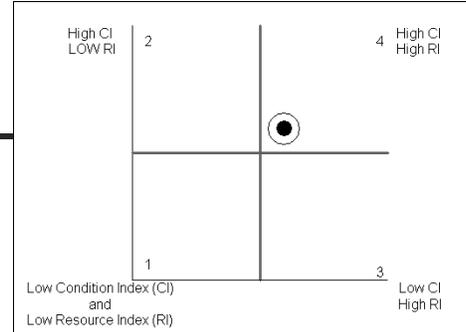
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.231	0.058
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	8	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	0.30466	%	0.00	0.000	0.000
Riparian vegetation	0.93	%	0.93	0.231	0.215
Aggregate Resource Index					0.43

Unique ID 58
 Analysis Unit Code L TAL 00
 River / Lake Name TALKIRE LAKE
 Coordinates Lat, Long 48.6024552 -119.329242
 Acres of SMP land 86.982959
 length water feet 7064.22050302

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.91	%	0.91	0.069	0.063
Agricultural dispersed	0.08	%	0.08	0.034	0.003
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.55	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	1	#	0.25	0.231	0.058
Riparian Species	1	#	0.25	0.231	0.058
Upland Species	9	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.74	%	0.74	0.231	0.170
Potential migration zones	.81979	%		0.000	0.000
Riparian vegetation	1.00	%	1.00	0.231	0.230
Aggregate Resource Index					0.55

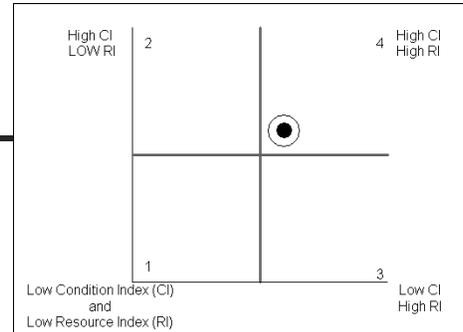
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 59
 Analysis Unit Code L WAL 00
 River / Lake Name WALKER LAKE
 Coordinates Lat, Long 48.761671 -119.023799
 Acres of SMP land 32.269254
 length water feet 2568.49818694

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.95 %	0.95	0.074	0.071
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.10 Mi.	0.50	0.111	0.056
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.87

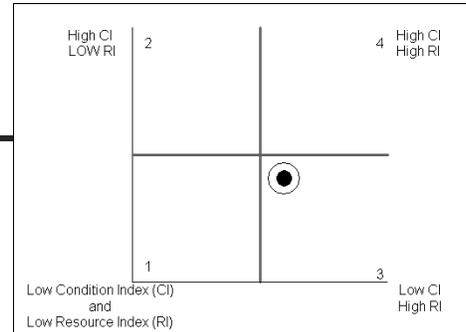
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.231	0.115
Riparian Species	5 #	0.75	0.231	0.173
Upland Species	7 #	0.50	0.077	0.038
Salmon spawning/rearing habitat	0	0	0.000	0.000
Steelhead/ Chinook Critical habitat	0	0	0	0.000
Wetlands	0.06 %	0.06	0.231	0.013
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.97 %	0.97	0.231	0.224
Aggregate Resource Index				0.56

Unique ID 63
 Analysis Unit Code L WAN 04
 River / Lake Name WANNACUT LAKE
 Coordinates Lat, Long -119.52361 48.88722255
 Acres of SMP land
 length water feet 5282.11645019

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.88	%	0.88	0.069	0.060
Agricultural dispersed	0.05	%	0.05	0.034	0.002
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.02	%	0.02	0.103	0.002
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.08	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.141119	%	0.14	0.069	0.010
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.80

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.231	0.058
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	7	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.50	%	0.50	0.231	0.115
Potential migration zones	Z data	%		0.000	0.000
Riparian vegetation	0.79	%	0.79	0.231	0.183
Aggregate Resource Index					0.51

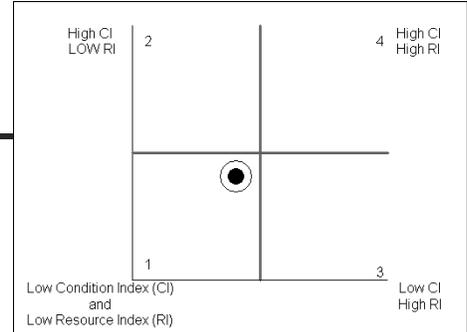
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 64
 Analysis Unit Code L WHI 01
 River / Lake Name WHITESTONE LAKE
 Coordinates Lat, Long 48.8067472-119.49247
 Acres of SMP land 123.49961
 length water feet 11905.4426743

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.72	%	0.72	0.069	0.049
Agricultural dispersed	0.12	%	0.12	0.034	0.004
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.76	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.20525 5	%	0.21	0.069	0.014
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

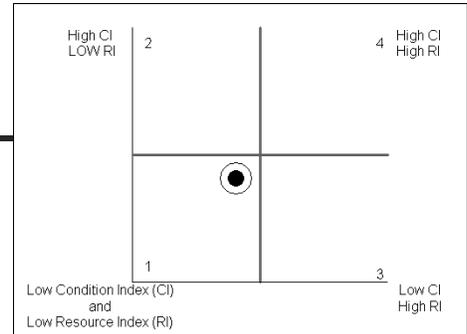
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.231	0.058
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	6	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.65	%	0.65	0.231	0.150
Potential migration zones	.59391	%		0.000	0.000
Riparian vegetation	0.56	%	0.56	0.231	0.128
Aggregate Resource Index					0.49

Unique ID 66
 Analysis Unit Code L WHI 03
 River / Lake Name WHITESTONE LAKE
 Coordinates Lat, Long -119.470548.78865087
 Acres of SMP land
 length water feet 5341.17521655

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.26	%	0.26	0.069	0.018
Agricultural dispersed	0.41	%	0.41	0.034	0.014
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.73107	%	0.73	0.069	0.050
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.81

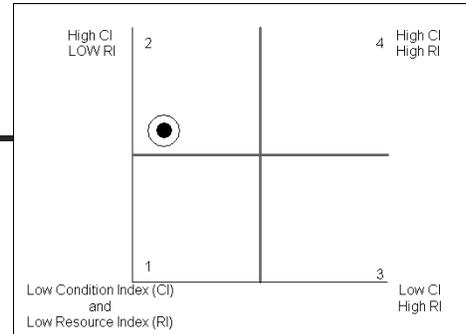
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.231	0.058
Riparian Species	3	#	0.50	0.231	0.115
Upland Species	6	#	0.50	0.077	0.038
Salmon spawning/rearing habitat	0		0	0.000	0.000
Steelhead/ Chinook Critical habitat	0		0	0	0.000
Wetlands	0.00	%	0.00	0.231	0.000
Potential migration zones	.15458	%		0.000	0.000
Riparian vegetation	0.76	%	0.76	0.231	0.174
Aggregate Resource Index					0.39

Unique ID 68
 Analysis Unit Code S ANT 02
 River / Lake Name ANTOINE CREEK
 Coordinates Lat, Long 48.7508548-119.348189
 Acres of SMP land 44.781886
 length water feet 4880.8569496

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.84	%	0.84	0.069	0.058
Agricultural dispersed	0.16	%	0.16	0.034	0.005
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.12	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01266 4	%	0.01	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.143	0.036
Riparian Species	1	#	0.25	0.143	0.036
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.69309	%		0.095	0.066
Riparian vegetation	0.70	%	0.70	0.143	0.100
Aggregate Resource Index					0.26

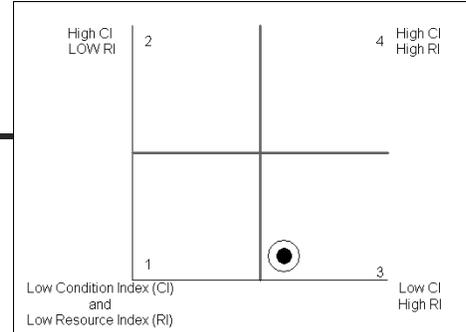
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 70
 Analysis Unit Code S BEA 01
 River / Lake Name BEAVER CREEK
 Coordinates Lat, Long 48.3376479-120.050891
 Acres of SMP land 133.74514
 length water feet 14637.3965725

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.70	%	0.70	0.069	0.048
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.22	%	0.22	0.103	0.023
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	2	#	0.50	0.034	0.017
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.32	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.32452 6	%	0.32	0.069	0.022
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.75

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.75	%	0.75	0.143	0.107
Aggregate Resource Index					0.66

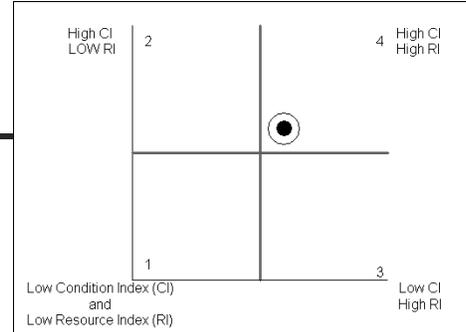
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 71
 Analysis Unit Code S BEA 02
 River / Lake Name BEAVER CREEK
 Coordinates Lat, Long 48.3743430-120.044095
 Acres of SMP land 140.85989
 length water feet 14137.3057103

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.93 %	0.93	0.069	0.064
Agricultural dispersed	0.03 %	0.03	0.034	0.001
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.04 %	0.04	0.103	0.004
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.03 Mi.	0.25	0.103	0.026
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.31544 / 3 %	0.32	0.069	0.022
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.88

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	7 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.11 %	0.11	0.143	0.016
Potential migration zones	0.8491 %	0.8491	0.095	0.081
Riparian vegetation	0.94 %	0.94	0.143	0.135
Aggregate Resource Index				0.68

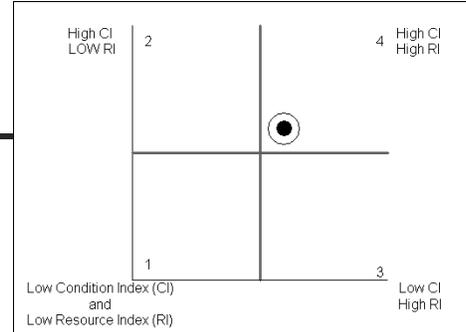
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 72
 Analysis Unit Code S BEA 03
 River / Lake Name BEAVER CREEK
 Coordinates Lat, Long 48.3980463-120.044023
 Acres of SMP land 96.043016
 length water feet 11571.6486608

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.40	%	0.40	0.069	0.028
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.07	%	0.07	0.103	0.008
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.87	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.19538 8	%	0.20	0.069	0.013
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.87

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.85492	%		0.095	0.081
Riparian vegetation	0.83	%	0.83	0.143	0.119
Aggregate Resource Index					0.65

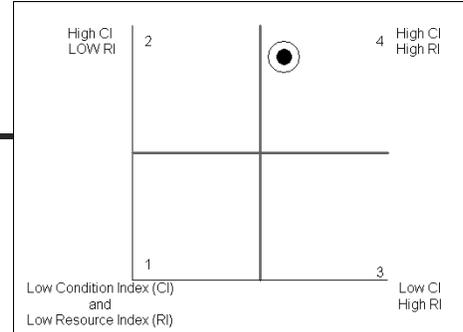
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 73
 Analysis Unit Code S BEA 04
 River / Lake Name BEAVER CREEK
 Coordinates Lat, Long 48.4297636-120.029838
 Acres of SMP land 63.955954
 length water feet 7761.56891411

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.46 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.15080 1 %	0.15	0.069	0.010
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.93

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	15 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.92861 %		0.095	0.088
Riparian vegetation	0.82 %	0.82	0.143	0.117
Aggregate Resource Index				0.67

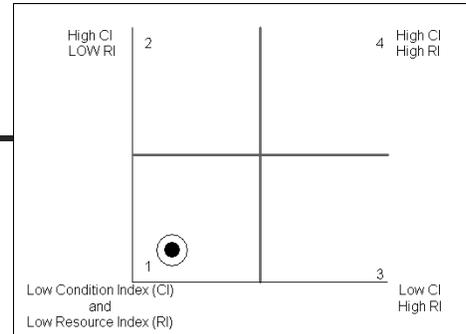
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 74
 Analysis Unit Code S BON 01
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.7001344-119.43928
 Acres of SMP land 29.90062
 length water feet 3257.03920127

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	9 #	0.50	0.034	0.017
Agricultural- intensive	0.04 %	0.04	0.069	0.003
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.46 %	0.46	0.103	0.048
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	4 #	0.75	0.034	0.026
Overwater structures	0 #	0.00	0.034	0.000
Rail	0.0864 Mi.	0.25	0.103	0.026
Roads	0.57 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.0204244 %	0.02	0.069	0.001
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.70

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	1 #	0.25	0.143	0.036
Riparian Species	0 #	0.00	0.143	0.000
Upland Species	1 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.99986 %		0.095	0.095
Riparian vegetation	0.01 %	0.01	0.143	0.001
Aggregate Resource Index				0.29

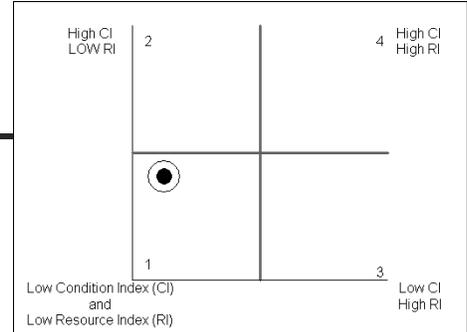
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 76
 Analysis Unit Code S BON 03
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.6604014-119.334963
 Acres of SMP land 77.038798
 length water feet 8372.62147929

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.53	%	0.53	0.069	0.037
Agricultural dispersed	0.34	%	0.34	0.034	0.012
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.71	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.164625	%	0.16	0.069	0.011
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.86

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.143	0.036
Riparian Species	1	#	0.25	0.143	0.036
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.98685	%		0.095	0.094
Riparian vegetation	0.47	%	0.47	0.143	0.068
Aggregate Resource Index					0.26

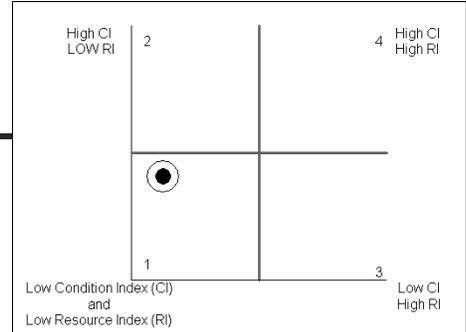
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 77
 Analysis Unit Code S BON 04
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.6541728 -119.302627
 Acres of SMP land 93.805659
 length water feet 10467.4698303

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.06 %	0.06	0.069	0.004
Agricultural dispersed	0.30 %	0.30	0.034	0.010
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.31 %	0.31	0.103	0.032
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.60 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.09205 73 %	0.09	0.069	0.006
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	2 #	0.25	0.143	0.036
Riparian Species	1 #	0.25	0.143	0.036
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.02 %	0.02	0.143	0.003
Potential migration zones	83596 %	0.095	0.095	0.080
Riparian vegetation	0.47 %	0.47	0.143	0.067
Aggregate Resource Index				0.24

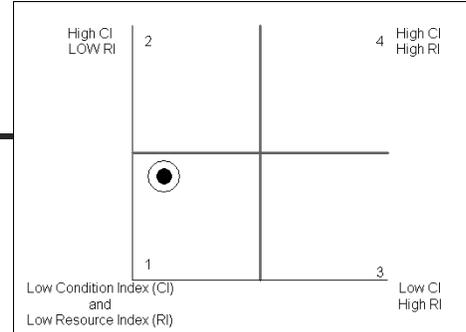
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 78
 Analysis Unit Code S BON 05
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.6572442-119.271164
 Acres of SMP land 65.812301
 length water feet 7244.70892008

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.11	%	0.11	0.069	0.008
Agricultural dispersed	0.28	%	0.28	0.034	0.010
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.36	%	0.36	0.103	0.037
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.36	Mi.	0.50	0.103	0.052
Culverts	2	#	1.00	0.069	0.069
Geologically hazardous areas	0.18406	%	0.18	0.069	0.013
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.81

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.143	0.036
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.01	%	0.01	0.143	0.001
Potential migration zones	0.85903	%		0.095	0.082
Riparian vegetation	0.81	%	0.81	0.143	0.115
Aggregate Resource Index					0.33

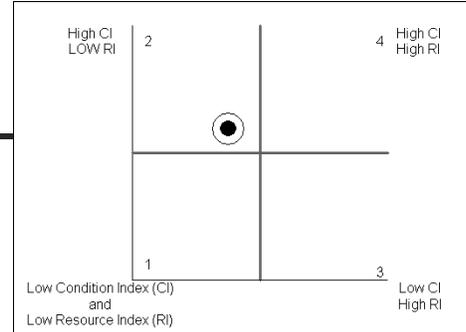
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 79
 Analysis Unit Code S BON 06
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.6652759-119.246737
 Acres of SMP land 78.138526
 length water feet 7230.74228201

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.41 %	0.41	0.069	0.028
Agricultural dispersed	0.41 %	0.41	0.034	0.014
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.18 %	0.18	0.103	0.018
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.09 Mi.	0.25	0.103	0.026
Culverts	1 #	1.00	0.069	0.069
Geologically hazardous areas	0.09785 / 23 %	0.10	0.069	0.007
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.64 %	0.64	0.143	0.092
Potential migration zones	0.88430 %		0.095	0.084
Riparian vegetation	1.00 %	1.00	0.143	0.143
Aggregate Resource Index				0.45

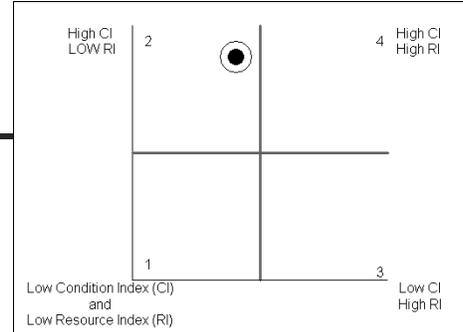
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 80
 Analysis Unit Code S BON 07
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.6680688-119.227126
 Acres of SMP land 110.50666
 length water feet 5130.39828254

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.67 %	0.67	0.074	0.050
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.28 %	0.28	0.111	0.031
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.00 Mi.	0.00	0.111	0.000
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.92

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.94 %	0.94	0.143	0.134
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.66 %	0.66	0.143	0.094
Aggregate Resource Index				0.49

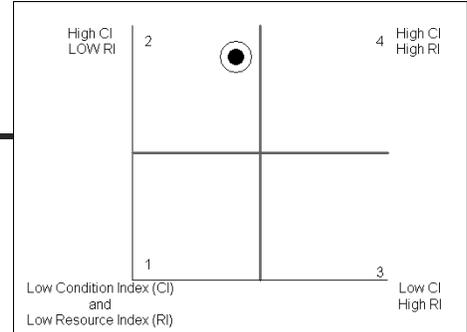
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 81
 Analysis Unit Code S BON 08
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.657605-119.201401
 Acres of SMP land 185.31748
 length water feet 8917.57751077

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.037	0.009
Agricultural- intensive	0.77 %	0.77	0.074	0.057
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.00 Mi.	0.00	0.111	0.000
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.93

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	7 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.91 %	0.91	0.143	0.129
Potential migration zones	0.9191 %		0.095	0.088
Riparian vegetation	0.71 %	0.71	0.143	0.102
Aggregate Resource Index				0.45

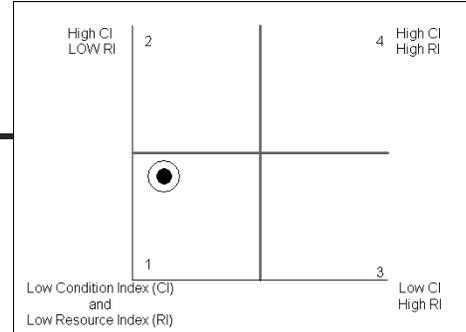
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 82
 Analysis Unit Code S BON 09
 River / Lake Name BONAPARTE CREEK
 Coordinates Lat, Long 48.675866-119.155894
 Acres of SMP land 239.71301
 length water feet 25623.7716529

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.037	0.009
Agricultural- intensive	0.20	%	0.20	0.074	0.015
Agricultural dispersed	0.03	%	0.03	0.037	0.001
Water quality	0.00	%	0.0	0.111	0.000
Residential development	0.09	%	0.09	0.111	0.010
Industrial development-heavy	0.00	%	0.00	0.111	0.000
Industrial development-light	0.00	%	0.00	0.074	0.000
Bridges	0	#	0.00	0.037	0.000
Overwater structures	0	#	0.00	0.037	0.000
Rail	0	Mi.	0.00	0.111	0.000
Roads	2.78	Mi.	0.75	0.111	0.083
Culverts	6	#	1.00	0.074	0.074
Geologically hazardous areas	unknown - insufficient	%	0.00	0.000	0.000
Boat ramps	0	#	0.00	0.037	0.000
Mines	0	#	0	0.037	0.000
Aggregate Condition Index					0.81

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.143	0.036
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	7	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.09	%	0.09	0.143	0.013
Potential migration zones	0.61043	%		0.095	0.058
Riparian vegetation	0.52	%	0.52	0.143	0.074
Aggregate Resource Index					0.28

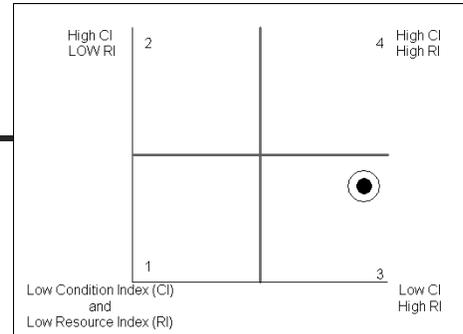
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 83
 Analysis Unit Code S CHE 01
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.4772061 -120.183602
 Acres of SMP land 99.458887
 length water feet 11074.0132421

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	3	#	0.25	0.034	0.009
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.48	%	0.48	0.103	0.050
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.79	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.51529 4	%	0.52	0.069	0.036
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.79

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.02	%	0.02	0.143	0.002
Potential migration zones	0.83707	%		0.095	0.080
Riparian vegetation	0.72	%	0.72	0.143	0.102
Aggregate Resource Index					0.71

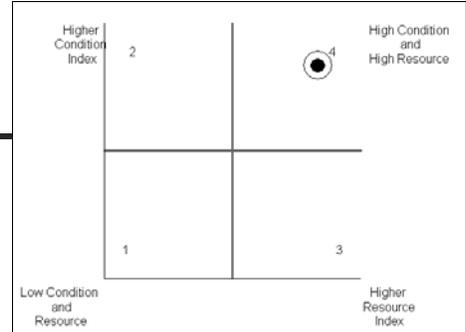
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 84
 Analysis Unit Code S CHE 02
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.5063773-120.182546
 Acres of SMP land 297.49020
 length water feet 15834.6053427

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.07	%	0.07	0.069	0.005
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.28	%	0.28	0.103	0.029
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.72	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.121889	%	0.12	0.069	0.008
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.91

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.43	%	0.43	0.143	0.062
Potential migration zones	.96278	%		0.095	0.092
Riparian vegetation	1.00	%	1.00	0.143	0.142
Aggregate Resource Index					0.82

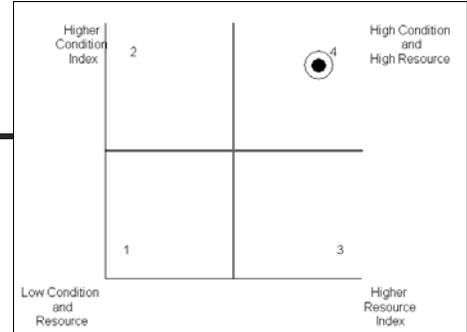
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 85
 Analysis Unit Code S CHE 03
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.5375202-120.184552
 Acres of SMP land 167.93519
 length water feet 8576.44292476

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.04	%	0.04	0.069	0.003
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.10	%	0.10	0.103	0.010
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.08	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.10845 8	%	0.11	0.069	0.007
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.95

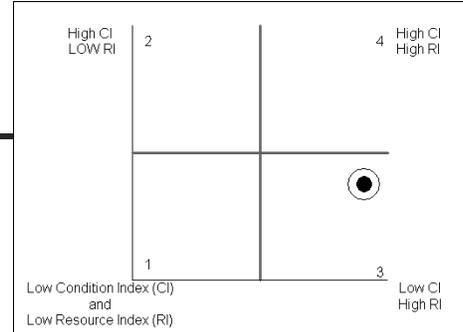
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.39	%	0.39	0.143	0.055
Potential migration zones	0.86102	%		0.095	0.082
Riparian vegetation	0.99	%	0.99	0.143	0.142
Aggregate Resource Index					0.80

Unique ID 86
 Analysis Unit Code S CHE 04
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.5615834-120.177466
 Acres of SMP land 153.94390
 length water feet 9548.37542849

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.33	%	0.33	0.069	0.023
Agricultural dispersed	0.20	%	0.20	0.034	0.007
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.14	%	0.14	0.103	0.015
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.40	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.562375	%	0.56	0.069	0.039
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.77

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	17	#	1.00	0.048	0.048
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.21	%	0.21	0.143	0.030
Potential migration zones	.90593	%		0.095	0.086
Riparian vegetation	0.83	%	0.83	0.143	0.119
Aggregate Resource Index					0.78

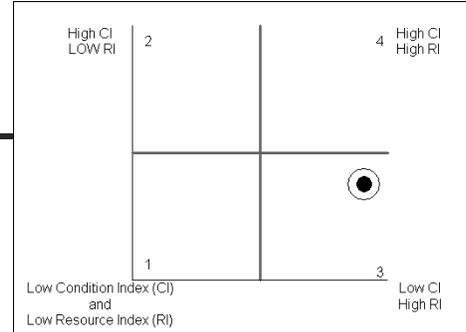
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 87
 Analysis Unit Code S CHE 05
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.5725110-120.172076
 Acres of SMP land 20.579558
 length water feet 3182.95049374

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.68853 1	%	0.69	0.069	0.047
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.82

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	16	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.10	%	0.10	0.143	0.014
Potential migration zones	.98627	%		0.095	0.094
Riparian vegetation	0.96	%	0.96	0.143	0.137
Aggregate Resource Index					0.78

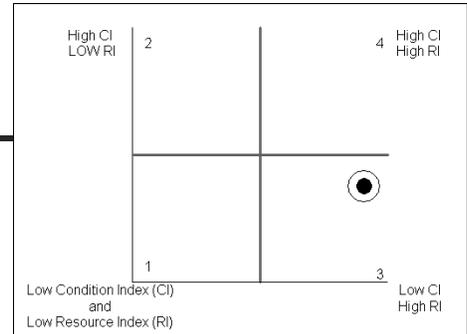
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 88
 Analysis Unit Code S CHE 06
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.5840051 -120.169059
 Acres of SMP land 48.69768
 length water feet 5562.8337861

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.96 %	0.96	0.103	0.099
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.22 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.16457 / 4 %	0.16	0.069	0.011
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.73

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	7 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	15 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.64 %	0.64	0.143	0.092
Potential migration zones	0.98617 %	0.98617	0.095	0.094
Riparian vegetation	0.96 %	0.96	0.143	0.137
Aggregate Resource Index				0.86

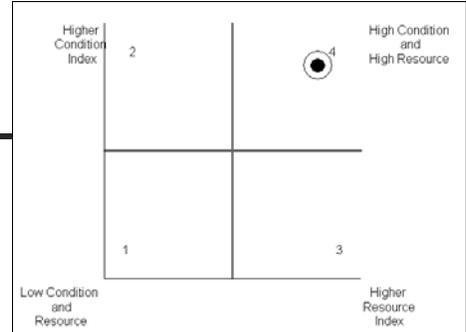
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 89
 Analysis Unit Code S CHE 07
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.5915870-120.164550
 Acres of SMP land 15.440375
 length water feet 6576.90111992

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.85	%	0.85	0.103	0.088
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.03	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.89

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	15	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.97	%	0.97	0.143	0.139
Aggregate Resource Index					0.77

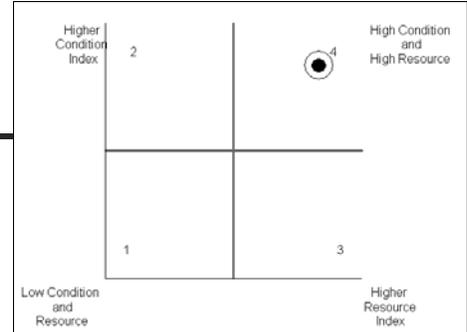
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 90
 Analysis Unit Code S CHE 08
 River / Lake Name CHEWACK RIVER
 Coordinates Lat, Long 48.604369-120.161475
 Acres of SMP land 74.617823
 length water feet 11788.8380528

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.09	%	0.09	0.103	0.010
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.11	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01649 36	%	0.02	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.96

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	15	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.44	%	0.44	0.143	0.063
Potential migration zones	.99965	%		0.095	0.095
Riparian vegetation	0.98	%	0.98	0.143	0.140
Aggregate Resource Index					0.83

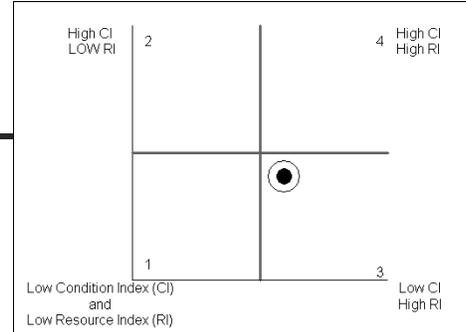
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 91
 Analysis Unit Code S COL 01
 River / Lake Name COLUMBIA RIVER
 Coordinates Lat, Long 47.9781753-119.875422
 Acres of SMP land 114.27974
 length water feet 26547.6052596

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.06	%	0.06	0.069	0.004
Agricultural dispersed	0.04	%	0.04	0.034	0.001
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.05	%	0.05	0.103	0.005
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	3.3057	Mi.	0.75	0.103	0.078
Roads	1.58	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.02780 56	%	0.03	0.069	0.002
Boat ramps	1	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.80

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	13	#	0.75	0.158	0.118
Riparian Species	4	#	0.75	0.158	0.118
Upland Species	13	#	0.75	0.053	0.039
Salmon spawning/rearing habitat	1		1	0.158	0.158
Steelhead/ Chinook Critical habitat	1		1	0.15789	0.158
Wetlands	0.02	%	0.02	0.158	0.003
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.36	%	0.36	0.158	0.057
Aggregate Resource Index					0.65

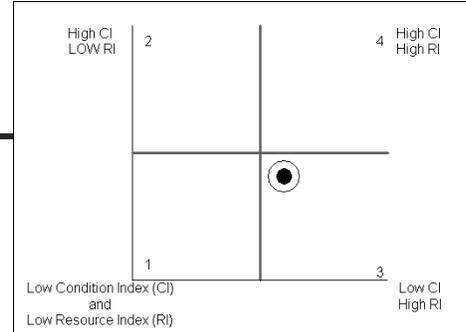
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 92
 Analysis Unit Code S COL 02
 River / Lake Name COLUMBIA RIVER
 Coordinates Lat, Long 48.0385835 -119.886607
 Acres of SMP land 49.879949
 length water feet 9687.65909897

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	4 #	0.25	0.034	0.009
Agricultural- intensive	0.02 %	0.02	0.069	0.002
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.02 %	0.02	0.103	0.002
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	1.6701 Mi.	0.75	0.103	0.078
Roads	0.39 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0 %	0.00	0.069	0.000
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	13 #	0.75	0.158	0.118
Riparian Species	5 #	0.75	0.158	0.118
Upland Species	13 #	0.75	0.053	0.039
Salmon spawning/rearing habitat	1	1	0.158	0.158
Steelhead/ Chinook Critical habitat	1	1	0.15789	0.158
Wetlands	0.00 %	0.00	0.158	0.000
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.38 %	0.38	0.158	0.060
Aggregate Resource Index				0.65

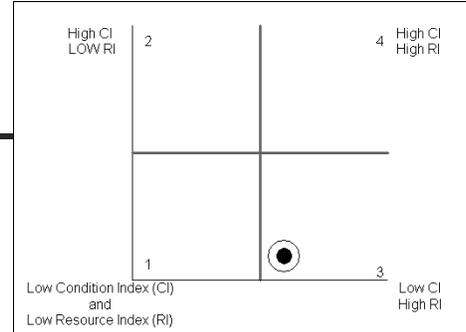
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 93
 Analysis Unit Code S COL 03
 River / Lake Name COLUMBIA RIVER
 Coordinates Lat, Long 48.0638374-119.871257
 Acres of SMP land 82.217216
 length water feet 19128.920227

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	10 #	0.50	0.034	0.017
Agricultural- intensive	0.02 %	0.02	0.069	0.001
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.02 %	0.02	0.103	0.002
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	6 #	1.00	0.034	0.034
Rail	2.7911 Mi.	0.75	0.103	0.078
Roads	2.00 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.176219 %	0.18	0.069	0.012
Boat ramps	1 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.73

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	14 #	0.75	0.158	0.118
Riparian Species	5 #	0.75	0.158	0.118
Upland Species	14 #	0.75	0.053	0.039
Salmon spawning/rearing habitat	1	1	0.158	0.158
Steelhead/ Chinook Critical habitat	1	1	0.15789	0.158
Wetlands	0.00 %	0.00	0.158	0.000
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.10 %	0.10	0.158	0.016
Aggregate Resource Index				0.61

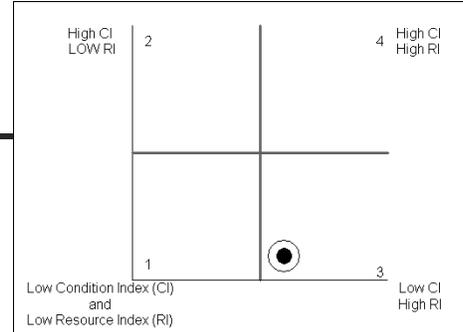
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 94
 Analysis Unit Code S COL 04
 River / Lake Name COLUMBIA RIVER
 Coordinates Lat, Long 48.0853771 -119.812276
 Acres of SMP land 95.200599
 length water feet 16860.2787809

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	7	#	0.50	0.034	0.017
Agricultural- intensive	0.13	%	0.13	0.069	0.009
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.14	%	0.14	0.103	0.015
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.01	%	0.01	0.069	0.001
Bridges	0	#	0.00	0.034	0.000
Overwater structures	8	#	1.00	0.034	0.034
Rail	0.6510	Mi.	0.50	0.103	0.052
Roads	1.22	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.25553 3	%	0.26	0.069	0.018
Boat ramps	3	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.74

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	13	#	0.75	0.158	0.118
Riparian Species	4	#	0.75	0.158	0.118
Upland Species	4	#	0.25	0.053	0.013
Salmon spawning/rearing habitat	1		1	0.158	0.158
Steelhead/ Chinook Critical habitat	1		1	0.15789	0.158
Wetlands	0.00	%	0.00	0.158	0.000
Potential migration zones	no data	%		0.000	0.000
Riparian vegetation	0.11	%	0.11	0.158	0.018
Aggregate Resource Index					0.58

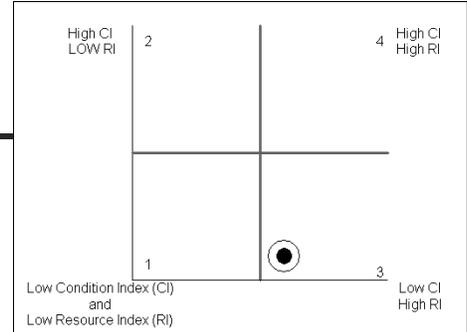
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 95
 Analysis Unit Code S COL 05
 River / Lake Name COLUMBIA RIVER
 Coordinates Lat, Long 48.0921500-119.74194
 Acres of SMP land 98.290738
 length water feet 31269.1748872

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	11 #	0.75	0.034	0.026
Agricultural- intensive	0.27 %	0.27	0.069	0.019
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.09 %	0.09	0.103	0.009
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	4 #	1.00	0.034	0.034
Rail	0.1337 Mi.	0.25	0.103	0.026
Roads	1.02 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.64573 %	0.65	0.069	0.045
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.75

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	13 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.36364 %		0.095	0.035
Riparian vegetation	0.23 %	0.23	0.143	0.033
Aggregate Resource Index				0.54

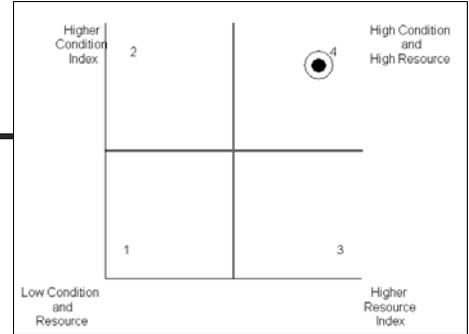
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 96
 Analysis Unit Code S EAR 01
 River / Lake Name EARLY WINTERS CREEK
 Coordinates Lat, Long 48.5977536-120.438823
 Acres of SMP land 59.261657
 length water feet 2897.35406096

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.17	%	0.17	0.103	0.018
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.99	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	14	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.66	%	0.66	0.143	0.094
Aggregate Resource Index					0.72

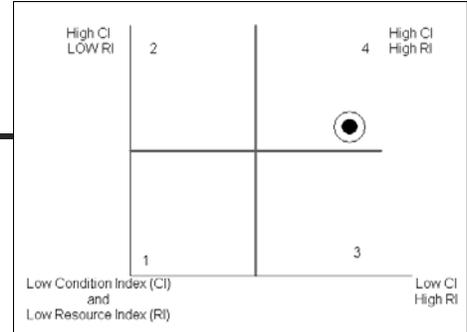
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 97
 Analysis Unit Code S EAR 02
 River / Lake Name EARLY WINTERS CREEK
 Coordinates Lat, Long 48.5958438 -120.450727
 Acres of SMP land 10.012753
 length water feet 2830.83890904

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.13	%	0.13	0.103	0.013
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.10	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.86

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	14	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.54	%	0.54	0.143	0.077
Aggregate Resource Index					0.71

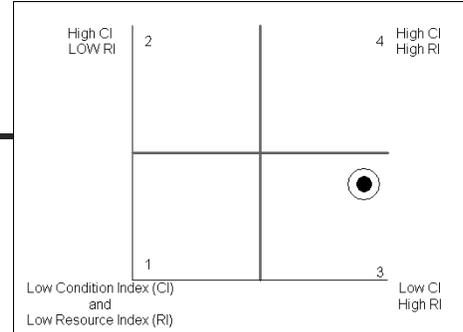
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 98
 Analysis Unit Code S GOL 01
 River / Lake Name GOLD CREEK
 Coordinates Lat, Long 48.1884775-120.105502
 Acres of SMP land 47.857321
 length water feet 5206.28584446

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.64	%	0.64	0.069	0.044
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.14	%	0.14	0.103	0.015
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.64	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.30162	%	0.30	0.069	0.021
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

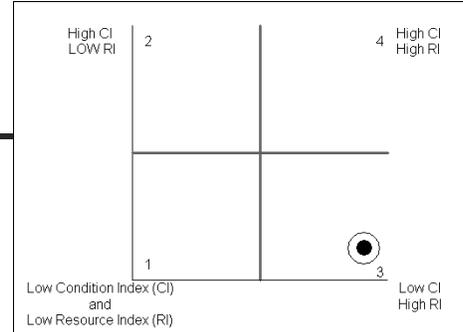
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	16	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.56567	%		0.095	0.054
Riparian vegetation	0.86	%	0.86	0.143	0.123
Aggregate Resource Index					0.71

Unique ID 99
 Analysis Unit Code S GOL 02
 River / Lake Name GOLD CREEK
 Coordinates Lat, Long 48.1884262 -120.146796
 Acres of SMP land 135.67576
 length water feet 18694.6948605

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.01	%	0.01	0.069	0.001
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.78	%	0.78	0.103	0.081
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	2	#	0.50	0.034	0.017
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.90	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.33750 4	%	0.34	0.069	0.023
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.74

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	19	#	1.00	0.048	0.048
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.33	%	0.33	0.143	0.047
Potential migration zones	.41373	%		0.095	0.039
Riparian vegetation	0.78	%	0.78	0.143	0.111
Aggregate Resource Index					0.71

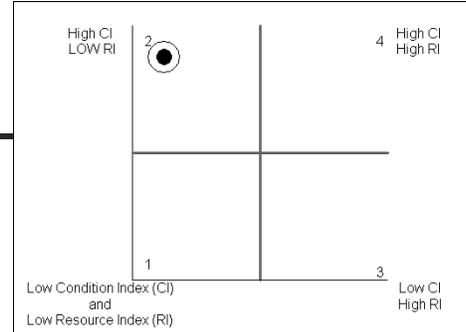
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 100
 Analysis Unit Code S LOS 01
 River / Lake Name LOST CREEK
 Coordinates Lat, Long 48.5253352 -118.932837
 Acres of SMP land 18.111387
 length water feet 2995.14923656

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.07	%	0.07	0.034	0.002
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.14	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.02582 95	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.94

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.143	0.036
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.05	%	0.05	0.143	0.007
Potential migration zones	.48131	%		0.095	0.046
Riparian vegetation	0.84	%	0.84	0.143	0.120
Aggregate Resource Index					0.30

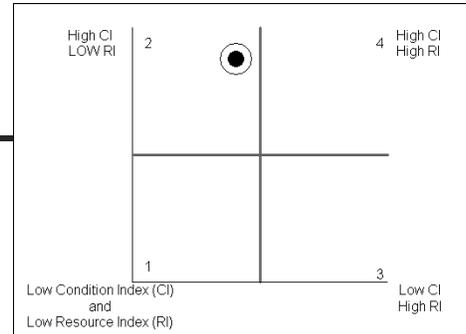
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 101
 Analysis Unit Code S LOS 02
 River / Lake Name LOST CREEK
 Coordinates Lat, Long 48.5196036-118.948077
 Acres of SMP land 24.493290
 length water feet 6666.07851868

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	1.00	%	1.00	0.069	0.069
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.03392 55	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.93

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.143	0.036
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.91	%	0.91	0.143	0.131
Potential migration zones	.95209	%		0.095	0.091
Riparian vegetation	1.00	%	1.00	0.143	0.143
Aggregate Resource Index					0.50

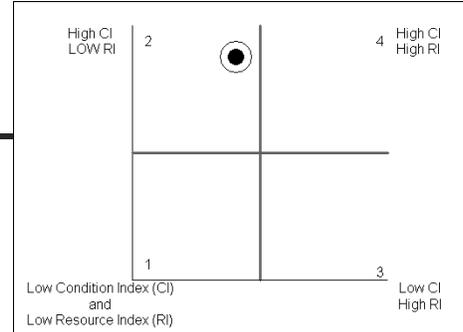
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 102
 Analysis Unit Code S LOS 03
 River / Lake Name LOST CREEK
 Coordinates Lat, Long 48.5169071 -118.966076
 Acres of SMP land 8.8649379
 length water feet 5819.39089159

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	1.00 %	1.00	0.034	0.034
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.25620 / 2 %	0.26	0.069	0.018
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.95

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	12 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.42 %	0.42	0.143	0.060
Potential migration zones	.81919 %		0.095	0.078
Riparian vegetation	1.00 %	1.00	0.143	0.143
Aggregate Resource Index				0.42

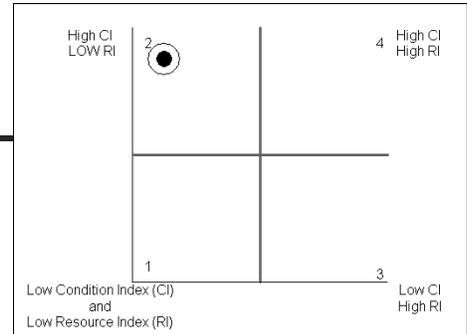
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 103
 Analysis Unit Code S LOS 04
 River / Lake Name LOST CREEK
 Coordinates Lat, Long 48.5182925-118.980908
 Acres of SMP land 34.969565
 length water feet 5753.16887054

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	1.00 %	1.00	0.034	0.034
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.07611 / 56 %	0.08	0.069	0.005
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.96

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	12 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.11 %	0.11	0.143	0.016
Potential migration zones	.97462 %		0.095	0.093
Riparian vegetation	1.00 %	1.00	0.143	0.143
Aggregate Resource Index				0.39

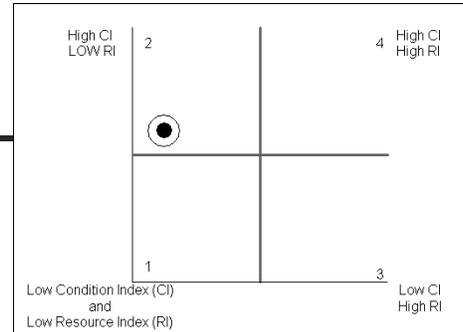
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 104
 Analysis Unit Code S LOS 06
 River / Lake Name LOST CREEK
 Coordinates Lat, Long 48.4913855-119.008193
 Acres of SMP land 8.5813494
 length water feet 9870.40924427

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	1.00 %	1.00	0.103	0.103
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.86855 / 6 %	0.87	0.069	0.060
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	12 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.24403 %		0.095	0.023
Riparian vegetation	1.00 %	1.00	0.143	0.143
Aggregate Resource Index				0.31

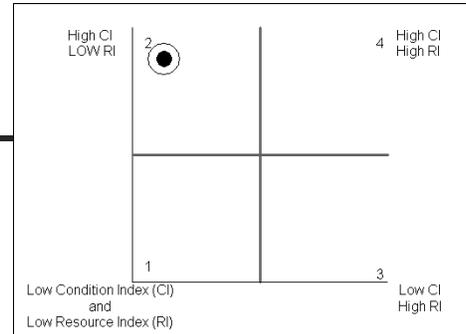
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 105
 Analysis Unit Code S LOS 07
 River / Lake Name LOST CREEK
 Coordinates Lat, Long 48.4851824-119.020627
 Acres of SMP land 32.443794
 length water feet 6306.35809126

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.56	%	0.56	0.103	0.058
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.284378	%	0.28	0.069	0.020
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.92

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.143	0.036
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	12	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.38	%	0.38	0.143	0.055
Potential migration zones	0.63560	%		0.095	0.061
Riparian vegetation	1.00	%	1.00	0.143	0.143
Aggregate Resource Index					0.40

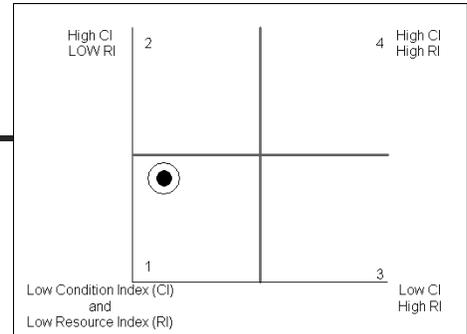
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 106
 Analysis Unit Code S MET 01
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.0486056-119.904492
 Acres of SMP land 22.893636
 length water feet 1913.86013216

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	7	#	0.50	0.034	0.017
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.03	%	0.03	0.034	0.001
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.29	%	0.29	0.103	0.030
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	16	#	1.00	0.034	0.034
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.62	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.00672 649	%	0.01	0.069	0.000
Boat ramps	2	#	1.00	0.034	0.034
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.80

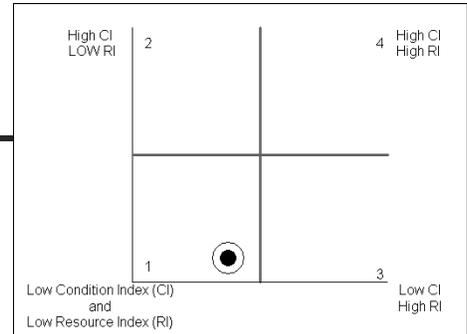
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	3	#	0.25	0.143	0.036
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	12	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.87256	%		0.095	0.083
Riparian vegetation	0.23	%	0.23	0.143	0.033
Aggregate Resource Index					0.40

Unique ID 107
 Analysis Unit Code S MET 02
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.047327 -119.915079
 Acres of SMP land 53.728109
 length water feet 4505.52651171

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.06 %	0.06	0.069	0.004
Agricultural dispersed	0.17 %	0.17	0.034	0.006
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.29 %	0.29	0.103	0.030
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	4 #	1.00	0.034	0.034
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.85 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.17384 / 9 %	0.17	0.069	0.012
Boat ramps	2 #	1.00	0.034	0.034
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.74

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	9 #	0.75	0.143	0.107
Riparian Species	5 #	0.75	0.143	0.107
Upland Species	13 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	0.84453 %		0.095	0.080
Riparian vegetation	0.33 %	0.33	0.143	0.048
Aggregate Resource Index				0.52

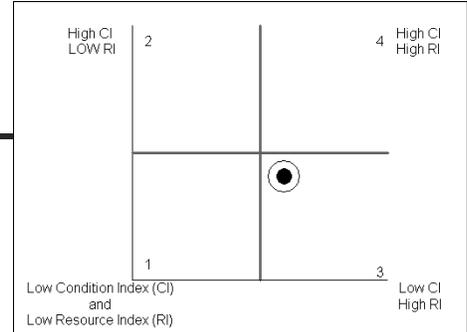
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 108
 Analysis Unit Code S MET 03
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.0748786-119.965562
 Acres of SMP land 345.99945
 length water feet 33943.3205174

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.67	%	0.67	0.069	0.046
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.06	%	0.06	0.103	0.006
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	2	#	0.50	0.034	0.017
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	2.97	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.22935 8	%	0.23	0.069	0.016
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

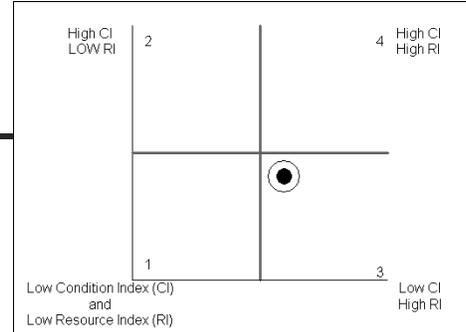
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	14	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.01	%	0.01	0.143	0.001
Potential migration zones	0.88166	%		0.095	0.084
Riparian vegetation	0.41	%	0.41	0.143	0.059
Aggregate Resource Index					0.68

Unique ID 109
 Analysis Unit Code S MET 04
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.0845829-120.013088
 Acres of SMP land 29.353608
 length water feet 4969.63224831

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.50	%	0.50	0.069	0.035
Agricultural dispersed	0.05	%	0.05	0.034	0.002
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.11	%	0.11	0.103	0.012
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.82	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.77832 2	%	0.78	0.069	0.054
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.82

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	10	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	21	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.64454	%		0.095	0.061
Riparian vegetation	0.55	%	0.55	0.143	0.079
Aggregate Resource Index					0.68

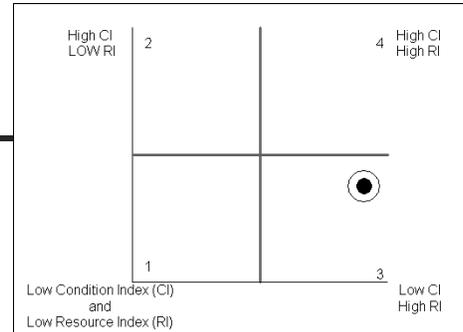
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 110
 Analysis Unit Code S MET 05
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.1023712-120.010496
 Acres of SMP land 262.05097
 length water feet 26883.7807152

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.49	%	0.49	0.069	0.034
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.13	%	0.13	0.103	0.014
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	3.61	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.32877 8	%	0.33	0.069	0.023
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.84

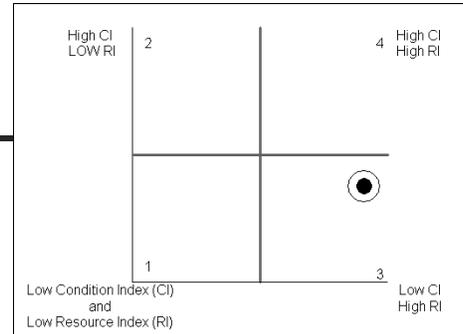
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	13	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.04	%	0.04	0.143	0.006
Potential migration zones	.81626	%		0.095	0.078
Riparian vegetation	0.75	%	0.75	0.143	0.107
Aggregate Resource Index					0.69

Unique ID 111
 Analysis Unit Code S MET 06
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.1373963-120.02395
 Acres of SMP land 136.32108
 length water feet 13585.1710869

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.17	%	0.17	0.069	0.012
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.31	%	0.31	0.103	0.032
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	2.03	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.26998 8	%	0.27	0.069	0.019
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.84

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	14	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	0.82143	%		0.095	0.078
Riparian vegetation	0.80	%	0.80	0.143	0.115
Aggregate Resource Index					0.73

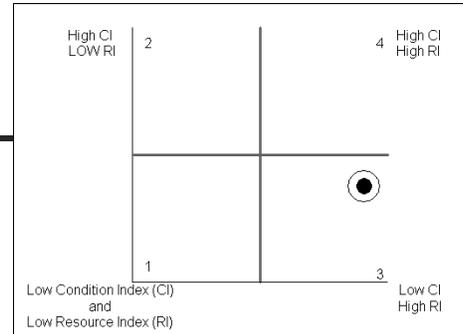
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 112
 Analysis Unit Code S MET 07
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.1517449-120.054024
 Acres of SMP land 88.693229
 length water feet 8850.96391333

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.73	%	0.73	0.069	0.051
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.09	%	0.09	0.103	0.009
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	2	#	0.50	0.034	0.017
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.98	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.33531 8	%	0.34	0.069	0.023
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.81

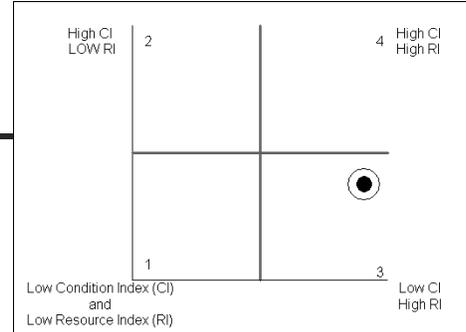
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	17	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	0.86757	%		0.095	0.083
Riparian vegetation	0.79	%	0.79	0.143	0.114
Aggregate Resource Index					0.73

Unique ID 113
 Analysis Unit Code S MET 08
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.1572022-120.071701
 Acres of SMP land 50.867169
 length water feet 6196.7959619

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.47 %	0.47	0.069	0.033
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.21 %	0.21	0.103	0.021
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.81 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.36634 / 3 %	0.37	0.069	0.025
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	11 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	0.87091 %		0.095	0.083
Riparian vegetation	0.70 %	0.70	0.143	0.100
Aggregate Resource Index				0.72

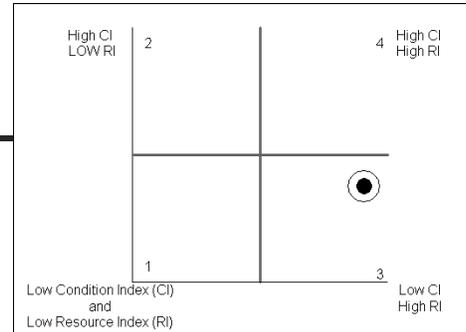
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 114
 Analysis Unit Code S MET 09
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.1770379-120.086401
 Acres of SMP land 136.10639
 length water feet 12092.7023289

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	3	#	0.25	0.034	0.009
Agricultural- intensive	0.60	%	0.60	0.069	0.041
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.13	%	0.13	0.103	0.014
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.88	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.18470 6	%	0.18	0.069	0.013
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.84

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	17	#	1.00	0.048	0.048
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	0.87504	%		0.095	0.083
Riparian vegetation	0.75	%	0.75	0.143	0.107
Aggregate Resource Index					0.74

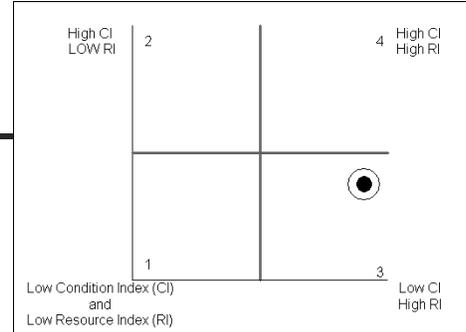
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 115
 Analysis Unit Code S MET 10
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.1985636-120.110197
 Acres of SMP land 241.22322
 length water feet 18379.6447806

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	3 #	0.25	0.034	0.009
Agricultural- intensive	0.42 %	0.42	0.069	0.029
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.26 %	0.26	0.103	0.026
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	3.16 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.12186 %	0.12	0.069	0.008
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	12 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.06 %	0.06	0.143	0.009
Potential migration zones	.90953 %		0.095	0.087
Riparian vegetation	0.72 %	0.72	0.143	0.103
Aggregate Resource Index				0.73

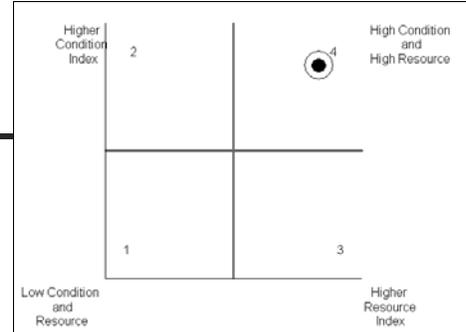
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 116
 Analysis Unit Code S MET 11
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.2161250-120.122318
 Acres of SMP land 63.793178
 length water feet 3429.6054529

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.21	%	0.21	0.069	0.014
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.06	%	0.06	0.103	0.007
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.48	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.03022 86	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.93

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	17	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.11	%	0.11	0.143	0.016
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.85	%	0.85	0.143	0.121
Aggregate Resource Index					0.77

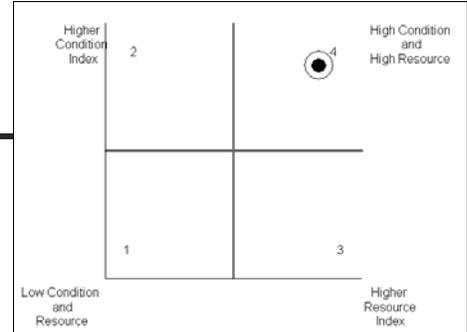
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 117
 Analysis Unit Code S MET 12
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.2240674-120.117744
 Acres of SMP land 41.37472
 length water feet 4028.77386047

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.31	%	0.31	0.069	0.021
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.32	%	0.32	0.103	0.033
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.17	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.171909	%	0.17	0.069	0.012
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.09	%	0.09	0.143	0.013
Potential migration zones	.99996	%		0.095	0.095
Riparian vegetation	0.89	%	0.89	0.143	0.127
Aggregate Resource Index					0.76

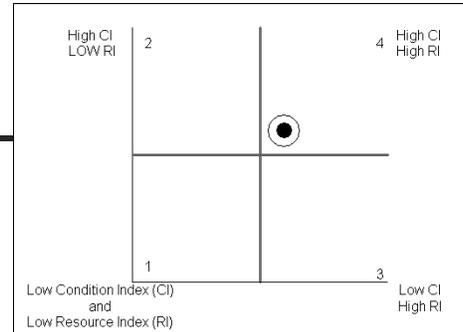
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 118
 Analysis Unit Code S MET 13
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.230591 -120.1123
 Acres of SMP land 124.01416
 length water feet 10771.3569966

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.44	%	0.44	0.069	0.030
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.22	%	0.22	0.103	0.023
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.06	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.07970 34	%	0.08	0.069	0.005
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.86

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.01	%	0.01	0.143	0.002
Potential migration zones	0.82422	%		0.095	0.078
Riparian vegetation	0.69	%	0.69	0.143	0.099
Aggregate Resource Index					0.70

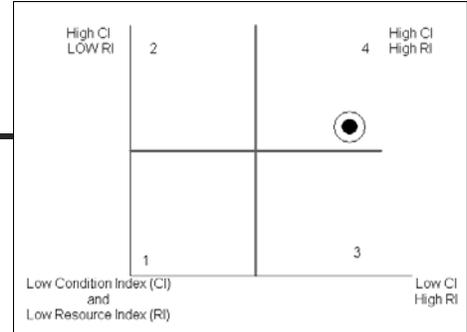
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 119
 Analysis Unit Code S MET 14
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.2545693-120.110384
 Acres of SMP land 61.510161
 length water feet 5237.63108985

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.29	%	0.29	0.069	0.020
Agricultural dispersed	0.02	%	0.02	0.034	0.001
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.21	%	0.21	0.103	0.021
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.63	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.07185 58	%	0.07	0.069	0.005
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.82

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.88788	%		0.095	0.085
Riparian vegetation	0.77	%	0.77	0.143	0.110
Aggregate Resource Index					0.72

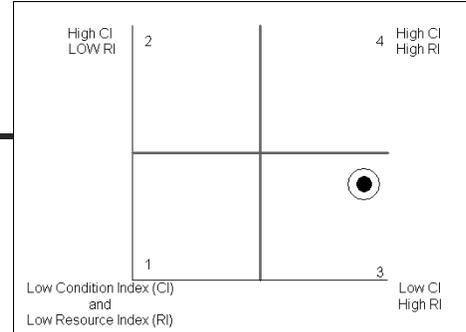
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 120
 Analysis Unit Code S MET 15
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.2681713-120.095845
 Acres of SMP land 74.345726
 length water feet 7756.31546999

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.03	%	0.03	0.069	0.002
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.71	%	0.71	0.103	0.073
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.60	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.20125 3	%	0.20	0.069	0.014
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.75

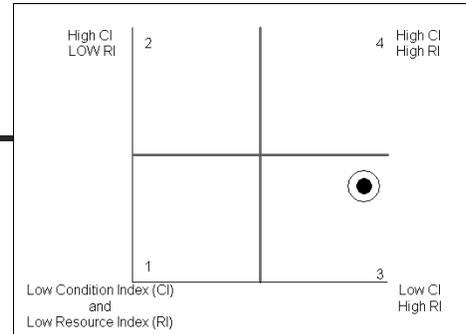
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.03	%	0.03	0.143	0.004
Potential migration zones	.92957	%		0.095	0.089
Riparian vegetation	0.81	%	0.81	0.143	0.115
Aggregate Resource Index					0.73

Unique ID 121
 Analysis Unit Code S MET 16
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.2729418-120.084626
 Acres of SMP land 45.102678
 length water feet 4829.70814498

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.20	%	0.20	0.069	0.014
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.67	%	0.67	0.103	0.069
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.33	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.20050 6	%	0.20	0.069	0.014
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.74

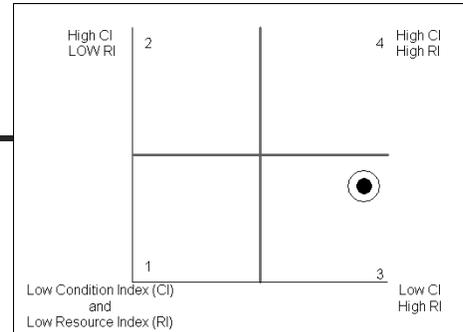
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	0.94727	%		0.095	0.090
Riparian vegetation	0.87	%	0.87	0.143	0.124
Aggregate Resource Index					0.74

Unique ID 122
 Analysis Unit Code S MET 17
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.287448-120.072087
 Acres of SMP land 61.470584
 length water feet 6731.72006549

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.37	%	0.37	0.069	0.026
Agricultural dispersed	0.04	%	0.04	0.034	0.001
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.37	%	0.37	0.103	0.039
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.18	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.16854 9	%	0.17	0.069	0.012
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.81

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.71	%	0.71	0.143	0.101
Aggregate Resource Index					0.72

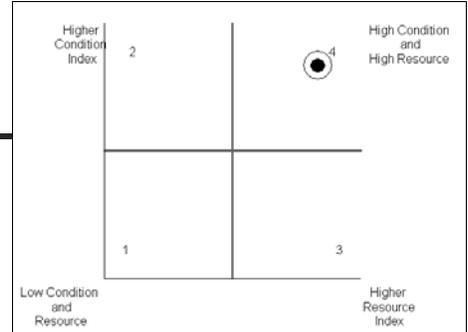
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 123
 Analysis Unit Code S MET 18
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3046505-120.060201
 Acres of SMP land 156.29931
 length water feet 5769.4893394

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	6	#	0.50	0.034	0.017
Agricultural- intensive	0.43	%	0.43	0.069	0.030
Agricultural dispersed	0.15	%	0.15	0.034	0.005
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.14	%	0.14	0.103	0.015
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.66	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.07966 74	%	0.08	0.069	0.005
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	6	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.18	%	0.18	0.143	0.025
Potential migration zones	.99821	%		0.095	0.095
Riparian vegetation	0.88	%	0.88	0.143	0.126
Aggregate Resource Index					0.77

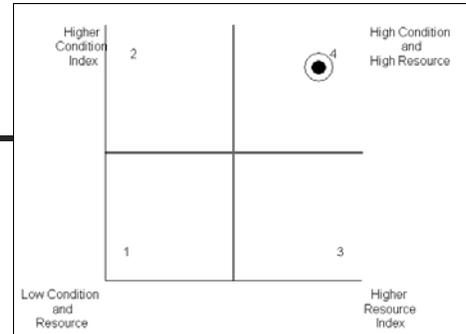
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 124
 Analysis Unit Code S MET 19
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3159332-120.06035
 Acres of SMP land 309.36927
 length water feet 9161.27223722

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.17	%	0.17	0.069	0.012
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.07	%	0.07	0.103	0.007
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.52	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.0324909	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.89

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	6	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.17	%	0.17	0.143	0.024
Potential migration zones	.98971	%		0.095	0.094
Riparian vegetation	0.90	%	0.90	0.143	0.128
Aggregate Resource Index					0.77

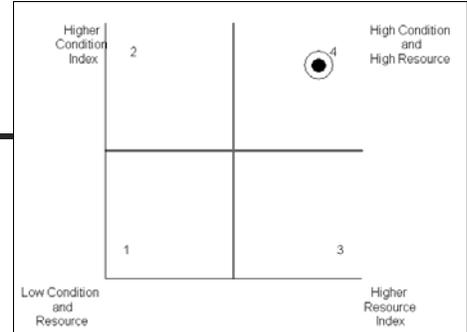
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 125
 Analysis Unit Code S MET 20
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3294082-120.074593
 Acres of SMP land 335.11358
 length water feet 6655.27899272

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.38	%	0.38	0.069	0.026
Agricultural dispersed	0.02	%	0.02	0.034	0.001
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.31	%	0.31	0.103	0.032
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.43	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.03781 41	%	0.04	0.069	0.003
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.24	%	0.24	0.143	0.034
Potential migration zones	.93573	%		0.095	0.089
Riparian vegetation	0.77	%	0.77	0.143	0.110
Aggregate Resource Index					0.76

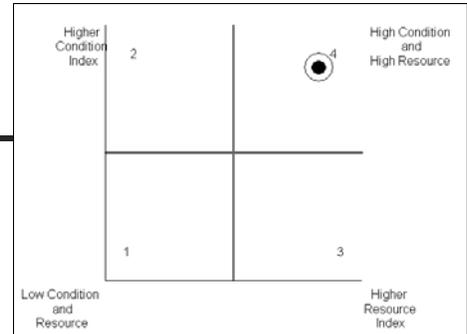
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 126
 Analysis Unit Code S MET 21
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.33759-120.081662
 Acres of SMP land 130.69089
 length water feet 2169.42780936

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.03	%	0.03	0.069	0.002
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.53	%	0.53	0.103	0.055
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.94	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.00116 053	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.25	%	0.25	0.143	0.035
Potential migration zones	.92633	%		0.095	0.088
Riparian vegetation	0.90	%	0.90	0.143	0.129
Aggregate Resource Index					0.78

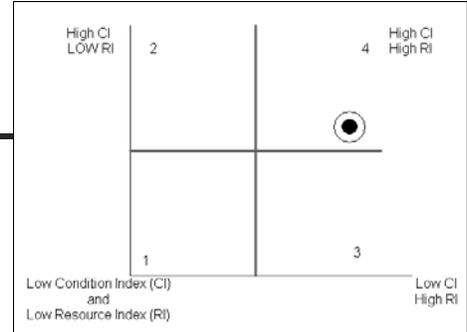
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 127
 Analysis Unit Code S MET 22
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3438600-120.081314
 Acres of SMP land 131.69363
 length water feet 5047.13152297

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.15 %	0.15	0.069	0.010
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.38 %	0.38	0.103	0.040
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.78 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.015877 %	0.02	0.069	0.001
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.25 %	0.25	0.143	0.036
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.89 %	0.89	0.143	0.127
Aggregate Resource Index				0.78

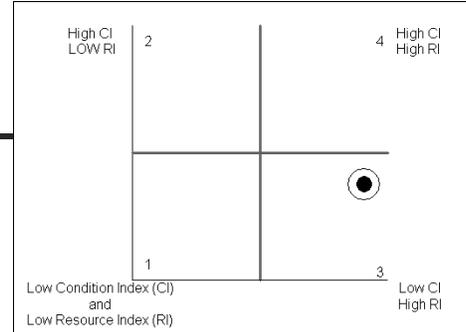
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 128
 Analysis Unit Code S MET 23
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3476437 -120.102637
 Acres of SMP land 227.42103
 length water feet 14666.2742317

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	14	#	0.75	0.034	0.026
Agricultural- intensive	0.03	%	0.03	0.069	0.002
Agricultural dispersed	0.04	%	0.04	0.034	0.002
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.36	%	0.36	0.103	0.037
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	2.30	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.10184 2	%	0.10	0.069	0.007
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.79

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.16	%	0.16	0.143	0.023
Potential migration zones	.87351	%		0.095	0.083
Riparian vegetation	0.67	%	0.67	0.143	0.096
Aggregate Resource Index					0.73

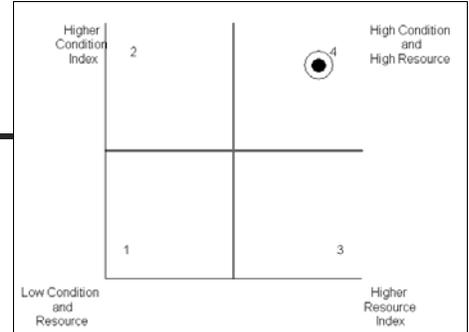
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 129
 Analysis Unit Code S MET 24
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3786748-120.124547
 Acres of SMP land 344.81432
 length water feet 8750.03776756

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	4	#	0.25	0.034	0.009
Agricultural- intensive	0.21	%	0.21	0.069	0.014
Agricultural dispersed	0.06	%	0.06	0.034	0.002
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.20	%	0.20	0.103	0.020
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.51	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.02654 73	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.25	%	0.25	0.143	0.036
Potential migration zones	0.9335	%		0.095	0.089
Riparian vegetation	0.81	%	0.81	0.143	0.115
Aggregate Resource Index					0.76

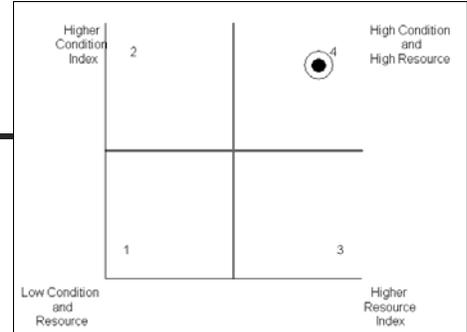
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 130
 Analysis Unit Code S MET 25
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.3902655-120.130806
 Acres of SMP land 274.68186
 length water feet 6013.32861227

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.58	%	0.58	0.069	0.040
Agricultural dispersed	0.17	%	0.17	0.034	0.006
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.04	%	0.04	0.103	0.004
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.06	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.030125	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.89

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.34	%	0.34	0.143	0.048
Potential migration zones	.98192	%		0.095	0.094
Riparian vegetation	0.79	%	0.79	0.143	0.113
Aggregate Resource Index					0.78

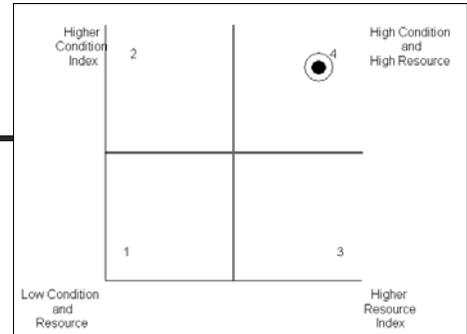
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 131
 Analysis Unit Code S MET 26
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.406163-120.136892
 Acres of SMP land 294.88042
 length water feet 10980.723883

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.30	%	0.30	0.069	0.021
Agricultural dispersed	0.23	%	0.23	0.034	0.008
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.19	%	0.19	0.103	0.020
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.70	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.03749 77	%	0.04	0.069	0.003
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.23	%	0.23	0.143	0.033
Potential migration zones	.93276	%		0.095	0.089
Riparian vegetation	0.87	%	0.87	0.143	0.124
Aggregate Resource Index					0.77

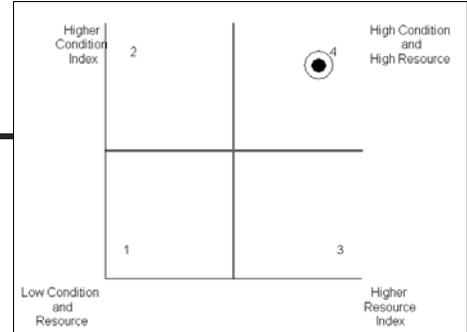
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 132
 Analysis Unit Code S MET 27
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.4195113-120.143287
 Acres of SMP land 86.890119
 length water feet 3194.82247645

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.09	%	0.09	0.069	0.006
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.15	%	0.15	0.103	0.015
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.69	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.93

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.55	%	0.55	0.143	0.078
Potential migration zones	.94712	%		0.095	0.090
Riparian vegetation	0.80	%	0.80	0.143	0.114
Aggregate Resource Index					0.81

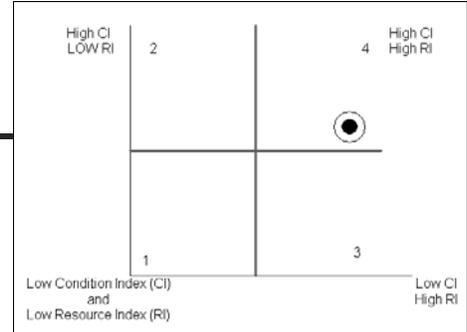
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 133
 Analysis Unit Code S MET 28
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.4251029-120.154996
 Acres of SMP land 193.33192
 length water feet 13968.3999639

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.53 %	0.53	0.069	0.037
Agricultural dispersed	0.03 %	0.03	0.034	0.001
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.20 %	0.20	0.103	0.021
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.05 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.026988 %	0.03	0.069	0.002
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.29 %	0.29	0.143	0.042
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.77 %	0.77	0.143	0.109
Aggregate Resource Index				0.76

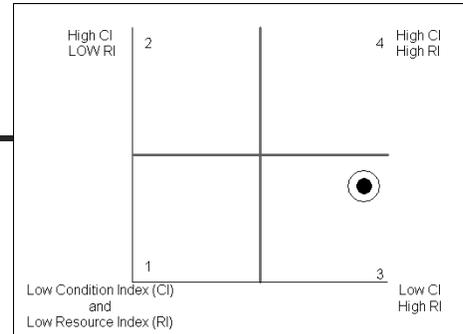
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 134
 Analysis Unit Code S MET 29
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.4663074-120.170258
 Acres of SMP land 140.21415
 length water feet 12394.5835218

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	one	Mi.	1	0.000	0.000
Permitted facilities	6	#	0.50	0.034	0.017
Agricultural- intensive	0.26	%	0.26	0.069	0.018
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.24	%	0.24	0.103	0.025
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.19	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.02960 87	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.80

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.12	%	0.12	0.143	0.018
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.71	%	0.71	0.143	0.101
Aggregate Resource Index					0.74

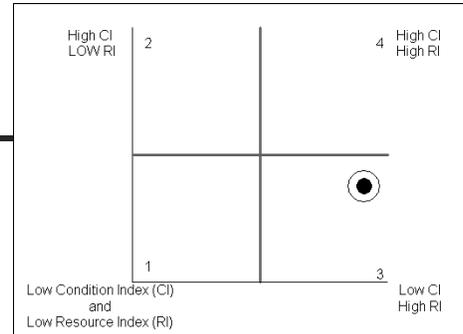
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 135
 Analysis Unit Code S MET 30
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.4790137 -120.198577
 Acres of SMP land 182.25305
 length water feet 9698.35771139

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	4	#	0.25	0.034	0.009
Agricultural- intensive	0.21	%	0.21	0.069	0.015
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.43	%	0.43	0.103	0.045
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.54	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01682 58	%	0.02	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.80

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.20	%	0.20	0.143	0.029
Potential migration zones	.86978	%		0.095	0.083
Riparian vegetation	0.77	%	0.77	0.143	0.110
Aggregate Resource Index					0.75

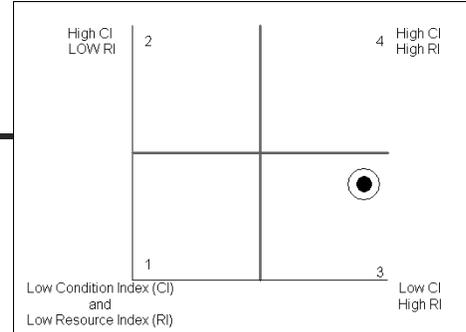
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 136
 Analysis Unit Code S MET 31
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.4848332-120.223079
 Acres of SMP land 51.284098
 length water feet 5565.65752179

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.39	%	0.39	0.069	0.027
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.38	%	0.38	0.103	0.040
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.82	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.04740 41	%	0.05	0.069	0.003
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.79

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.73	%	0.73	0.143	0.104
Aggregate Resource Index					0.72

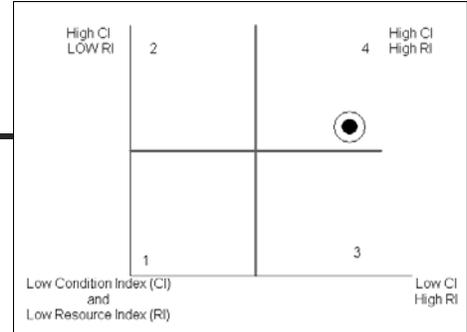
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 137
 Analysis Unit Code S MET 32
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.4969218-120.242037
 Acres of SMP land 101.44617
 length water feet 6717.58376743

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.01 %	0.01	0.034	0.000
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.33 %	0.33	0.103	0.034
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.40 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.25345 / 2 %	0.25	0.069	0.017
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.82

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	7 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.06 %	0.06	0.143	0.008
Potential migration zones	.99975 %		0.095	0.095
Riparian vegetation	0.62 %	0.62	0.143	0.089
Aggregate Resource Index				0.72

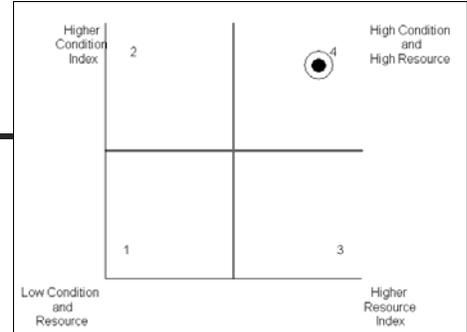
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 138
 Analysis Unit Code S MET 33
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.5186866-120.292236
 Acres of SMP land 898.48712
 length water feet 30433.3898215

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	2	#	0.25	0.034	0.009
Agricultural- intensive	0.12	%	0.12	0.069	0.008
Agricultural dispersed	0.02	%	0.02	0.034	0.001
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.18	%	0.18	0.103	0.019
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.65	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.02966 61	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	15	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.62	%	0.62	0.143	0.089
Potential migration zones	.99990	%		0.095	0.095
Riparian vegetation	0.96	%	0.96	0.143	0.137
Aggregate Resource Index					0.86

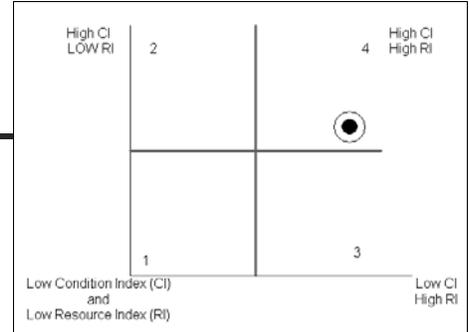
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 139
 Analysis Unit Code S MET 34
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.5473963-120.330069
 Acres of SMP land 178.34943
 length water feet 6752.17979808

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.35 %	0.35	0.069	0.024
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.30 %	0.30	0.103	0.031
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.97 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.08591 / 74 %	0.09	0.069	0.006
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.87

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	5 #	0.75	0.143	0.107
Upland Species	16 #	1.00	0.048	0.048
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.28 %	0.28	0.143	0.040
Potential migration zones	0.99528 %	0.995	0.095	0.095
Riparian vegetation	0.81 %	0.81	0.143	0.116
Aggregate Resource Index				0.80

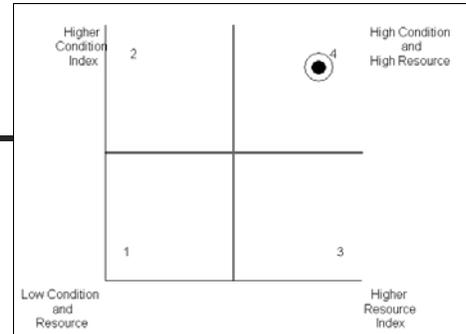
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 140
 Analysis Unit Code S MET 35
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.5545486-120.349231
 Acres of SMP land 244.52409
 length water feet 7929.42396824

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.13	%	0.13	0.103	0.014
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.45	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01293 64	%	0.01	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.96

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	15	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.64	%	0.64	0.143	0.091
Potential migration zones	.99410	%		0.095	0.095
Riparian vegetation	0.95	%	0.95	0.143	0.135
Aggregate Resource Index					0.86

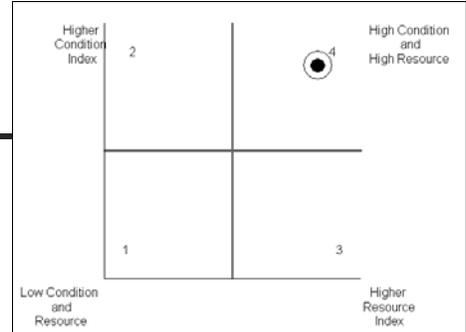
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 141
 Analysis Unit Code S MET 36
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.5709915-120.368767
 Acres of SMP land 235.49231
 length water feet 8187.75411148

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.06	%	0.06	0.069	0.004
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.22	%	0.22	0.103	0.023
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.11	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.00170 548	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	15	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.69	%	0.69	0.143	0.099
Potential migration zones	.99760	%		0.095	0.095
Riparian vegetation	0.97	%	0.97	0.143	0.138
Aggregate Resource Index					0.87

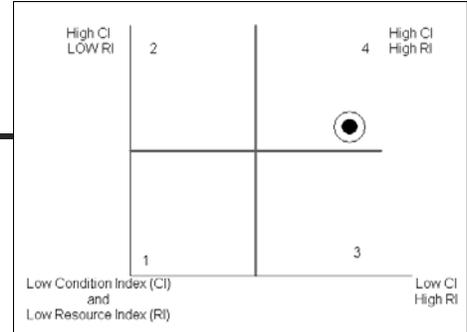
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 142
 Analysis Unit Code S MET 37
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.5909978-120.408462
 Acres of SMP land 340.41739
 length water feet 20840.3186114

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.28	%	0.28	0.069	0.019
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.30	%	0.30	0.103	0.031
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.21	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.00303 83	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.83

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	15	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.26	%	0.26	0.143	0.038
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.85	%	0.85	0.143	0.122
Aggregate Resource Index					0.79

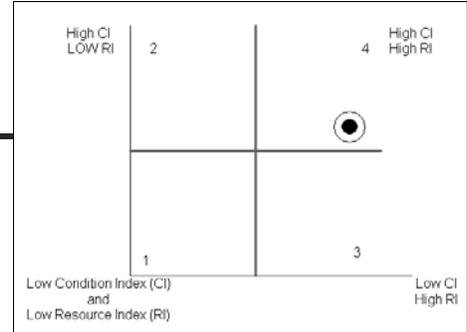
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 143
 Analysis Unit Code S MET 38
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.6320646-120.470080
 Acres of SMP land 512.00578
 length water feet 27567.7537521

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.29 %	0.29	0.103	0.030
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	2.27 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.10619 / 4 %	0.11	0.069	0.007
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	7 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	15 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.36 %	0.36	0.143	0.052
Potential migration zones	.99763 %		0.095	0.095
Riparian vegetation	0.98 %	0.98	0.143	0.140
Aggregate Resource Index				0.82

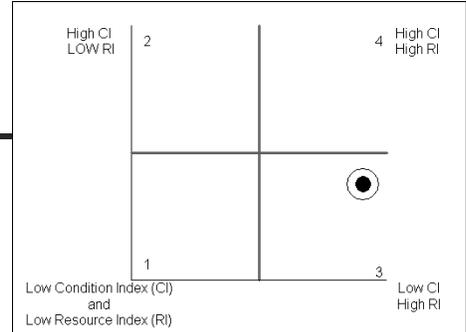
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 144
 Analysis Unit Code S MET 39
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.6454755-120.506539
 Acres of SMP land 32.776058
 length water feet 3632.32539258

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	one	Mi.	1	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.45	%	0.45	0.103	0.047
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.73	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.286236	%	0.29	0.069	0.020
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.80

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	16	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	1.00	%	1.00	0.143	0.143
Aggregate Resource Index					0.77

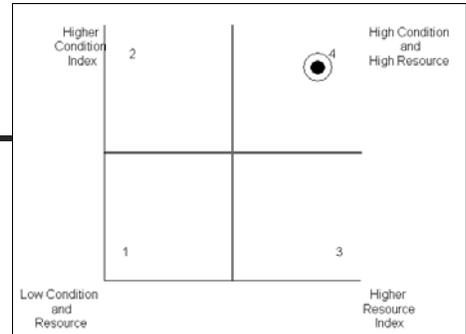
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 145
 Analysis Unit Code S MET 40
 River / Lake Name METHOW RIVER
 Coordinates Lat, Long 48.6535600-120.518747
 Acres of SMP land 10.923823
 length water feet 5539.90276982

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.60	%	0.60	0.103	0.062
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0	%	0.00	0.069	0.000
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.89

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	6	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	14	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.49	%	0.49	0.143	0.070
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	1.00	%	1.00	0.143	0.142
Aggregate Resource Index					0.77

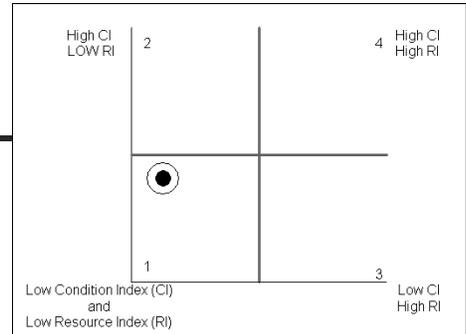
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 146
 Analysis Unit Code S OKA 01
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.1001097 -119.714188
 Acres of SMP land 16.78595
 length water feet 3710.02237661

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.10 %	0.10	0.057	0.006
Agricultural dispersed	0.10 %	0.10	0.029	0.003
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.07 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.431246 %	0.43	0.057	0.025
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.92

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	6 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	14 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.08 %	0.08	0.143	0.012
Potential migration zones	.11142	%	0.095	0.011
Riparian vegetation	0.13 %	0.13	0.143	0.018
Aggregate Resource Index				0.36

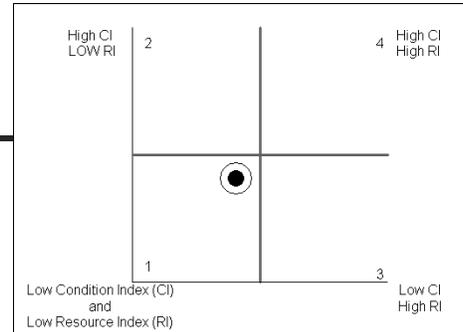
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 147
 Analysis Unit Code S OKA 02
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.1065677 -119.698079
 Acres of SMP land 24.834711
 length water feet 5293.77034193

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	1 #	0.25	0.029	0.007
Agricultural- intensive	0.62 %	0.62	0.057	0.035
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.89 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.784836 %	0.78	0.057	0.045
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.81

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	11 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	064090	%	0.095	0.006
Riparian vegetation	0.40 %	0.40	0.143	0.056
Aggregate Resource Index				0.43

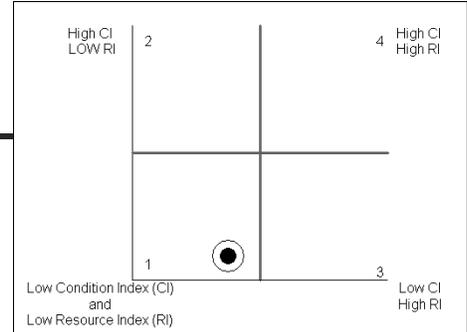
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 148
 Analysis Unit Code S OKA 03
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.1319324-119.676938
 Acres of SMP land 97.956438
 length water feet 18492.2016565

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	one #	1	0.086	0.086
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	1 #	0.25	0.029	0.007
Agricultural- intensive	0.18 %	0.18	0.057	0.010
Agricultural dispersed	0.03 %	0.03	0.029	0.001
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	1 #	1.00	0.029	0.029
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.42 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	2 #	1.00	0.029	0.029
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.75

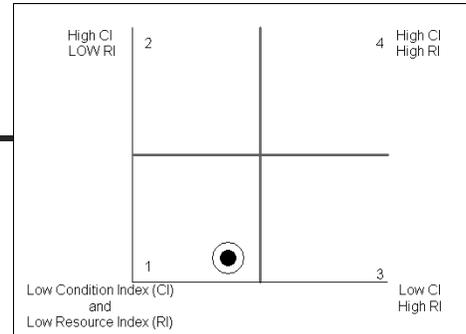
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	10 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.01 %	0.01	0.143	0.001
Potential migration zones	.93333 %		0.095	0.089
Riparian vegetation	0.08 %	0.08	0.143	0.011
Aggregate Resource Index				0.47

Unique ID 149
 Analysis Unit Code S OKA 04
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.1653386-119.669597
 Acres of SMP land 46.328923
 length water feet 9557.60222159

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.13 %	0.13	0.057	0.007
Agricultural dispersed	0.07 %	0.07	0.029	0.002
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.4451 Mi.	0.50	0.086	0.043
Roads	0.89 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.24761 / 4 %	0.25	0.057	0.014
Boat ramps	1 #	1.00	0.029	0.029
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.75

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	10 #	0.75	0.143	0.107
Riparian Species	4 #	0.75	0.143	0.107
Upland Species	11 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.09 %	0.09	0.143	0.012
Potential migration zones	0.99626 %	0.16	0.095	0.095
Riparian vegetation	0.16 %	0.16	0.143	0.023
Aggregate Resource Index				0.52

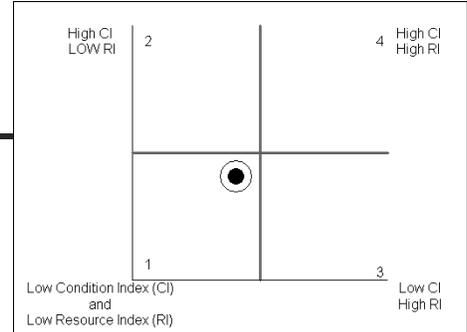
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 150
 Analysis Unit Code S OKA 05
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.1961959-119.688518
 Acres of SMP land 69.102790
 length water feet 11682.7386219

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.08 %	0.08	0.057	0.004
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.08 %	0.08	0.086	0.007
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.0413 Mi.	0.25	0.086	0.021
Roads	0.10 Mi.	0.25	0.086	0.021
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.01258/98 %	0.01	0.057	0.001
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.94

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	9 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	11 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.99479 %		0.095	0.095
Riparian vegetation	0.04 %	0.04	0.143	0.006
Aggregate Resource Index				0.46

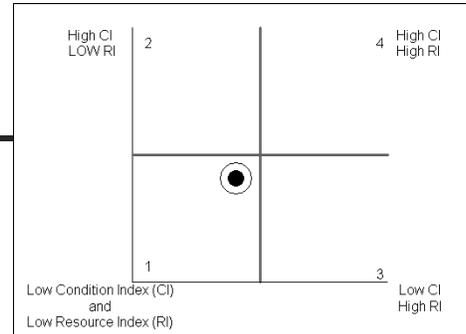
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 151
 Analysis Unit Code S OKA 06
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.2098139-119.712896
 Acres of SMP land 65.966798
 length water feet 10491.7526326

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	zero	#	0	0.086	0.000
Levees	zero	Mi.	0	0.086	0.000
Permitted facilities	0	#	0.00	0.029	0.000
Agricultural- intensive	0.09	%	0.09	0.057	0.005
Agricultural dispersed	0.04	%	0.04	0.029	0.001
Water quality	0.00	%	0.0	0.086	0.000
Residential development	0.07	%	0.07	0.086	0.006
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	1	#	0.25	0.029	0.007
Overwater structures	0	#	0.00	0.029	0.000
Rail	0.0379	Mi.	0.25	0.086	0.021
Roads	0.00	Mi.	0.00	0.086	0.000
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	0.03540 18	%	0.04	0.057	0.002
Boat ramps	1	#	1.00	0.029	0.029
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.93

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	9	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	11	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.01	%	0.01	0.143	0.002
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.26	%	0.26	0.143	0.038
Aggregate Resource Index					0.49

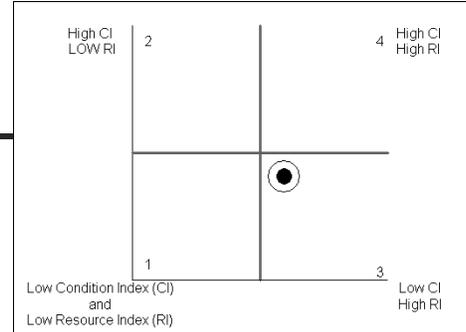
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 152
 Analysis Unit Code S OKA 07
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.2287318-119.7319
 Acres of SMP land 107.44443
 length water feet 17118.7893388

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	2 #	0.25	0.029	0.007
Agricultural- intensive	0.21 %	0.21	0.057	0.012
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.02 %	0.02	0.086	0.001
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.49 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.09753 98 %	0.10	0.057	0.006
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.89

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	9 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	11 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.04 %	0.04	0.143	0.005
Potential migration zones	.90157 %		0.095	0.086
Riparian vegetation	0.22 %	0.22	0.143	0.031
Aggregate Resource Index				0.62

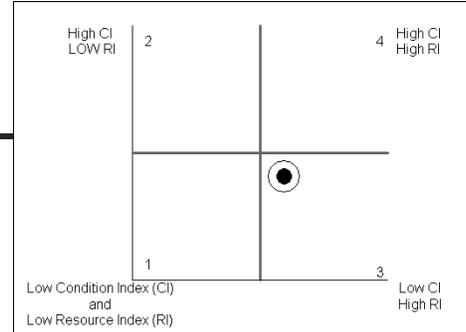
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 153
 Analysis Unit Code S OKA 08
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.2670572 -119.726616
 Acres of SMP land 15.38416
 length water feet 2602.8573025

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.31 %	0.31	0.057	0.018
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.14 %	0.14	0.086	0.012
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.00 Mi.	0.00	0.086	0.000
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.03677 / 16 %	0.04	0.057	0.002
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.88

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	11 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	15 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.07 %	0.07	0.143	0.011
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.30 %	0.30	0.143	0.043
Aggregate Resource Index				0.65

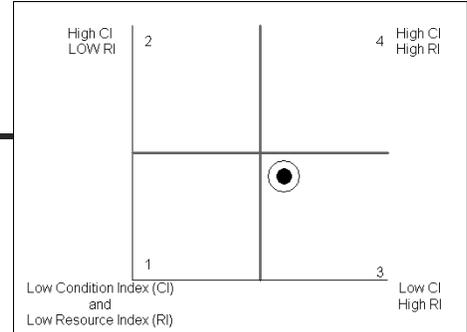
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 154
 Analysis Unit Code S OKA 09
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.2764946-119.716248
 Acres of SMP land 114.96109
 length water feet 7318.52802266

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	5 #	0.25	0.029	0.007
Agricultural- intensive	0.40 %	0.40	0.057	0.023
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.16 %	0.16	0.086	0.014
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.53 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.02549 / 46 %	0.03	0.057	0.001
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	10 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	15 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.01 %	0.01	0.143	0.002
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.28 %	0.28	0.143	0.040
Aggregate Resource Index				0.64

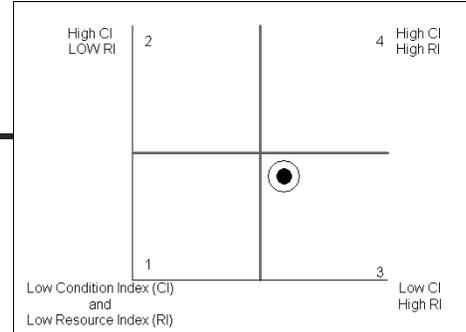
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 155
 Analysis Unit Code S OKA 10
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.2912533-119.681464
 Acres of SMP land 142.23245
 length water feet 13193.5717768

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	one Mi.	1	0.086	0.086
Permitted facilities	3 #	0.25	0.029	0.007
Agricultural- intensive	0.55 %	0.55	0.057	0.032
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.20 %	0.20	0.086	0.017
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.86 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.77

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	15 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.03 %	0.03	0.143	0.004
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.40 %	0.40	0.143	0.058
Aggregate Resource Index				0.66

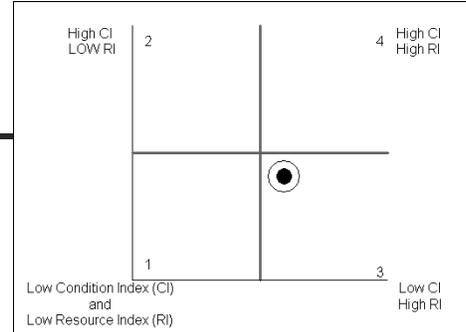
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 156
 Analysis Unit Code S OKA 11
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3078720-119.633424
 Acres of SMP land 124.78878
 length water feet 14562.2216299

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	zero	#	0	0.086	0.000
Levees	zero	Mi.	0	0.086	0.000
Permitted facilities	3	#	0.25	0.029	0.007
Agricultural- intensive	0.55	%	0.55	0.057	0.031
Agricultural dispersed	0.08	%	0.08	0.029	0.002
Water quality	0.00	%	0.0	0.086	0.000
Residential development	0.32	%	0.32	0.086	0.028
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	0	#	0.00	0.029	0.000
Overwater structures	0	#	0.00	0.029	0.000
Rail	0	Mi.	0.00	0.086	0.000
Roads	0.15	Mi.	0.25	0.086	0.021
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	0	%	0.00	0.057	0.000
Boat ramps	0	#	0.00	0.029	0.000
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.91

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	12	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.04	%	0.04	0.143	0.006
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.28	%	0.28	0.143	0.040
Aggregate Resource Index					0.64

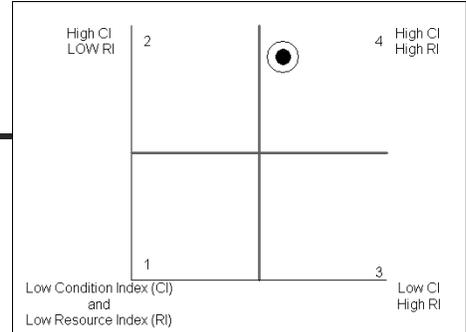
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 157
 Analysis Unit Code S OKA 12
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3219987 -119.607278
 Acres of SMP land 20.637584
 length water feet 2882.34682906

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.87 %	0.87	0.057	0.050
Agricultural dispersed	0.08 %	0.08	0.029	0.002
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.04 %	0.04	0.086	0.004
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.05 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.90

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.01 %	0.01	0.143	0.001
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.39 %	0.39	0.143	0.055
Aggregate Resource Index				0.64

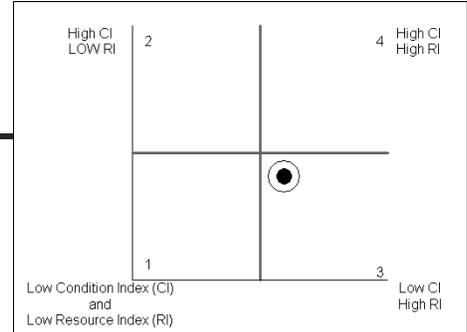
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 158
 Analysis Unit Code S OKA 13
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3273784-119.606419
 Acres of SMP land 7.0910735
 length water feet 1213.1973135

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.05 %	0.05	0.057	0.003
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.53 %	0.53	0.086	0.045
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.32 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	10 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.32 %	0.32	0.143	0.045
Aggregate Resource Index				0.63

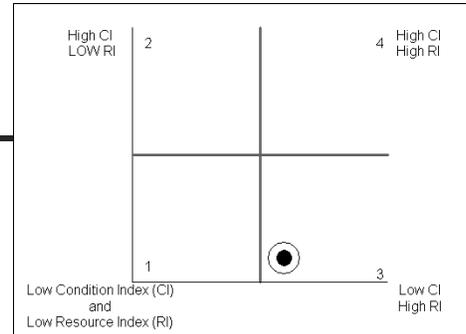
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 159
 Analysis Unit Code S OKA 14
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3524333-119.593732
 Acres of SMP land 199.8841
 length water feet 14813.4367737

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	one #	1	0.086	0.086
Levees	two Mi.	1	0.086	0.086
Permitted facilities	12 #	0.75	0.029	0.021
Agricultural- intensive	0.24 %	0.24	0.057	0.014
Agricultural dispersed	0.02 %	0.02	0.029	0.001
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.25 %	0.25	0.086	0.022
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	1.84 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	1 #	1.00	0.029	0.029
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.59

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.08 %	0.08	0.143	0.012
Potential migration zones	.99848 %		0.095	0.095
Riparian vegetation	0.35 %	0.35	0.143	0.051
Aggregate Resource Index				0.65

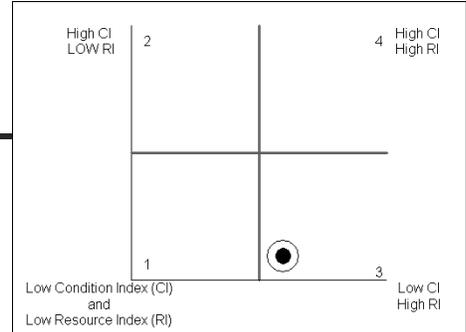
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 160
 Analysis Unit Code S OKA 15
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3714592-119.568842
 Acres of SMP land 88.091371
 length water feet 8777.02674096

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	two	#	1	0.086	0.086
Levees	two	Mi.	1	0.086	0.086
Permitted facilities	21	#	0.75	0.029	0.021
Agricultural- intensive	0.00	%	0.00	0.057	0.000
Agricultural dispersed	0.00	%	0.00	0.029	0.000
Water quality	0.50	%	0.5	0.086	0.043
Residential development	0.29	%	0.29	0.086	0.025
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	1	#	0.25	0.029	0.007
Overwater structures	0	#	0.00	0.029	0.000
Rail	0	Mi.	0.00	0.086	0.000
Roads	2.59	Mi.	0.75	0.086	0.064
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	0	%	0.00	0.057	0.000
Boat ramps	0	#	0.00	0.029	0.000
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.67

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.99994	%		0.095	0.095
Riparian vegetation	0.03	%	0.03	0.143	0.005
Aggregate Resource Index					0.59

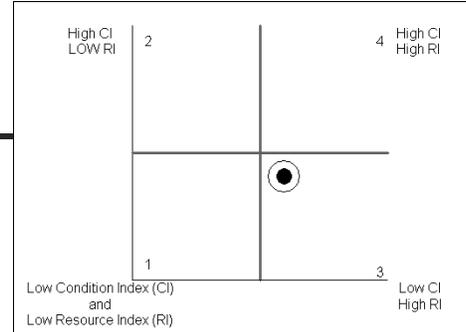
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 161
 Analysis Unit Code S OKA 16
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3821172-119.553541
 Acres of SMP land 110.38822
 length water feet 5123.62965565

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	8 #	0.50	0.029	0.014
Agricultural- intensive	0.19 %	0.19	0.057	0.011
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.44 %	0.44	0.086	0.037
Industrial development-heavy	0.01 %	0.01	0.086	0.001
Industrial development-light	0.03 %	0.03	0.057	0.002
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	1.68 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.00039 / 0405 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.83

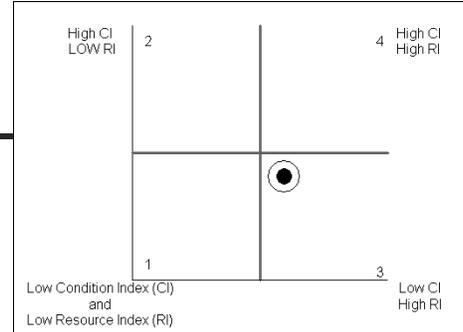
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.01 %	0.01	0.143	0.002
Aggregate Resource Index				0.59

Unique ID 162
 Analysis Unit Code S OKA 17
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.3932240-119.536042
 Acres of SMP land 82.957799
 length water feet 7987.63540715

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	two Mi.	1	0.086	0.086
Permitted facilities	5 #	0.25	0.029	0.007
Agricultural- intensive	0.45 %	0.45	0.057	0.025
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.13 %	0.13	0.086	0.011
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.47 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.08611 / 25 %	0.09	0.057	0.005
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.78

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.07 %	0.07	0.143	0.009
Potential migration zones	0.97389 %		0.095	0.093
Riparian vegetation	0.23 %	0.23	0.143	0.033
Aggregate Resource Index				0.62

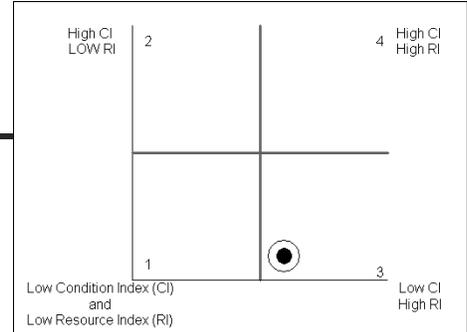
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 163
 Analysis Unit Code S OKA 18
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.4130883-119.516401
 Acres of SMP land 85.939533
 length water feet 11664.862492

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	three Mi.	1	0.086	0.086
Permitted facilities	31 #	1.00	0.029	0.029
Agricultural- intensive	0.00 %	0.00	0.057	0.000
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.24 %	0.24	0.086	0.021
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	2 #	0.50	0.029	0.014
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.35 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.22369 / 3 %	0.22	0.057	0.013
Boat ramps	1 #	1.00	0.029	0.029
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.72

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.34 %	0.34	0.143	0.049
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.41 %	0.41	0.143	0.059
Aggregate Resource Index				0.69

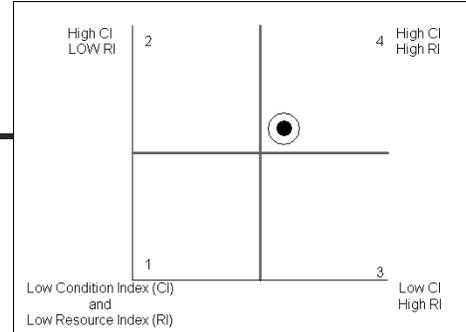
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 164
 Analysis Unit Code S OKA 19
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.4053455-119.483240
 Acres of SMP land 144.90564
 length water feet 15264.2145259

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	2 #	0.25	0.029	0.007
Agricultural- intensive	0.65 %	0.65	0.057	0.037
Agricultural dispersed	0.04 %	0.04	0.029	0.001
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.15 %	0.15	0.086	0.013
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.62 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.04595 / 24 %	0.05	0.057	0.003
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.96056 %		0.095	0.091
Riparian vegetation	0.47 %	0.47	0.143	0.067
Aggregate Resource Index				0.65

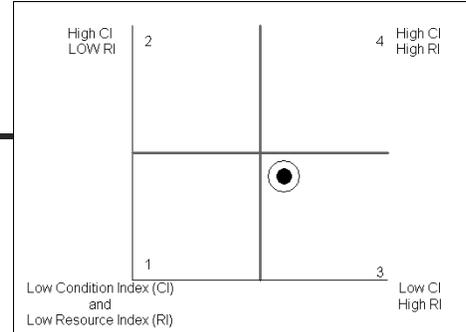
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 165
 Analysis Unit Code S OKA 20
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.4350915-119.467697
 Acres of SMP land 25.875544
 length water feet 5091.93204654

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	1 #	0.25	0.029	0.007
Agricultural- intensive	0.75 %	0.75	0.057	0.043
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.08 %	0.08	0.086	0.007
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.59 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.21685 / 2 %	0.22	0.057	0.012
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.82

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	10 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	0.866 %		0.095	0.082
Riparian vegetation	0.45 %	0.45	0.143	0.064
Aggregate Resource Index				0.63

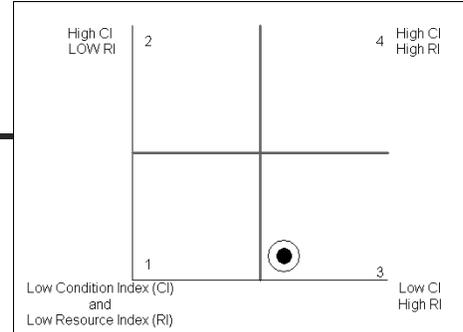
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 166
 Analysis Unit Code S OKA 21
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.4919064-119.486468
 Acres of SMP land 298.78121
 length water feet 24516.6162707

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	two Mi.	1	0.086	0.086
Permitted facilities	5 #	0.25	0.029	0.007
Agricultural- intensive	0.57 %	0.57	0.057	0.033
Agricultural dispersed	0.29 %	0.29	0.029	0.008
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.07 %	0.07	0.086	0.006
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	1.0262 Mi.	0.25	0.086	0.021
Roads	1.27 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.06598 28 %	0.07	0.057	0.004
Boat ramps	1 #	1.00	0.029	0.029
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.72

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	10 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.04 %	0.04	0.143	0.006
Potential migration zones	.89181 %		0.095	0.085
Riparian vegetation	0.67 %	0.67	0.143	0.096
Aggregate Resource Index				0.68

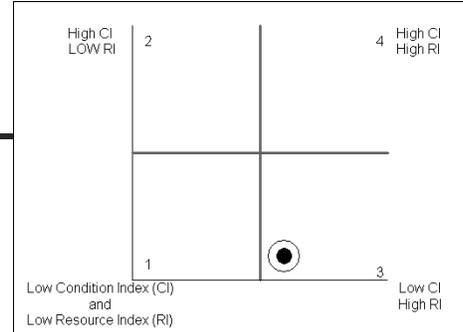
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 167
 Analysis Unit Code S OKA 22
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.5100050-119.508514
 Acres of SMP land 233.92768
 length water feet 5792.92408256

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	two Mi.	1	0.086	0.086
Permitted facilities	3 #	0.25	0.029	0.007
Agricultural- intensive	0.72 %	0.72	0.057	0.041
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.12 %	0.12	0.086	0.010
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	1.88 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.00146067 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.72

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	10 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.08 %	0.08	0.143	0.011
Potential migration zones	.94142 %	0.50	0.095	0.090
Riparian vegetation	0.50 %	0.50	0.143	0.072
Aggregate Resource Index				0.66

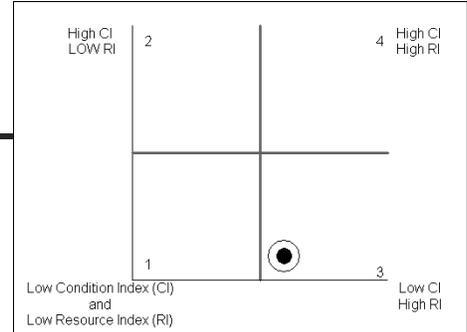
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 168
 Analysis Unit Code S OKA 23
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.5311341 -119.496557
 Acres of SMP land 356.04051
 length water feet 18007.7956048

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	one Mi.	1	0.086	0.086
Permitted facilities	2 #	0.25	0.029	0.007
Agricultural- intensive	0.76 %	0.76	0.057	0.043
Agricultural dispersed	0.15 %	0.15	0.029	0.004
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.02 %	0.02	0.086	0.002
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	2.9165 Mi.	0.75	0.086	0.064
Roads	1.92 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.04671 23 %	0.05	0.057	0.003
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.70

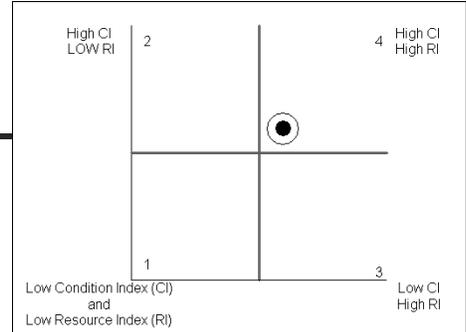
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.01 %	0.01	0.143	0.002
Potential migration zones	88931 %		0.095	0.085
Riparian vegetation	0.33 %	0.33	0.143	0.048
Aggregate Resource Index				0.62

Unique ID 169
 Analysis Unit Code S OKA 24
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.5630416-119.484557
 Acres of SMP land 355.01515
 length water feet 19905.9043061

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	3 #	0.25	0.029	0.007
Agricultural- intensive	0.61 %	0.61	0.057	0.035
Agricultural dispersed	0.39 %	0.39	0.029	0.011
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	1.5416 Mi.	0.50	0.086	0.043
Roads	0.56 Mi.	0.25	0.086	0.021
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.180659 %	0.18	0.057	0.010
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.87

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	10 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	11 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.08 %	0.08	0.143	0.011
Potential migration zones	.65866 %	0.08	0.095	0.063
Riparian vegetation	0.37 %	0.37	0.143	0.053
Aggregate Resource Index				0.63

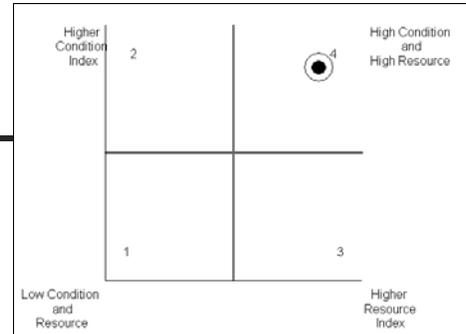
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 170
 Analysis Unit Code S OKA 25
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.6136802-119.471545
 Acres of SMP land 217.20843
 length water feet 10296.8815271

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.47 %	0.47	0.057	0.027
Agricultural dispersed	0.53 %	0.53	0.029	0.015
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	1.2783 Mi.	0.50	0.086	0.043
Roads	0.42 Mi.	0.25	0.086	0.021
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.193314 %	0.19	0.057	0.011
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.88

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	10 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.27 %	0.27	0.143	0.038
Potential migration zones	0.80212 %		0.095	0.076
Riparian vegetation	0.83 %	0.83	0.143	0.118
Aggregate Resource Index				0.72

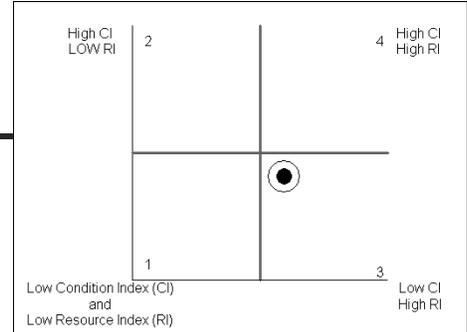
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 171
 Analysis Unit Code S OKA 26
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.6439526-119.463871
 Acres of SMP land 124.33615
 length water feet 8241.265899

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	2 #	0.25	0.029	0.007
Agricultural- intensive	0.89 %	0.89	0.057	0.051
Agricultural dispersed	0.02 %	0.02	0.029	0.001
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.03 %	0.03	0.086	0.003
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.9192 Mi.	0.50	0.086	0.043
Roads	1.45 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.08088 / 49 %	0.08	0.057	0.005
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	11 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	0.72524 %	0.51	0.095	0.069
Riparian vegetation	0.51 %	0.51	0.143	0.073
Aggregate Resource Index				0.64

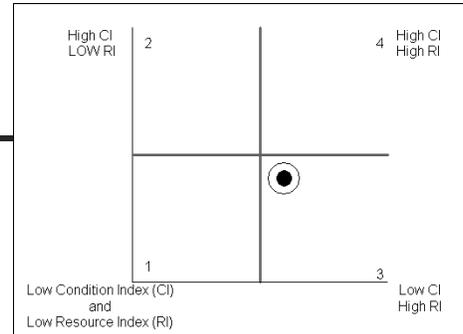
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 172
 Analysis Unit Code S OKA 27
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.6496409-119.471097
 Acres of SMP land 83.824297
 length water feet 4622.79879235

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	2 #	0.25	0.029	0.007
Agricultural- intensive	0.82 %	0.82	0.057	0.047
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.03 %	0.03	0.086	0.002
Industrial development-heavy	0.01 %	0.01	0.086	0.001
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.4669 Mi.	0.50	0.086	0.043
Roads	0.26 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.81

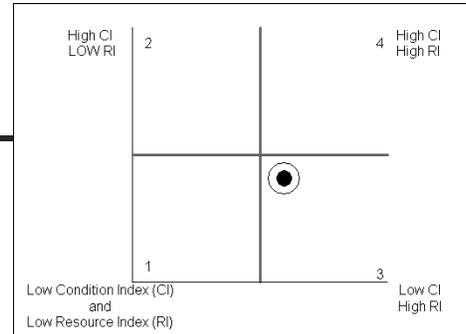
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	10 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.57765 %		0.095	0.055
Riparian vegetation	0.76 %	0.76	0.143	0.109
Aggregate Resource Index				0.65

Unique ID 173
 Analysis Unit Code S OKA 28
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.6615511 -119.472588
 Acres of SMP land 38.400055
 length water feet 1623.79928296

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.51 %	0.51	0.057	0.029
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.48 %	0.48	0.086	0.041
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.1723 Mi.	0.50	0.086	0.043
Roads	0.31 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	3 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.07 %	0.07	0.143	0.009
Potential migration zones	.97613 %		0.095	0.093
Riparian vegetation	0.44 %	0.44	0.143	0.063
Aggregate Resource Index				0.64

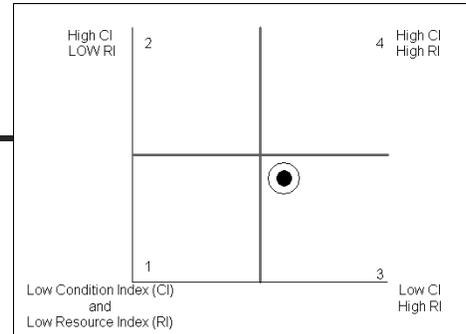
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 174
 Analysis Unit Code S OKA 29
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.6795181 -119.466923
 Acres of SMP land 169.33067
 length water feet 9148.71093023

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	5 #	0.25	0.029	0.007
Agricultural- intensive	0.41 %	0.41	0.057	0.023
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.34 %	0.34	0.086	0.029
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.5844 Mi.	0.25	0.086	0.021
Roads	0.94 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.02637 75 %	0.03	0.057	0.002
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	3 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.34 %	0.34	0.143	0.049
Potential migration zones	83876 %		0.095	0.080
Riparian vegetation	0.58 %	0.58	0.143	0.084
Aggregate Resource Index				0.69

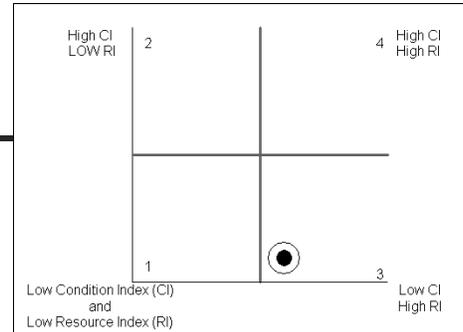
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 175
 Analysis Unit Code S OKA 30
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.6927220-119.453877
 Acres of SMP land 177.23898
 length water feet 9451.59780156

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	four #	1	0.086	0.086
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	8 #	0.50	0.029	0.014
Agricultural- intensive	0.30 %	0.30	0.057	0.017
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.33 %	0.33	0.086	0.028
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0.7477 Mi.	0.50	0.086	0.043
Roads	2.02 Mi.	0.75	0.086	0.064
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.05959 / 25 %	0.06	0.057	0.003
Boat ramps	2 #	1.00	0.029	0.029
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.67

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	6 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.18 %	0.18	0.143	0.026
Potential migration zones	.90064 %		0.095	0.086
Riparian vegetation	0.26 %	0.26	0.143	0.037
Aggregate Resource Index				0.64

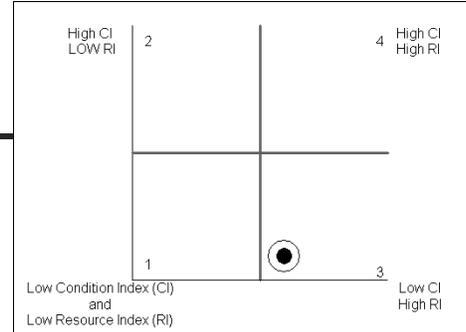
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 176
 Analysis Unit Code S OKA 31
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.7104815-119.438671
 Acres of SMP land 71.667381
 length water feet 3641.89193469

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	three	#	1	0.086	0.086
Levees	zero	Mi.	0	0.086	0.000
Permitted facilities	16	#	0.75	0.029	0.021
Agricultural- intensive	0.12	%	0.12	0.057	0.007
Agricultural dispersed	0.00	%	0.00	0.029	0.000
Water quality	1.00	%	1.0	0.086	0.086
Residential development	0.35	%	0.35	0.086	0.030
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	1	#	0.25	0.029	0.007
Overwater structures	0	#	0.00	0.029	0.000
Rail	0.2731	Mi.	0.25	0.086	0.021
Roads	2.40	Mi.	0.75	0.086	0.064
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	0.164876	%	0.16	0.057	0.009
Boat ramps	0	#	0.00	0.029	0.000
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.67

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	3	#	0.25	0.048	0.012
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	82100	%		0.095	0.078
Riparian vegetation	0.21	%	0.21	0.143	0.030
Aggregate Resource Index					0.58

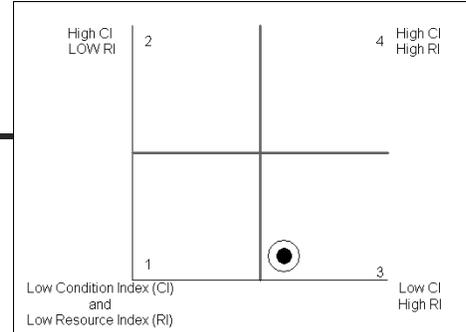
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 177
 Analysis Unit Code S OKA 32
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.7374417 -119.423767
 Acres of SMP land 485.78289
 length water feet 19613.9649294

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	three #	1	0.086	0.086
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	10 #	0.75	0.029	0.021
Agricultural- intensive	0.73 %	0.73	0.057	0.042
Agricultural dispersed	0.06 %	0.06	0.029	0.002
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.11 %	0.11	0.086	0.009
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	2.0932 Mi.	0.50	0.086	0.043
Roads	3.66 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.01789 / 22 %	0.02	0.057	0.001
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.71

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	3 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.08 %	0.08	0.143	0.011
Potential migration zones	.97574 %		0.095	0.093
Riparian vegetation	0.30 %	0.30	0.143	0.042
Aggregate Resource Index				0.62

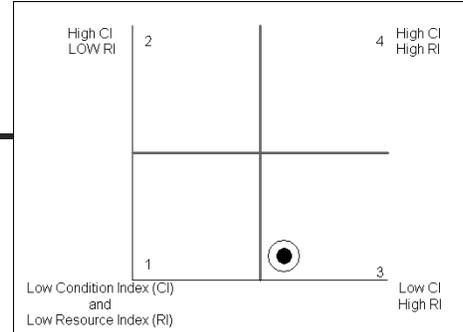
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 178
 Analysis Unit Code S OKA 33
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.7673525-119.410732
 Acres of SMP land 252.41086
 length water feet 6930.21534092

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	two	#	1	0.086	0.086
Levees	zero	Mi.	0	0.086	0.000
Permitted facilities	3	#	0.25	0.029	0.007
Agricultural- intensive	0.57	%	0.57	0.057	0.032
Agricultural dispersed	0.14	%	0.14	0.029	0.004
Water quality	0.50	%	0.5	0.086	0.043
Residential development	0.23	%	0.23	0.086	0.020
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	0	#	0.00	0.029	0.000
Overwater structures	0	#	0.00	0.029	0.000
Rail	0.6531	Mi.	0.25	0.086	0.021
Roads	1.46	Mi.	0.50	0.086	0.043
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	0	%	0.00	0.057	0.000
Boat ramps	0	#	0.00	0.029	0.000
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.74

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	6	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.23	%	0.23	0.143	0.033
Potential migration zones	.99903	%		0.095	0.095
Riparian vegetation	0.29	%	0.29	0.143	0.042
Aggregate Resource Index					0.66

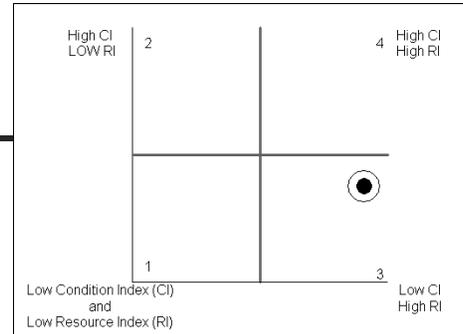
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 179
 Analysis Unit Code S OKA 34
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.7755876-119.411757
 Acres of SMP land 1050.774
 length water feet 28993.2034979

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	five #	1	0.086	0.086
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	3 #	0.25	0.029	0.007
Agricultural- intensive	0.70 %	0.70	0.057	0.040
Agricultural dispersed	0.18 %	0.18	0.029	0.005
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.00 %	0.00	0.086	0.000
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	1.7796 Mi.	0.25	0.086	0.021
Roads	1.58 Mi.	0.25	0.086	0.021
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.01494 73 %	0.01	0.057	0.001
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.77

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	4 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.70 %	0.70	0.143	0.099
Potential migration zones	.99078 %		0.095	0.094
Riparian vegetation	0.42 %	0.42	0.143	0.060
Aggregate Resource Index				0.73

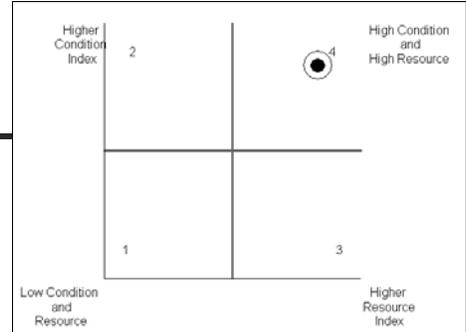
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 180
 Analysis Unit Code S OKA 35
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.8446325-119.419832
 Acres of SMP land 249.47357
 length water feet 5184.44420871

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	0 #	0.00	0.029	0.000
Agricultural- intensive	0.96 %	0.96	0.057	0.055
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	0.00 %	0.0	0.086	0.000
Residential development	0.02 %	0.02	0.086	0.001
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.53 Mi.	0.25	0.086	0.021
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.00013 / 3344 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.92

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	4 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.73 %	0.73	0.143	0.105
Potential migration zones	.99563 %		0.095	0.095
Riparian vegetation	0.67 %	0.67	0.143	0.095
Aggregate Resource Index				0.77

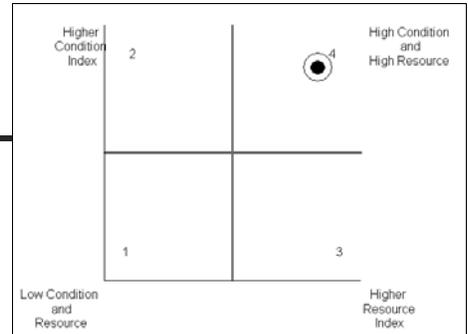
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 181
 Analysis Unit Code S OKA 36
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.8583409-119.4194
 Acres of SMP land 499.07206
 length water feet 10136.1873673

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	zero	#	0	0.086	0.000
Levees	zero	Mi.	0	0.086	0.000
Permitted facilities	1	#	0.25	0.029	0.007
Agricultural- intensive	0.78	%	0.78	0.057	0.045
Agricultural dispersed	0.12	%	0.12	0.029	0.003
Water quality	0.00	%	0.0	0.086	0.000
Residential development	0.04	%	0.04	0.086	0.003
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	0	#	0.00	0.029	0.000
Overwater structures	0	#	0.00	0.029	0.000
Rail	1.1587	Mi.	0.25	0.086	0.021
Roads	0.71	Mi.	0.25	0.086	0.021
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	0.00158 303	%	0.00	0.057	0.000
Boat ramps	0	#	0.00	0.029	0.000
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	4	#	0.25	0.048	0.012
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.86	%	0.86	0.143	0.123
Potential migration zones	.99630	%		0.095	0.095
Riparian vegetation	0.80	%	0.80	0.143	0.114
Aggregate Resource Index					0.81

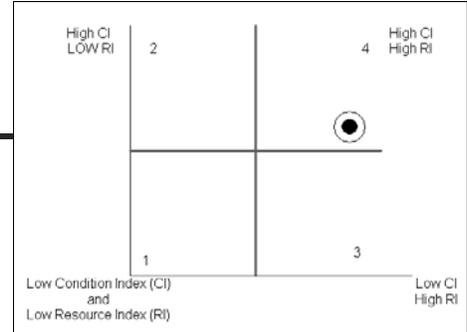
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 182
 Analysis Unit Code S OKA 37
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.8748644-119.424631
 Acres of SMP land 440.32426
 length water feet 14942.7804087

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	3 #	0.25	0.029	0.007
Agricultural- intensive	0.83 %	0.83	0.057	0.047
Agricultural dispersed	0.05 %	0.05	0.029	0.002
Water quality	0.50 %	0.5	0.086	0.043
Residential development	0.05 %	0.05	0.086	0.004
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	1.7269 Mi.	0.25	0.086	0.021
Roads	0.36 Mi.	0.25	0.086	0.021
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.02445 / 35 %	0.02	0.057	0.001
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	4 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.83 %	0.83	0.143	0.118
Potential migration zones	.98006 %		0.095	0.093
Riparian vegetation	0.34 %	0.34	0.143	0.048
Aggregate Resource Index				0.74

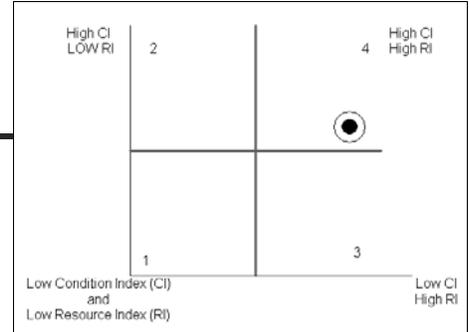
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 183
 Analysis Unit Code S OKA 38
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.8924568 -119.434961
 Acres of SMP land 216.54579
 length water feet 7555.918235

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	zero Mi.	0	0.086	0.000
Permitted facilities	1 #	0.25	0.029	0.007
Agricultural- intensive	0.70 %	0.70	0.057	0.040
Agricultural dispersed	0.03 %	0.03	0.029	0.001
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.02 %	0.02	0.086	0.002
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	0 #	0.00	0.029	0.000
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.00 Mi.	0.00	0.086	0.000
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0 %	0.00	0.057	0.000
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	4 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.77 %	0.77	0.143	0.111
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	0.60 %	0.60	0.143	0.085
Aggregate Resource Index				0.77

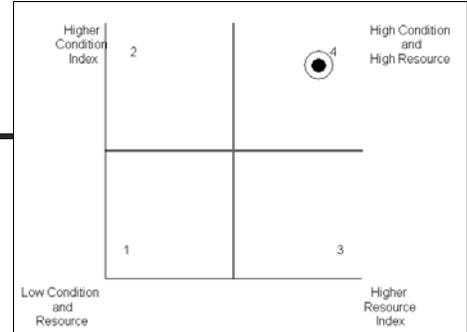
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 184
 Analysis Unit Code S OKA 39
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.9071415-119.431372
 Acres of SMP land 519.65393
 length water feet 23139.6275564

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	zero	#	0	0.086	0.000
Levees	zero	Mi.	0	0.086	0.000
Permitted facilities	0	#	0.00	0.029	0.000
Agricultural- intensive	0.36	%	0.36	0.057	0.020
Agricultural dispersed	0.05	%	0.05	0.029	0.001
Water quality	0.50	%	0.5	0.086	0.043
Residential development	0.04	%	0.04	0.086	0.003
Industrial development-heavy	0.00	%	0.00	0.086	0.000
Industrial development-light	0.00	%	0.00	0.057	0.000
Bridges	0	#	0.00	0.029	0.000
Overwater structures	0	#	0.00	0.029	0.000
Rail	0.7255	Mi.	0.25	0.086	0.021
Roads	0.28	Mi.	0.25	0.086	0.021
Culverts	0	#	0.00	0.057	0.000
Geologically hazardous areas	3.27134e-006	%	0.00	0.057	0.000
Boat ramps	0	#	0.00	0.029	0.000
Mines	0	#	0	0.029	0.000
Aggregate Condition Index					0.89

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	4	#	0.25	0.048	0.012
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.67	%	0.67	0.143	0.095
Potential migration zones	.99962	%		0.095	0.095
Riparian vegetation	0.77	%	0.77	0.143	0.110
Aggregate Resource Index					0.78

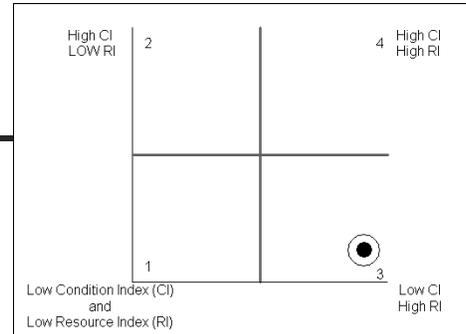
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 185
 Analysis Unit Code S OKA 40
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.9217636-119.424777
 Acres of SMP land 329.57467
 length water feet 7652.43160909

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	two #	1	0.091	0.091
Levees	one Mi.	1	0.091	0.091
Permitted facilities	16 #	0.75	0.030	0.023
Agricultural- intensive	0.50 %	0.50	0.061	0.030
Agricultural dispersed	0.05 %	0.05	0.030	0.001
Water quality	1.00 %	1.0	0.091	0.091
Residential development	0.08 %	0.08	0.091	0.007
Industrial development-heavy	0.19 %	0.19	0.091	0.017
Industrial development-light	0.00 %	0.00	0.061	0.000
Bridges	2 #	0.50	0.030	0.015
Overwater structures	0 #	0.00	0.030	0.000
Rail	0.5307 Mi.	0.25	0.091	0.023
Roads	2.30 Mi.	0.50	0.091	0.045
Culverts	0 #	0.00	0.061	0.000
Geologically hazardous areas	unknown - insufficient	0.00	0.000	0.000
Boat ramps	1 #	1.00	0.030	0.030
Mines	0 #	0	0.030	0.000
Aggregate Condition Index				0.53

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.42 %	0.42	0.143	0.060
Potential migration zones	.99796 %		0.095	0.095
Riparian vegetation	0.50 %	0.50	0.143	0.072
Aggregate Resource Index				0.70

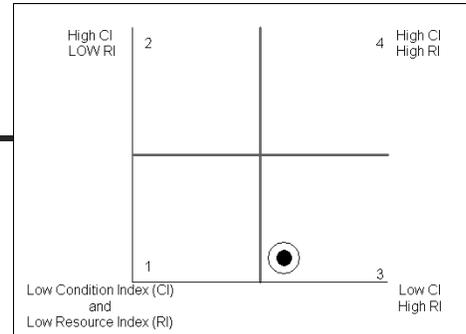
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 186
 Analysis Unit Code S OKA 41
 River / Lake Name OKANOGAN RIVER
 Coordinates Lat, Long 48.9442781 -119.428398
 Acres of SMP land 117.62003
 length water feet 6477.48409621

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	10 #	0.50	0.037	0.019
Agricultural- intensive	0.16 %	0.16	0.074	0.012
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.50 %	0.5	0.111	0.056
Residential development	0.32 %	0.32	0.111	0.036
Industrial development-heavy	0.02 %	0.02	0.111	0.002
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	1 #	0.25	0.037	0.009
Overwater structures	6 #	1.00	0.037	0.037
Rail	0 Mi.	0.00	0.111	0.000
Roads	2.23 Mi.	0.75	0.111	0.083
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.75

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.31 %	0.31	0.143	0.044
Potential migration zones	.98560 %		0.095	0.094
Riparian vegetation	0.21 %	0.21	0.143	0.030
Aggregate Resource Index				0.64

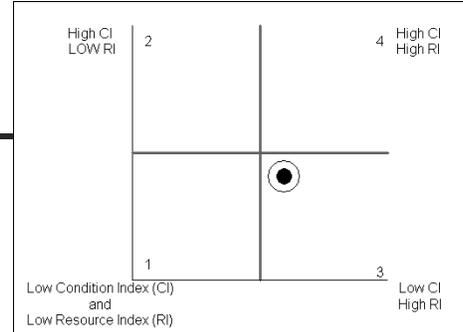
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 187
 Analysis Unit Code S PAL 00
 River / Lake Name PALMER CREEK
 Coordinates Lat, Long 48.9177319-119.656268
 Acres of SMP land 502.94786
 length water feet 9824.49144732

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.50 %	0.50	0.069	0.034
Agricultural dispersed	0.50 %	0.50	0.034	0.017
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.84 Mi.	0.25	0.103	0.026
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.0151701 %	0.02	0.069	0.001
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.80

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	3 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.90 %	0.90	0.143	0.128
Potential migration zones	.99208 %		0.095	0.094
Riparian vegetation	0.82 %	0.82	0.143	0.117
Aggregate Resource Index				0.53

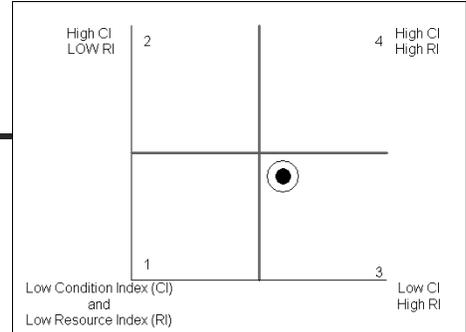
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 188
 Analysis Unit Code S SAL 01
 River / Lake Name SALMON CREEK
 Coordinates Lat, Long 48.3662621 -119.591976
 Acres of SMP land 137.65224
 length water feet 15058.4500354

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	12	#	0.75	0.034	0.026
Agricultural- intensive	0.17	%	0.17	0.069	0.012
Agricultural dispersed	0.08	%	0.08	0.034	0.003
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.26	%	0.26	0.103	0.027
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	2.84	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.18253 8	%	0.18	0.069	0.013
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	2	#	0.25	0.143	0.036
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	.47750	%		0.095	0.045
Riparian vegetation	0.41	%	0.41	0.143	0.058
Aggregate Resource Index					0.52

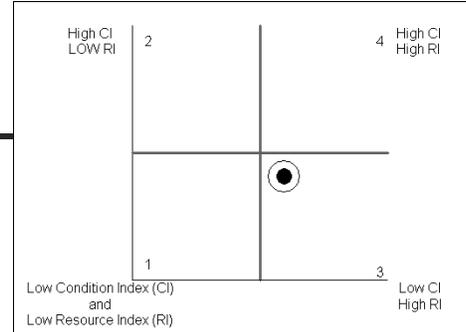
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 189
 Analysis Unit Code S SAL 02
 River / Lake Name SALMON CREEK
 Coordinates Lat, Long 48.4014835-119.614775
 Acres of SMP land 92.780067
 length water feet 13029.7776524

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.67	%	0.67	0.069	0.046
Agricultural dispersed	0.02	%	0.02	0.034	0.001
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.21	%	0.21	0.103	0.022
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.45	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.27994 6	%	0.28	0.069	0.019
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.83

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.03	%	0.03	0.143	0.004
Potential migration zones	.44276	%		0.095	0.042
Riparian vegetation	0.35	%	0.35	0.143	0.050
Aggregate Resource Index					0.55

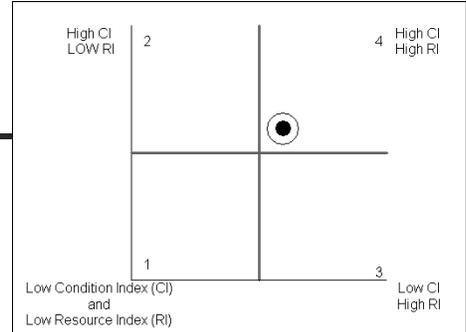
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 190
 Analysis Unit Code S SAL 03
 River / Lake Name SALMON CREEK
 Coordinates Lat, Long 48.4322446-119.649720
 Acres of SMP land 168.48850
 length water feet 18778.7151823

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.60	%	0.60	0.069	0.041
Agricultural dispersed	0.05	%	0.05	0.034	0.002
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.23	%	0.23	0.103	0.024
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.49	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.27165 3	%	0.27	0.069	0.019
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.21	%	0.21	0.143	0.029
Potential migration zones	.36477	%		0.095	0.035
Riparian vegetation	0.86	%	0.86	0.143	0.123
Aggregate Resource Index					0.64

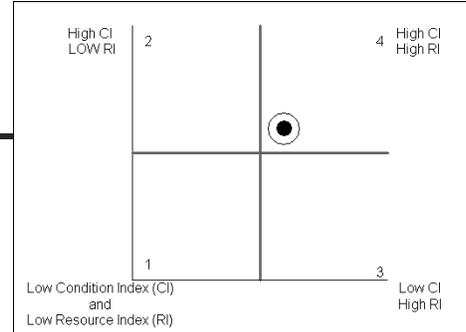
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 191
 Analysis Unit Code S SAL 04
 River / Lake Name SALMON CREEK
 Coordinates Lat, Long 48.457542-119.683817
 Acres of SMP land 85.727747
 length water feet 10489.0525806

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.48 %	0.48	0.069	0.033
Agricultural dispersed	0.35 %	0.35	0.034	0.012
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.04 Mi.	0.75	0.103	0.078
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.39214 / 7 %	0.39	0.069	0.027
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.09 %	0.09	0.143	0.012
Potential migration zones	.23311 %	0.09	0.095	0.022
Riparian vegetation	0.93 %	0.93	0.143	0.133
Aggregate Resource Index				0.62

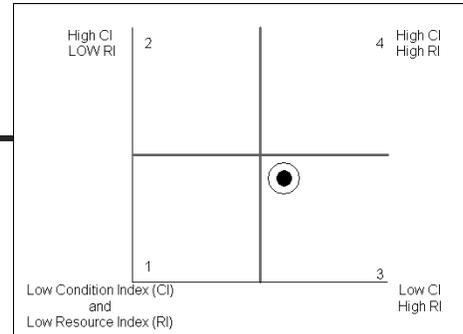
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 192
 Analysis Unit Code S SAL 05
 River / Lake Name SALMON CREEK
 Coordinates Lat, Long 48.4871453-119.709757
 Acres of SMP land 98.137427
 length water feet 15762.0270417

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.80 %	0.80	0.074	0.060
Agricultural dispersed	0.05 %	0.05	0.037	0.002
Water quality	0.50 %	0.5	0.111	0.056
Residential development	0.07 %	0.07	0.111	0.008
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	2 #	0.50	0.037	0.019
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	1.11 Mi.	0.75	0.111	0.083
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.77

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	1 #	0.25	0.143	0.036
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.09 %	0.09	0.143	0.013
Potential migration zones	.37123 %		0.095	0.035
Riparian vegetation	0.86 %	0.86	0.143	0.123
Aggregate Resource Index				0.55

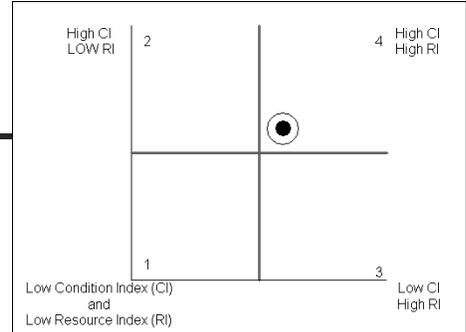
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 193
 Analysis Unit Code S SAL 06
 River / Lake Name SALMON CREEK
 Coordinates Lat, Long 48.5243565-119.737707
 Acres of SMP land 36.020476
 length water feet 15972.3429607

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.19 %	0.19	0.034	0.006
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.20 %	0.20	0.103	0.021
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.13 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.2826 %	0.28	0.069	0.019
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	16 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.07 %	0.07	0.143	0.010
Potential migration zones	.22085 %		0.095	0.021
Riparian vegetation	0.89 %	0.89	0.143	0.127
Aggregate Resource Index				0.62

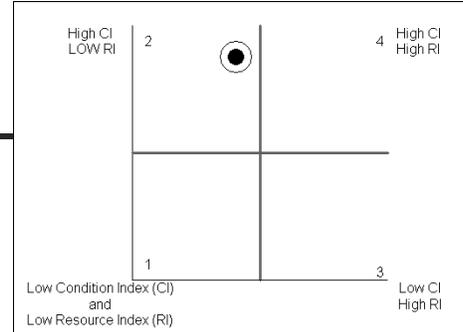
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 195
 Analysis Unit Code S SAN 02
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5241087 -118.920432
 Acres of SMP land 82.958166
 length water feet 6063.87173372

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.42 %	0.42	0.074	0.031
Agricultural dispersed	0.58 %	0.58	0.037	0.021
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.00 Mi.	0.00	0.111	0.000
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.95

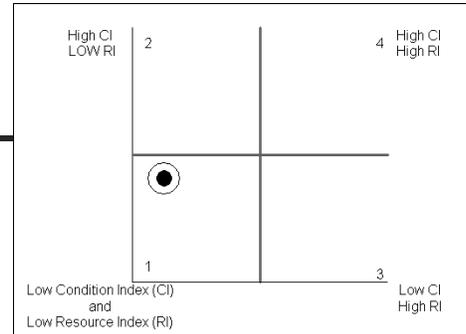
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	9 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.89 %	0.89	0.143	0.127
Potential migration zones	1 %		0.095	0.095
Riparian vegetation	1.00 %	1.00	0.143	0.143
Aggregate Resource Index				0.53

Unique ID 196
 Analysis Unit Code S SAN 03
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5302649-118.932542
 Acres of SMP land 37.045686
 length water feet 4198.07572489

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.78 %	0.78	0.034	0.027
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.69 Mi.	0.75	0.103	0.078
Culverts	1 #	1.00	0.069	0.069
Geologically hazardous areas	0.0590256 %	0.06	0.069	0.004
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.82

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.07 %	0.07	0.143	0.011
Potential migration zones	.37726 %		0.095	0.036
Riparian vegetation	0.62 %	0.62	0.143	0.089
Aggregate Resource Index				0.30

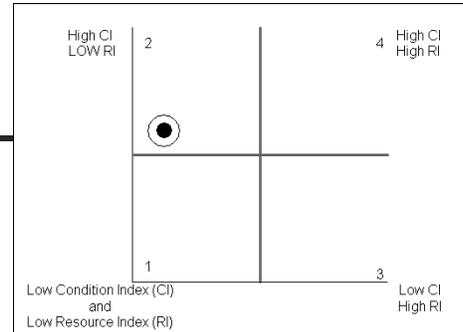
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 198
 Analysis Unit Code S SAN 05
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5399598 -118.951466
 Acres of SMP land 23.863523
 length water feet 2007.19519273

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.96 %	0.96	0.074	0.071
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.30 Mi.	0.75	0.111	0.083
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	1 #	0.25	0.143	0.036
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.40 %	0.40	0.143	0.057
Potential migration zones	.98534 %		0.095	0.094
Riparian vegetation	0.76 %	0.76	0.143	0.109
Aggregate Resource Index				0.34

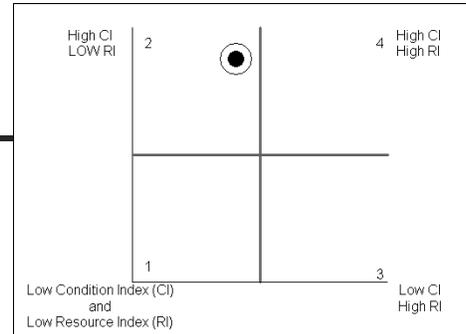
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 199
 Analysis Unit Code S SAN 06
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5410291 -118.965090
 Acres of SMP land 85.905214
 length water feet 6145.09466336

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.05 %	0.05	0.074	0.004
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.21 Mi.	0.50	0.111	0.056
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.94

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	1 #	0.25	0.143	0.036
Upland Species	5 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.77 %	0.77	0.143	0.110
Potential migration zones	0.90181 %	0.95	0.095	0.086
Riparian vegetation	0.95 %	0.95	0.143	0.135
Aggregate Resource Index				0.42

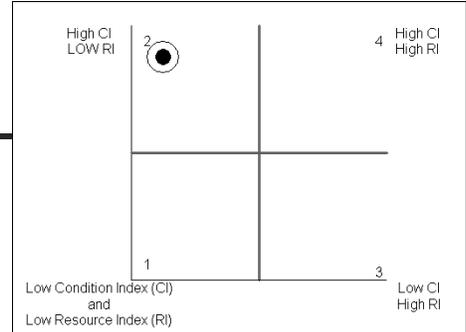
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 201
 Analysis Unit Code S SAN 08
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5535127 -119.007816
 Acres of SMP land 15.905095
 length water feet 1748.40528127

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.00 %	0.00	0.074	0.000
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.91 %	0.91	0.111	0.101
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.00 Mi.	0.00	0.111	0.000
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.90

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	8 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.17 %	0.17	0.143	0.024
Potential migration zones	0.67518 %	0.67518	0.095	0.064
Riparian vegetation	1.00 %	1.00	0.143	0.143
Aggregate Resource Index				0.40

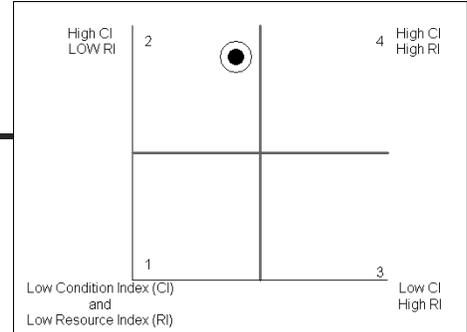
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 202
 Analysis Unit Code S SAN 09
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5533202-119.015781
 Acres of SMP land 27.653081
 length water feet 3017.61364948

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.037	0.000
Agricultural- intensive	0.39	%	0.39	0.074	0.029
Agricultural dispersed	0.00	%	0.00	0.037	0.000
Water quality	0.00	%	0.0	0.111	0.000
Residential development	0.38	%	0.38	0.111	0.042
Industrial development-heavy	0.00	%	0.00	0.111	0.000
Industrial development-light	0.00	%	0.00	0.074	0.000
Bridges	0	#	0.00	0.037	0.000
Overwater structures	0	#	0.00	0.037	0.000
Rail	0	Mi.	0.00	0.111	0.000
Roads	0.00	Mi.	0.00	0.111	0.000
Culverts	0	#	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient	%	0.00	0.000	0.000
Boat ramps	0	#	0.00	0.037	0.000
Mines	0	#	0	0.037	0.000
Aggregate Condition Index					0.93

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.54	%	0.54	0.143	0.076
Potential migration zones	.95067	%		0.095	0.091
Riparian vegetation	1.00	%	1.00	0.143	0.143
Aggregate Resource Index					0.48

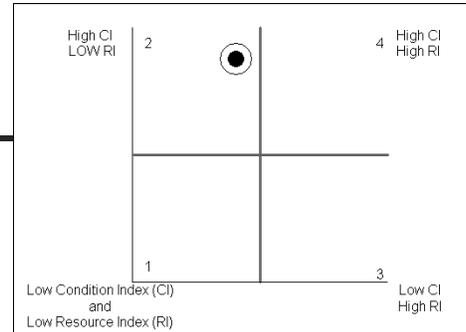
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 204
 Analysis Unit Code S SAN 11
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5668404-119.036054
 Acres of SMP land 59.730142
 length water feet 5492.69246886

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.037	0.000
Agricultural- intensive	0.14	%	0.14	0.074	0.010
Agricultural dispersed	0.00	%	0.00	0.037	0.000
Water quality	0.00	%	0.0	0.111	0.000
Residential development	0.41	%	0.41	0.111	0.046
Industrial development-heavy	0.00	%	0.00	0.111	0.000
Industrial development-light	0.00	%	0.00	0.074	0.000
Bridges	0	#	0.00	0.037	0.000
Overwater structures	0	#	0.00	0.037	0.000
Rail	0	Mi.	0.00	0.111	0.000
Roads	0.00	Mi.	0.00	0.111	0.000
Culverts	0	#	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient	%	0.00	0.000	0.000
Boat ramps	0	#	0.00	0.037	0.000
Mines	0	#	0	0.037	0.000
Aggregate Condition Index					0.94

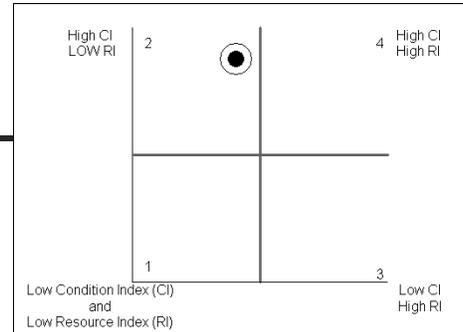
Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	10	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.75	%	0.75	0.143	0.107
Potential migration zones	0.70450	%		0.095	0.067
Riparian vegetation	1.00	%	1.00	0.143	0.143
Aggregate Resource Index					0.48

Unique ID 205
 Analysis Unit Code S SAN 12
 River / Lake Name SANPOIL RIVER
 Coordinates Lat, Long 48.5725492 -119.055769
 Acres of SMP land 105.34697
 length water feet 6657.88836127

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.037	0.000
Agricultural- intensive	0.04	%	0.04	0.074	0.003
Agricultural dispersed	0.00	%	0.00	0.037	0.000
Water quality	0.00	%	0.0	0.111	0.000
Residential development	0.36	%	0.36	0.111	0.039
Industrial development-heavy	0.00	%	0.00	0.111	0.000
Industrial development-light	0.00	%	0.00	0.074	0.000
Bridges	0	#	0.00	0.037	0.000
Overwater structures	0	#	0.00	0.037	0.000
Rail	0	Mi.	0.00	0.111	0.000
Roads	0.12	Mi.	0.25	0.111	0.028
Culverts	1	#	1.00	0.074	0.074
Geologically hazardous areas	unknown - insufficient	%	0.00	0.000	0.000
Boat ramps	0	#	0.00	0.037	0.000
Mines	0	#	0	0.037	0.000
Aggregate Condition Index					0.86

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.143	0.071
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	12	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.92	%	0.92	0.143	0.131
Potential migration zones	.90035	%		0.095	0.086
Riparian vegetation	0.93	%	0.93	0.143	0.133
Aggregate Resource Index					0.53

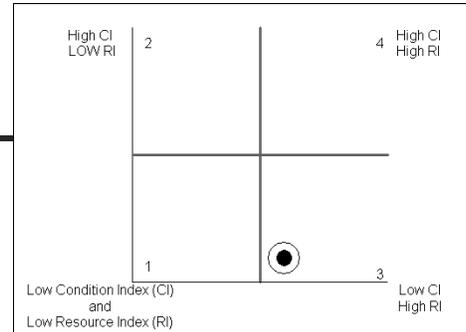
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ENVIRONMENTAL CONSULTANTS

Unique ID 206
 Analysis Unit Code S SIM 01
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9199506-119.436357
 Acres of SMP land 89.838796
 length water feet 4835.37689254

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	three #	1	0.091	0.091
Levees	one Mi.	1	0.091	0.091
Permitted facilities	8 #	0.50	0.030	0.015
Agricultural- intensive	0.63 %	0.63	0.061	0.038
Agricultural dispersed	0.02 %	0.02	0.030	0.001
Water quality	0.50 %	0.5	0.091	0.045
Residential development	0.12 %	0.12	0.091	0.011
Industrial development-heavy	0.00 %	0.00	0.091	0.000
Industrial development-light	0.00 %	0.00	0.061	0.000
Bridges	0 #	0.00	0.030	0.000
Overwater structures	0 #	0.00	0.030	0.000
Rail	0 Mi.	0.00	0.091	0.000
Roads	0.20 Mi.	0.50	0.091	0.045
Culverts	0 #	0.00	0.061	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.030	0.000
Mines	0 #	0	0.030	0.000
Aggregate Condition Index				0.66

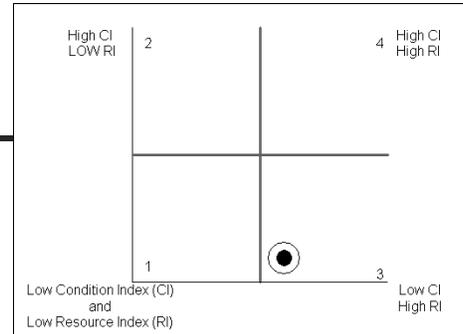
Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	7 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	3 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.29 %	0.29	0.143	0.042
Potential migration zones	.91980 %		0.095	0.088
Riparian vegetation	0.20 %	0.20	0.143	0.028
Aggregate Resource Index				0.63

Unique ID 207
 Analysis Unit Code S SIM 02
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9415806-119.449763
 Acres of SMP land 123.69589
 length water feet 9584.10257348

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	zero #	0	0.086	0.000
Levees	one Mi.	1	0.086	0.086
Permitted facilities	11 #	0.75	0.029	0.021
Agricultural- intensive	0.50 %	0.50	0.057	0.028
Agricultural dispersed	0.00 %	0.00	0.029	0.000
Water quality	1.00 %	1.0	0.086	0.086
Residential development	0.21 %	0.21	0.086	0.018
Industrial development-heavy	0.00 %	0.00	0.086	0.000
Industrial development-light	0.00 %	0.00	0.057	0.000
Bridges	1 #	0.25	0.029	0.007
Overwater structures	0 #	0.00	0.029	0.000
Rail	0 Mi.	0.00	0.086	0.000
Roads	0.91 Mi.	0.50	0.086	0.043
Culverts	0 #	0.00	0.057	0.000
Geologically hazardous areas	0.18244 / 4 %	0.18	0.057	0.010
Boat ramps	0 #	0.00	0.029	0.000
Mines	0 #	0	0.029	0.000
Aggregate Condition Index				0.70

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	7 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	3 #	0.25	0.048	0.012
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.02 %	0.02	0.143	0.003
Potential migration zones	0.78869 %		0.095	0.075
Riparian vegetation	0.28 %	0.28	0.143	0.040
Aggregate Resource Index				0.59

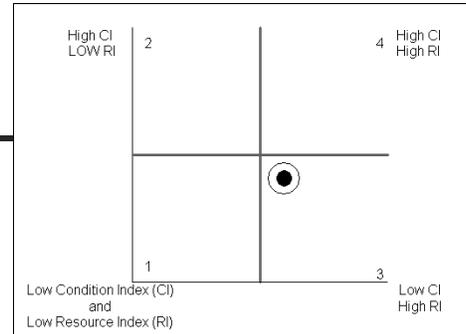
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ENVIRONMENTAL CONSULTANTS

Unique ID 208
 Analysis Unit Code S SIM 03
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9510213-119.480786
 Acres of SMP land 46.187138
 length water feet 12981.3382243

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	4 #	0.25	0.034	0.009
Agricultural- intensive	0.58 %	0.58	0.069	0.040
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.17 %	0.17	0.103	0.017
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	1 #	0.25	0.034	0.009
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.77659 %	0.78	0.069	0.054
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.82

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	7 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	7 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	0.54451 %	0.59	0.095	0.052
Riparian vegetation	0.59 %	0.59	0.143	0.084
Aggregate Resource Index				0.48

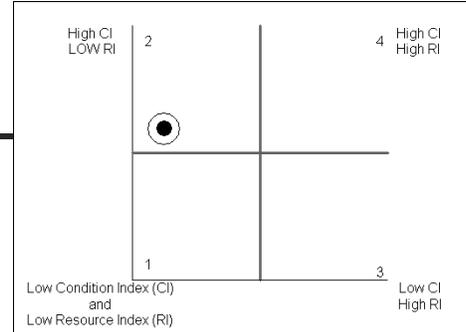
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ENVIRONMENTAL CONSULTANTS

Unique ID 209
 Analysis Unit Code S SIM 04
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9757527 -119.512710
 Acres of SMP land 10.082986
 length water feet 13317.1174722

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.97 %	0.97	0.034	0.034
Water quality	1.00 %	1.0	0.103	0.103
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.00 Mi.	0.00	0.103	0.000
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.29267 1 %	0.29	0.069	0.020
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.83

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	7 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.90697 %		0.095	0.086
Riparian vegetation	0.72 %	0.72	0.143	0.102
Aggregate Resource Index				0.36

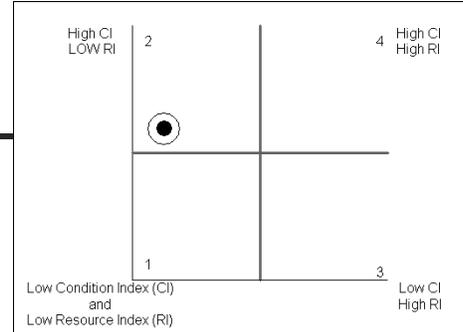
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ENVIRONMENTAL CONSULTANTS

Unique ID 210
 Analysis Unit Code S SIM 05
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9806395 -119.547526
 Acres of SMP land 21.721656
 length water feet 11876.4988852

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.00 %	0.00	0.069	0.000
Agricultural dispersed	0.12 %	0.12	0.034	0.004
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.14 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.25058 1 %	0.25	0.069	0.017
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.88

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	7 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.51959 %		0.095	0.049
Riparian vegetation	0.62 %	0.62	0.143	0.089
Aggregate Resource Index				0.30

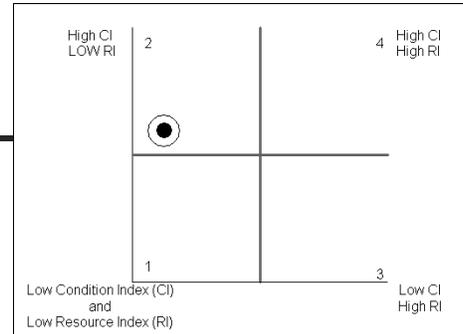
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 211
 Analysis Unit Code S SIM 06
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9876541 -119.598256
 Acres of SMP land 92.314812
 length water feet 14809.631052

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.26 %	0.26	0.069	0.018
Agricultural dispersed	0.31 %	0.31	0.034	0.011
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.12 %	0.12	0.103	0.012
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.37 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.07403 14 %	0.07	0.069	0.005
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.85

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	6 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	7 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.01 %	0.01	0.143	0.002
Potential migration zones	.21048 %		0.095	0.020
Riparian vegetation	0.70 %	0.70	0.143	0.099
Aggregate Resource Index				0.29

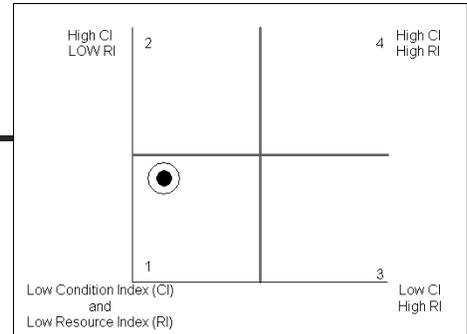
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ENVIRONMENTAL CONSULTANTS

Unique ID 212
 Analysis Unit Code S SIM 07
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9633421 -119.642316
 Acres of SMP land 157.77923
 length water feet 17070.3732793

General Quadrant Results for AU

Quad #: 1

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	3	#	0.25	0.034	0.009
Agricultural- intensive	0.26	%	0.26	0.069	0.018
Agricultural dispersed	0.21	%	0.21	0.034	0.007
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.16	%	0.16	0.103	0.016
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.82	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.15219	%	0.15	0.069	0.010
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.78

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	6	#	0.50	0.143	0.071
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.24	%	0.24	0.143	0.034
Potential migration zones	0.86331	%		0.095	0.082
Riparian vegetation	0.84	%	0.84	0.143	0.120
Aggregate Resource Index					0.40

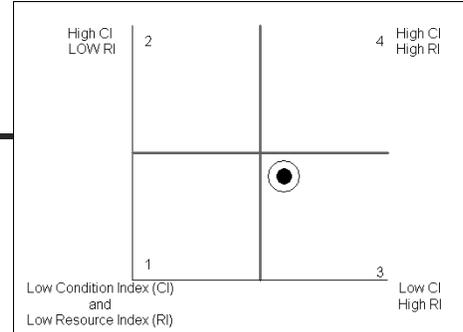
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ENVIRONMENTAL CONSULTANTS

Unique ID 213
 Analysis Unit Code S SIM 08
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9355582-119.672842
 Acres of SMP land 618.08335
 length water feet 21505.2076048

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.72	%	0.72	0.069	0.050
Agricultural dispersed	0.23	%	0.23	0.034	0.008
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.83	Mi.	0.25	0.103	0.026
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.0369003	%	0.04	0.069	0.003
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.85

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	6	#	0.50	0.143	0.071
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.73	%	0.73	0.143	0.104
Potential migration zones	.99673	%		0.095	0.095
Riparian vegetation	0.79	%	0.79	0.143	0.113
Aggregate Resource Index					0.48

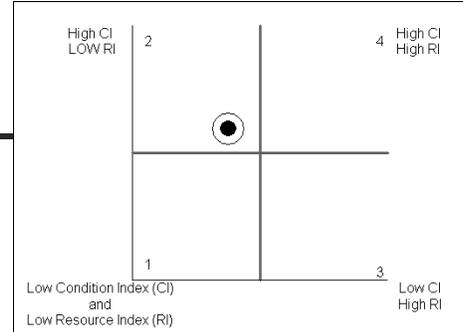
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ENVIRONMENTAL CONSULTANTS

Unique ID 214
 Analysis Unit Code S SIM 09
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9531666-119.699586
 Acres of SMP land 488.86276
 length water feet 7674.8255996

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.87	%	0.87	0.069	0.060
Agricultural dispersed	0.06	%	0.06	0.034	0.002
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.02	%	0.02	0.103	0.002
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.04840 92	%	0.05	0.069	0.003
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.143	0.071
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	7	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.87	%	0.87	0.143	0.125
Potential migration zones	.99766	%		0.095	0.095
Riparian vegetation	0.99	%	0.99	0.143	0.142
Aggregate Resource Index					0.53

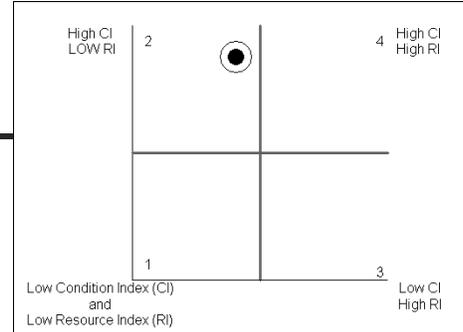
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 215
 Analysis Unit Code S SIM 10
 River / Lake Name SIMILKAMEEN RIVER
 Coordinates Lat, Long 48.9810926-119.713007
 Acres of SMP land 911.31882
 length water feet 20161.822857

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	1	#	0.25	0.034	0.009
Agricultural- intensive	0.45	%	0.45	0.069	0.031
Agricultural dispersed	0.12	%	0.12	0.034	0.004
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.00	%	0.00	0.103	0.000
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.01340 66	%	0.01	0.069	0.001
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	5	#	0.50	0.143	0.071
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	8	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.71	%	0.71	0.143	0.102
Potential migration zones	.99654	%		0.095	0.095
Riparian vegetation	0.98	%	0.98	0.143	0.140
Aggregate Resource Index					0.50

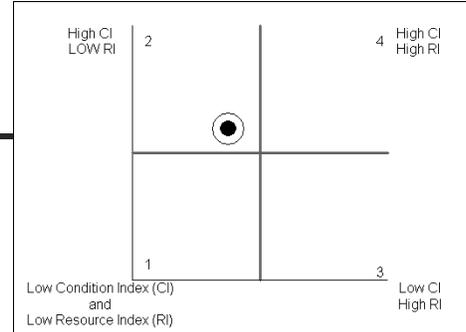
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 218
 Analysis Unit Code S SIN 03
 River / Lake Name SINLAHEKIN RIVER
 Coordinates Lat, Long 48.8016045-119.648292
 Acres of SMP land 337.92035
 length water feet 20296.1531599

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.034	0.009
Agricultural- intensive	0.68 %	0.68	0.069	0.047
Agricultural dispersed	0.31 %	0.31	0.034	0.011
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.00 %	0.00	0.103	0.000
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.13 Mi.	0.25	0.103	0.026
Culverts	1 #	1.00	0.069	0.069
Geologically hazardous areas	0.00041 / 883 %	0.00	0.069	0.000
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	5 #	0.50	0.143	0.071
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	10 #	0.50	0.048	0.024
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.68 %	0.68	0.143	0.097
Potential migration zones	.99890 %		0.095	0.095
Riparian vegetation	0.35 %	0.35	0.143	0.050
Aggregate Resource Index				0.41

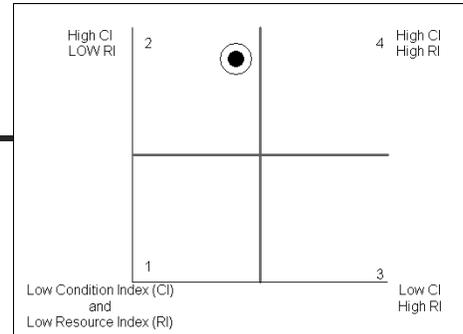
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 221
 Analysis Unit Code S SIN 06
 River / Lake Name SINLAHEKIN RIVER
 Coordinates Lat, Long 48.7203969-119.674819
 Acres of SMP land 297.68797
 length water feet 12037.6115508

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.037	0.009
Agricultural- intensive	0.00 %	0.00	0.074	0.000
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.20 Mi.	0.25	0.111	0.028
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	1 #	1.00	0.037	0.037
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.93

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.158	0.039
Riparian Species	3 #	0.50	0.158	0.079
Upland Species	12 #	0.75	0.053	0.039
Salmon spawning/rearing habitat	0	0	0.158	0.000
Steelhead/ Chinook Critical habitat	0	0	0.15789	0.000
Wetlands	0.93 %	0.93	0.158	0.146
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.97 %	0.97	0.158	0.153
Aggregate Resource Index				0.46

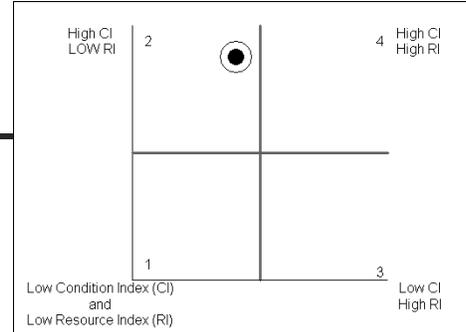
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 222
 Analysis Unit Code S SIN 07
 River / Lake Name SINLAHEKIN RIVER
 Coordinates Lat, Long 48.7070243-119.685542
 Acres of SMP land 125.66386
 length water feet 7101.81971486

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	1 #	0.25	0.037	0.009
Agricultural- intensive	0.00 %	0.00	0.074	0.000
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.11 Mi.	0.25	0.111	0.028
Culverts	1 #	1.00	0.074	0.074
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.89

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.158	0.039
Riparian Species	3 #	0.50	0.158	0.079
Upland Species	12 #	0.75	0.053	0.039
Salmon spawning/rearing habitat	0	0	0.158	0.000
Steelhead/ Chinook Critical habitat	0	0	0.15789	0.000
Wetlands	0.82 %	0.82	0.158	0.129
Potential migration zones	no data %		0.000	0.000
Riparian vegetation	0.94 %	0.94	0.158	0.149
Aggregate Resource Index				0.44

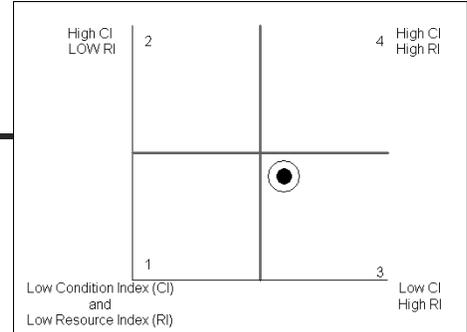
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 223
 Analysis Unit Code S TOA 01
 River / Lake Name TOATS COULEE CREEK
 Coordinates Lat, Long 48.8343588-119.696931
 Acres of SMP land 208.06376
 length water feet 22834.2096112

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.034	0.000
Agricultural- intensive	0.20 %	0.20	0.069	0.014
Agricultural dispersed	0.05 %	0.05	0.034	0.002
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.02 %	0.02	0.103	0.002
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	2.49 Mi.	0.75	0.103	0.078
Culverts	2 #	1.00	0.069	0.069
Geologically hazardous areas	0.00642 / 412 %	0.01	0.069	0.000
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.84

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	4 #	0.50	0.143	0.071
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	12 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.47784 %		0.095	0.046
Riparian vegetation	0.98 %	0.98	0.143	0.140
Aggregate Resource Index				0.36

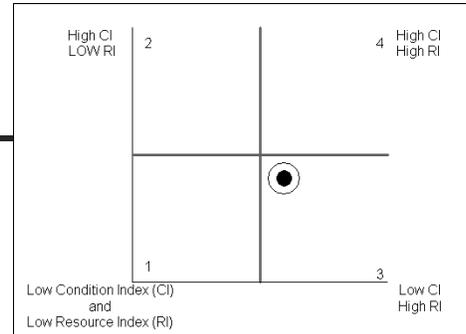
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 224
 Analysis Unit Code S TOA 02
 River / Lake Name TOATS COULEE CREEK
 Coordinates Lat, Long 48.8440585-119.758550
 Acres of SMP land 119.11406
 length water feet 13034.5289302

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	0 #	0.00	0.037	0.000
Agricultural- intensive	0.00 %	0.00	0.074	0.000
Agricultural dispersed	0.00 %	0.00	0.037	0.000
Water quality	0.00 %	0.0	0.111	0.000
Residential development	0.00 %	0.00	0.111	0.000
Industrial development-heavy	0.00 %	0.00	0.111	0.000
Industrial development-light	0.00 %	0.00	0.074	0.000
Bridges	0 #	0.00	0.037	0.000
Overwater structures	0 #	0.00	0.037	0.000
Rail	0 Mi.	0.00	0.111	0.000
Roads	0.05 Mi.	0.25	0.111	0.028
Culverts	0 #	0.00	0.074	0.000
Geologically hazardous areas	unknown - insufficient %	0.00	0.000	0.000
Boat ramps	0 #	0.00	0.037	0.000
Mines	0 #	0	0.037	0.000
Aggregate Condition Index				0.97

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	3 #	0.25	0.143	0.036
Riparian Species	2 #	0.50	0.143	0.071
Upland Species	14 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	0	0	0.143	0.000
Steelhead/ Chinook Critical habitat	0	0	0.14286	0.000
Wetlands	0.00 %	0.00	0.143	0.000
Potential migration zones	.41962 %		0.095	0.040
Riparian vegetation	0.85 %	0.85	0.143	0.122
Aggregate Resource Index				0.30

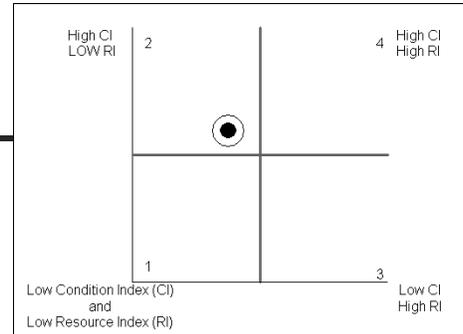
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 225
 Analysis Unit Code S TOR 01
 River / Lake Name TORODA CREEK
 Coordinates Lat, Long 48.9222667 -118.849728
 Acres of SMP land 136.76999
 length water feet 13785.5536157

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.037	0.000
Agricultural- intensive	0.57	%	0.57	0.074	0.043
Agricultural dispersed	0.01	%	0.01	0.037	0.000
Water quality	0.00	%	0.0	0.111	0.000
Residential development	0.28	%	0.28	0.111	0.032
Industrial development-heavy	0.00	%	0.00	0.111	0.000
Industrial development-light	0.00	%	0.00	0.074	0.000
Bridges	0	#	0.00	0.037	0.000
Overwater structures	0	#	0.00	0.037	0.000
Rail	0	Mi.	0.00	0.111	0.000
Roads	0.56	Mi.	0.25	0.111	0.028
Culverts	1	#	1.00	0.074	0.074
Geologically hazardous areas	unknown - insufficient	%	0.00	0.000	0.000
Boat ramps	0	#	0.00	0.037	0.000
Mines	0	#	0	0.037	0.000
Aggregate Condition Index					0.82

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	9	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.39	%	0.39	0.143	0.055
Potential migration zones	.95562	%		0.095	0.091
Riparian vegetation	0.76	%	0.76	0.143	0.109
Aggregate Resource Index					0.42

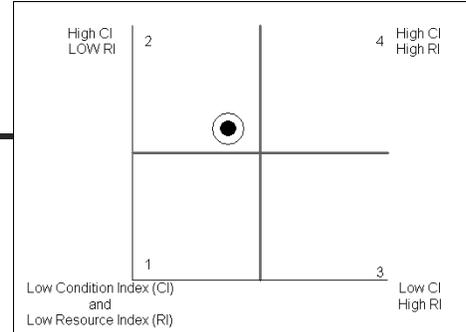
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 226
 Analysis Unit Code S TOR 02
 River / Lake Name TORODA CREEK
 Coordinates Lat, Long 48.8727421 -118.872537
 Acres of SMP land 184.13952
 length water feet 18046.6104147

General Quadrant Results for AU

Quad #: 2

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.89	%	0.89	0.069	0.062
Agricultural dispersed	0.03	%	0.03	0.034	0.001
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.03	%	0.03	0.103	0.003
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	1.02	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.05557 69	%	0.06	0.069	0.004
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.88

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	4	#	0.50	0.143	0.071
Riparian Species	2	#	0.50	0.143	0.071
Upland Species	7	#	0.50	0.048	0.024
Salmon spawning/rearing habitat	0		0	0.143	0.000
Steelhead/ Chinook Critical habitat	0		0	0.14286	0.000
Wetlands	0.38	%	0.38	0.143	0.054
Potential migration zones	0.88288	%		0.095	0.084
Riparian vegetation	0.79	%	0.79	0.143	0.112
Aggregate Resource Index					0.42

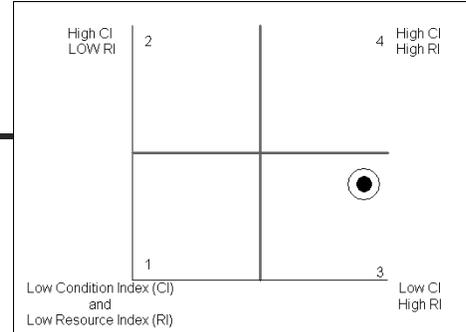
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 227
 Analysis Unit Code S TWI 01
 River / Lake Name TWISP RIVER
 Coordinates Lat, Long 48.3697851 -120.163877
 Acres of SMP land 388.00728
 length water feet 26810.9656744

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	one Mi.	1	0.000	0.000
Permitted facilities	6 #	0.50	0.034	0.017
Agricultural- intensive	0.24 %	0.24	0.069	0.016
Agricultural dispersed	0.07 %	0.07	0.034	0.002
Water quality	0.50 %	0.5	0.103	0.052
Residential development	0.39 %	0.39	0.103	0.040
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	3 #	0.50	0.034	0.017
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	1.98 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.18528 3 %	0.19	0.069	0.013
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.79

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	9 #	0.75	0.143	0.107
Riparian Species	5 #	0.75	0.143	0.107
Upland Species	13 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.32 %	0.32	0.143	0.046
Potential migration zones	.98579 %		0.095	0.094
Riparian vegetation	0.90 %	0.90	0.143	0.129
Aggregate Resource Index				0.81

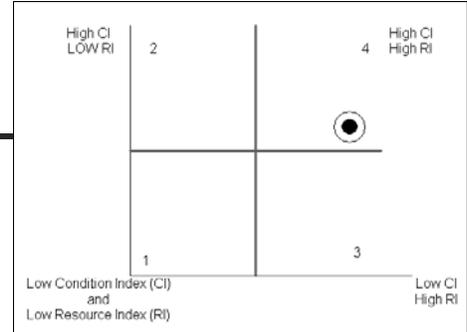
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 228
 Analysis Unit Code S TWI 02
 River / Lake Name TWISP RIVER
 Coordinates Lat, Long 48.3798854-120.248621
 Acres of SMP land 243.87559
 length water feet 23017.1921579

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.24	%	0.24	0.069	0.017
Agricultural dispersed	0.15	%	0.15	0.034	0.005
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.36	%	0.36	0.103	0.037
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	2	#	0.50	0.034	0.017
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	2.86	Mi.	0.75	0.103	0.078
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.14950 6	%	0.15	0.069	0.010
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.84

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	16	#	1.00	0.048	0.048
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.21	%	0.21	0.143	0.029
Potential migration zones	.90476	%		0.095	0.086
Riparian vegetation	0.85	%	0.85	0.143	0.121
Aggregate Resource Index					0.78

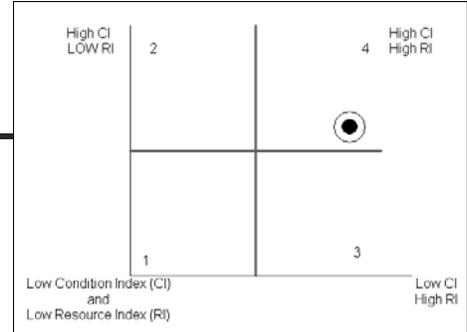
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 229
 Analysis Unit Code S TWI 03
 River / Lake Name TWISP RIVER
 Coordinates Lat, Long 48.3721949-120.302296
 Acres of SMP land 161.97439
 length water feet 9561.00931023

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data	Score	weight	FINAL SCORES
Bank hardening	no data #	0	0.000	0.000
Levees	no data Mi.	0	0.000	0.000
Permitted facilities	2 #	0.25	0.034	0.009
Agricultural- intensive	0.08 %	0.08	0.069	0.006
Agricultural dispersed	0.00 %	0.00	0.034	0.000
Water quality	0.00 %	0.0	0.103	0.000
Residential development	0.61 %	0.61	0.103	0.063
Industrial development-heavy	0.00 %	0.00	0.103	0.000
Industrial development-light	0.00 %	0.00	0.069	0.000
Bridges	0 #	0.00	0.034	0.000
Overwater structures	0 #	0.00	0.034	0.000
Rail	0 Mi.	0.00	0.103	0.000
Roads	0.87 Mi.	0.50	0.103	0.052
Culverts	0 #	0.00	0.069	0.000
Geologically hazardous areas	0.13372 %	0.13	0.069	0.009
Boat ramps	0 #	0.00	0.034	0.000
Mines	0 #	0	0.034	0.000
Aggregate Condition Index				0.86

Resources	Raw Data	Score	Weight	FINAL SCORES
Aquatic Species	8 #	0.75	0.143	0.107
Riparian Species	3 #	0.50	0.143	0.071
Upland Species	14 #	0.75	0.048	0.036
Salmon spawning/rearing habitat	1	1	0.143	0.143
Steelhead/ Chinook Critical habitat	1	1	0.14286	0.143
Wetlands	0.45 %	0.45	0.143	0.064
Potential migration zones	.97642 %		0.095	0.093
Riparian vegetation	0.93 %	0.93	0.143	0.134
Aggregate Resource Index				0.79

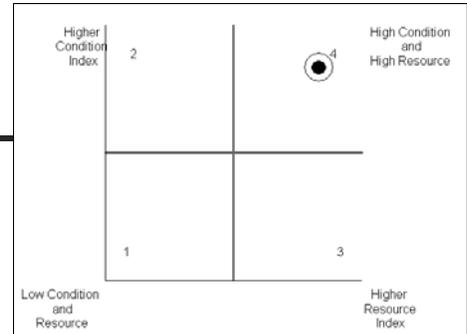
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 230
 Analysis Unit Code S TWI 04
 River / Lake Name TWISP RIVER
 Coordinates Lat, Long 48.3656102-120.328483
 Acres of SMP land 109.01284
 length water feet 9869.32597559

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.36	%	0.36	0.103	0.037
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	1	#	0.25	0.034	0.009
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.66	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.02914 4	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.90

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	8	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	14	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.31	%	0.31	0.143	0.044
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	0.95	%	0.95	0.143	0.136
Aggregate Resource Index					0.77

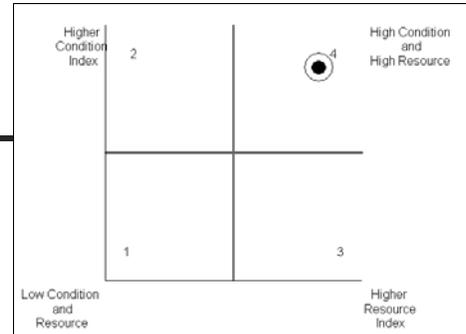
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 231
 Analysis Unit Code S TWI 05
 River / Lake Name TWISP RIVER
 Coordinates Lat, Long 48.3556827 -120.350253
 Acres of SMP land 162.21885
 length water feet 8814.44166303

General Quadrant Results for AU

Quad #: 4

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	3	#	0.25	0.034	0.009
Agricultural- intensive	0.00	%	0.00	0.069	0.000
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.00	%	0.0	0.103	0.000
Residential development	0.46	%	0.46	0.103	0.047
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.00	Mi.	0.00	0.103	0.000
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.03388 37	%	0.03	0.069	0.002
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.94

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	16	#	1.00	0.048	0.048
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.82	%	0.82	0.143	0.117
Potential migration zones	1	%		0.095	0.095
Riparian vegetation	1.00	%	1.00	0.143	0.143
Aggregate Resource Index					0.87

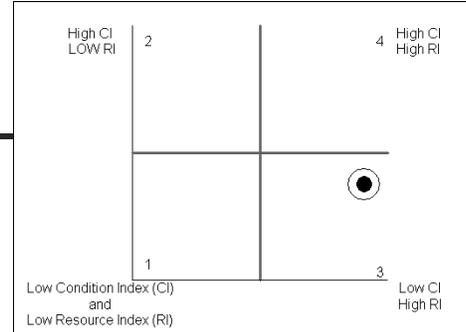
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 232
 Analysis Unit Code S TWI 06
 River / Lake Name TWISP RIVER
 Coordinates Lat, Long 48.3530250-120.371351
 Acres of SMP land 48.088914
 length water feet 4425.48601452

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



quadrant assignment adjusted

AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.14	%	0.14	0.069	0.010
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	0.50	%	0.5	0.103	0.052
Residential development	0.40	%	0.40	0.103	0.041
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.30	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.33560 1	%	0.34	0.069	0.023
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.82

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	3	#	0.50	0.143	0.071
Upland Species	16	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.34	%	0.34	0.143	0.049
Potential migration zones	.98154	%		0.095	0.093
Riparian vegetation	0.97	%	0.97	0.143	0.138
Aggregate Resource Index					0.78

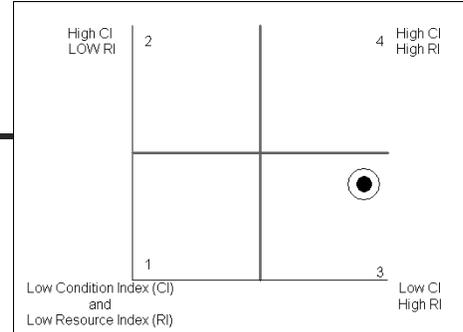
E N T R I X
ENVIRONMENTAL CONSULTANTS

Unique ID 233
 Analysis Unit Code S WOL 00
 River / Lake Name WOLF CREEK
 Coordinates Lat, Long 48.4880230-120.246319
 Acres of SMP land 90.160298
 length water feet 9878.34244012

General Quadrant Results for AU

Quad #: 3

General placement of AU within Quad



AU Stressor	Raw Data		Score	weight	FINAL SCORES
Bank hardening	no data	#	0	0.000	0.000
Levees	no data	Mi.	0	0.000	0.000
Permitted facilities	0	#	0.00	0.034	0.000
Agricultural- intensive	0.14	%	0.14	0.069	0.009
Agricultural dispersed	0.00	%	0.00	0.034	0.000
Water quality	1.00	%	1.0	0.103	0.103
Residential development	0.20	%	0.20	0.103	0.021
Industrial development-heavy	0.00	%	0.00	0.103	0.000
Industrial development-light	0.00	%	0.00	0.069	0.000
Bridges	0	#	0.00	0.034	0.000
Overwater structures	0	#	0.00	0.034	0.000
Rail	0	Mi.	0.00	0.103	0.000
Roads	0.46	Mi.	0.50	0.103	0.052
Culverts	0	#	0.00	0.069	0.000
Geologically hazardous areas	0.413179	%	0.41	0.069	0.028
Boat ramps	0	#	0.00	0.034	0.000
Mines	0	#	0	0.034	0.000
Aggregate Condition Index					0.79

Resources	Raw Data		Score	Weight	FINAL SCORES
Aquatic Species	7	#	0.75	0.143	0.107
Riparian Species	4	#	0.75	0.143	0.107
Upland Species	16	#	0.75	0.048	0.036
Salmon spawning/rearing habitat	1		1	0.143	0.143
Steelhead/ Chinook Critical habitat	1		1	0.14286	0.143
Wetlands	0.00	%	0.00	0.143	0.000
Potential migration zones	0.67155	%		0.095	0.064
Riparian vegetation	0.94	%	0.94	0.143	0.134
Aggregate Resource Index					0.73

Okanogan County Native Plants List

Useful websites:

Okanogan Conservation District - <http://okanogand.org/plants.html>

Methow Valley Native Plant assemblies - <http://www.okanogan1.com/ecology/plantgeog.htm>

Okanogan County Washington State University Extension Office - <http://okanogan.wsu.edu/mg/>

<http://okanogan.wsu.edu/mg/>

Native Landscape Structure Plants

Okanogan County

	<i>Scientific Name</i>	<i>Common Name</i>	<i>Family</i>	<i>Type</i>
Conifer Shrubs(CS)	<i>Juniperus communis</i>	Mountain juniper	Cupressaceae	CS
	<i>Taxus brevifolia</i>	Western yew	Taxaceae	CS
	<i>Tsuga mertensiana</i>	Mountain hemlock	Pinaceae	CS
Deciduous Shrubs (DS)	<i>Amelanchier alnifolia</i>	Serviceberry	Rosaceae	DS
	<i>Amelanchier utahensis</i>	Utah serviceberry	Rosaceae	DS
	<i>Ceanothus sanguineus</i>	Redstem ceanothus	Rhamnaceae	DS
	<i>Ceanothus velutinus</i>	Snowbrush	Rhamnaceae	DS
	<i>Celtis reticulata</i>	Hackberry	Ulmaceae	DS
	<i>Cornus canadensis</i>	Bunchberry	Cornaceae	DS
	<i>Cornus nuttallii</i>	Pacific dogwood	Cornaceae	DS
	<i>Cornus stolonifera</i>	Red-osier dogwood	Cornaceae	DS
	<i>Crataegus chrysoarpa</i>	Fireberry hawthorn	Rosaceae	DS
	<i>Crataegus columbiana</i>	Columbia hawthorn	Rosaceae	DS
	<i>Crataegus douglasii</i>	Black hawthorn	Rosaceae	DS
	<i>Crataegus okennonii</i>	Hawthorn	Rosaceae	DS
	<i>Elaeagnus commutata</i>	Silverberry	Elaeagnaceae	DS
	<i>Kalmia microphylla</i>	Alpine laurel	Ericaceae	DS
	<i>Lonicera involucrata</i>	Black twinberry	Caprifoliaceae	DS
	<i>Lonicera utahensis</i>	Utah honeysuckle	Caprifoliaceae	DS
<i>Philadelphus lewisii</i>	Mock-orange	Hydrangeaceae	DS	

<i>Phyllodoce empetriformis</i>	Red mountain heather	Ericaceae	DS
<i>Phyllodoce glanduliflora</i>	Yellow heather	Ericaceae	DS
<i>Phyllodoce intermedia</i>	Hybrid mountain heather	Ericaceae	DS
<i>Physocarpus malvaceus</i>	Mallow ninebark	Rosaceae	DS
<i>Prunus emarginata</i>	Bitter cherry	Rosaceae	DS
<i>Prunus virginiana</i>	Chokecherry	Rosaceae	DS
<i>Rhamnus alnifolia</i>	Alder buckthorn	Rhamnaceae	DS
<i>Rhododendron albiflorum</i>	White rhododendron	Ericaceae	DS
<i>Rhus glabra</i>	Sumac	Anacardiaceae	DS
<i>Ribes cereum</i>	Wax currant	Grossulariaceae	DS
<i>Ribes howellii</i>	Maple-leaf currant	Grossulariaceae	DS
<i>Ribes lacustre</i>	Prickly currant	Grossulariaceae	DS
<i>Ribes oxycanthoides</i>	Northern gooseberry	Grossulariaceae	DS
<i>Ribes viscosissimum</i>	Sticky currant	Grossulariaceae	DS
<i>Ribes watsonianum</i>	Watson gooseberry	Grossulariaceae	DS
<i>Rosa gymnocarpa</i>	Baldhip rose	Rosaceae	DS
<i>Shepherdia canadensis</i>	Buffalo berry	Elaeagnaceae	DS
<i>Spiraea betulifolia</i>	Birch-leafed spirea	Rosaceae	DS
<i>Spiraea densiflora</i>	Rosy spirea	Rosaceae	DS
<i>Spiraea douglasii</i>	Hardhack	Rosaceae	DS
<i>Spiraea pyramidata</i>	Pyramid spirea	Rosaceae	DS
<i>Symphoricarpos albus</i>	Common snowberry	Caprifoliaceae	DS
<i>Symphoricarpos occidentalis</i>	Western snowberry	Caprifoliaceae	DS
<i>Symphoricarpos oreophilus</i>	Mountain snowberry	Caprifoliaceae	DS

**Evergreen Shrubs
(ES)**

<i>Artemisia arbuscula</i>	Low sagebrush	Asteraceae	ES
<i>Artemisia biennis</i>	Biennial wormwood	Asteraceae	ES
<i>Artemisia campestris</i>	Northern wormwood	Asteraceae	ES
<i>Artemisia rigida</i>	Stiff sagebrush	Asteraceae	ES
<i>Artemisia tripartita</i>	Three-tip sagebrush	Asteraceae	ES
<i>Berberis aquifolium</i>	Tall Oregongrape	Berberidaceae	ES
<i>Berberis nervosa</i>	Cascade Oregongrape	Berberidaceae	ES
<i>Cassiope mertensiana</i>	White mountain heather	Ericaceae	ES
	Four-angled mountain		
<i>Cassiope tetragona</i>	heather	Ericaceae	ES
<i>Pachistima myrsinites</i>	Mountain box	Celastraceae	ES
<i>Vaccinium deliciosum</i>	Cascade huckleberry	Ericaceae	ES
<i>Vaccinium membranaceum</i>	Mountain huckleberry	Ericaceae	ES
<i>Vaccinium myrtilloides</i>	Velvet-leaf huckleberry	Ericaceae	ES

	<i>Viburnum edule</i>	Highbush cranberry	Caprifoliaceae	ES
Conifer Trees(CT)				
	<i>Abies amabilis</i>	Pacific silver fir	Pinaceae	CT
	<i>Abies grandis</i>	Grand fir	Pinaceae	CT
	<i>Abies lasiocarpa</i>	Sub-alpine fir	Pinaceae	CT
	<i>Juniperus scopulorum</i>	Rocky Mountain juniper	Cupressaceae	CT
	<i>Larix lyallii</i>	Subalpine larch	Pinaceae	CT
	<i>Larix occidentalis</i>	Western larch	Pinaceae	CT
	<i>Picea engelmannii</i>	Engelmann spruce	Pinaceae	CT
	<i>Picea glauca</i>	White spruce	Pinaceae	CT
	<i>Pinus albicaulis</i>	White-bark pine	Pinaceae	CT
	<i>Pinus contorta</i>	Lodgepole pine	Pinaceae	CT
	<i>Pinus monticola</i>	Western white pine	Pinaceae	CT
	<i>Pinus ponderosa</i>	Ponderosa pine	Pinaceae	CT
	<i>Pseudotsuga menziesii</i>	Douglas fir	Pinaceae	CT, H
	<i>Thuja plicata</i>	Western red cedar	Cupressaceae	H
Deciduous Trees (DT)				
	<i>Acer glabrum</i>	Douglas maple	Aceraceae	DT
	<i>Acer macrophyllum</i>	Big-leaf maple	Aceraceae	DT
	<i>Alnus incana</i>	Mountain alder	Betulaceae	DT
	<i>Alnus sinuata</i>	Sitka alder	Betulaceae	DT
	<i>Betula glandulosa</i>	Bog birch	Betulaceae	DT
	<i>Betula occidentalis</i>	Water birch	Betulaceae	DT
	<i>Betula papyrifera</i>	Paper birch	Betulaceae	DT
	<i>Populus tremuloides</i>	Quaking aspen	Salicaceae	DT
	<i>Populus trichocarpa</i>	Black cottonwood	Salicaceae	DT
	<i>Sorbus scopulina</i>	Cascade mountain-ash	Rosaceae	DT
	<i>Sorbus sitchensis</i>	Sitka mountain-ash	Rosaceae	DT
Ground Covers(GC)				
	<i>Arctostaphylos nevadensis</i>	Kinnikinnik	Ericaceae	GC
	<i>Arctostaphylos uva-ursi</i>	Bearberry	Ericaceae	GC
	<i>Berberis repens</i>	Creeping Oregongrape	Berberidaceae	GC
	<i>Gaultheria humifusa</i>	Alpine wintergreen	Ericaceae	GC
	<i>Sedum divergens</i>	Spreading stonecrop	Crassulaceae	GC
	<i>Sedum lanceolatum</i>	Lance-leaved stonecrop	Crassulaceae	GC
	<i>Sedum roseum</i>	King's crown	Crassulaceae	GC
	<i>Sedum stenopetalum</i>	Worm-leaf stonecrop	Crassulaceae	GC

<i>Symphoricarpos mollis</i>	Creeping snowberry	Caprifoliaceae	GC
<i>Vaccinium caespitosum</i>	Dwarf bilberry	Ericaceae	GC
<i>Vaccinium myrtillus</i>	Low bilberry	Ericaceae	GC

Native Landscape Detail Plants

Okanogan County

	Scientific Name	Common Name	Family	Type
Annuals(A)				
	<i>Erysimum arenicola</i>	Mountain wallflower	Brassicaceae	A
	<i>Nemophila breviflora</i>	Great Basin nemophila	Hydrophyllaceae	A
Bulbs (BU)				
	<i>Anemone drummondii</i>	Drummond's anemone	Ranunculaceae	BU
	<i>Anemone multifida</i>	Cliff anemone	Ranunculaceae	BU
	<i>Anemone occidentalis</i>	Mountain pasqueflower	Ranunculaceae	BU
	<i>Anemone parviflora</i>	Northern anemone	Ranunculaceae	BU
	<i>Erythronium grandiflorum</i>	Glacier lily	Liliaceae	BU
	<i>Fritillaria lanceolata</i>	Chocolate lily	Liliaceae	BU
	<i>Fritillaria pudica</i>	Yellow bell	Liliaceae	BU
	<i>Lilium columbianum</i>	Tiger lily	Liliaceae	BU
Edible Plants (ED)				
	<i>Rubus acaulis</i>	Nagoonberry	Rosaceae	ED
	<i>Rubus idaeus</i>	Red raspberry	Rosaceae	ED
	<i>Rubus lasiococcus</i>	Dwarf bramble	Rosaceae	ED
	<i>Rubus leucodermis</i>	Blackcap	Rosaceae	ED
	<i>Rubus parviflorus</i>	Thimbleberry	Rosaceae	ED
	<i>Rubus pedatus</i>	Strawberry bramble	Rosaceae	ED
	<i>Rubus spectabilis</i>	Salmonberry	Rosaceae	ED
Ground Covers (GC)				
	<i>Fragaria vesca</i>	Wild strawberry	Rosaceae	GC
	<i>Fragaria virginiana</i>	Woods strawberry	Rosaceae	GC
	<i>Galium aparine</i>	Cleavers	Rubiaceae	GC
	<i>Galium bifolium</i>	Low mountain bedstraw	Rubiaceae	GC
	<i>Galium boreale</i>	Northern bedstraw	Rubiaceae	GC
	<i>Galium serpyllifolium</i>	Intermountain bedstraw	Rubiaceae	GC
	<i>Galium trifidum</i>	Small bedstraw	Rubiaceae	GC

<i>Galium triflorum</i>	Fragrant bedstraw	Rubiaceae	GC
<i>Physostegia parviflora</i>	Purple dragon-head	Lamiaceae	GC
<i>Veronica cusickii</i>	Cusick's speedwell	Scrophulariaceae	GC
<i>Veronica peregrina</i>	Purslane speedwell	Scrophulariaceae	GC
<i>Veronica scuttelata</i>	Marsh speedwell	Scrophulariaceae	GC
<i>Veronica serpyllifolia</i>	Thyme-leaf speedwell	Scrophulariaceae	GC
<i>Veronica wormskjoldii</i>	Alpine speedwell	Scrophulariaceae	GC

Perennials (P)

<i>Abronia umbellata</i>	Pink sandverbena	Nyctaginaceae	P
<i>Antennaria alpina</i>	Alpine pussy-toes	Asteraceae	P
<i>Antennaria anaphaloides</i>	Tall pussy-toes	Asteraceae	P
<i>Antennaria dimorpha</i>	Low pussy-toes	Asteraceae	P
<i>Antennaria flagellaris</i>	Stolonous pussy-toes	Asteraceae	P
<i>Antennaria lanata</i>	Woolly pussy-toes	Asteraceae	P
<i>Antennaria luzuloides</i>	Woodrush pussy-toes	Asteraceae	P
<i>Antennaria microphylla</i>	Rosy pussy-toes	Asteraceae	P
<i>Antennaria neglecta</i>	Field pussy-toes	Asteraceae	P
<i>Antennaria parvifolia</i>	Nuttall's pussytoes	Asteraceae	P
<i>Antennaria pulcherrima</i>	Showy pussytoes	Asteraceae	P
<i>Antennaria racemosa</i>	Raceme pussy-toes	Asteraceae	P
<i>Antennaria umbrinella</i>	Umber pussy-toes	Asteraceae	P
<i>Aquilegia flavescens</i>	Golden columbine	Ranunculaceae	P
<i>Aquilegia formosa</i>	Red columbine	Ranunculaceae	P
<i>Arabis divaricarpa</i>	Spreadingpod rockcress	Brassicaceae	P
<i>Arabis drummondii</i>	Drummond's rockcress	Brassicaceae	P
<i>Arabis hirsuta</i>	Hairy rockcress	Brassicaceae	P
<i>Arabis holboellii</i>	Holboell's rockcress	Brassicaceae	P
<i>Arabis lemmonii</i>	Lemmon's rockcress	Brassicaceae	P
<i>Arabis lyallii</i>	Lyall's rockcress	Brassicaceae	P
<i>Arabis microphylla</i>	Small-leaf rockcress	Brassicaceae	P
<i>Arabis nuttallii</i>	Nuttall's rockcress	Brassicaceae	P
<i>Arabis puberula</i>	Hoary rockcress	Brassicaceae	P
<i>Arabis sparsiflora</i>	Sicklepod rockcress	Brassicaceae	P
<i>Arenaria capillaris</i>	Thread-leaved sandwort	Caryophyllaceae	P
<i>Arenaria congesta</i>	Dense-flowered sandwort	Caryophyllaceae	P
<i>Arenaria franklinii</i>	Franklin's sandwort	Caryophyllaceae	P
<i>Arenaria laricifolia</i>	Serpentine stichwort	Caryophyllaceae	P
<i>Arenaria lateriflora</i>	Bluntleaf sandwort	Caryophyllaceae	P
<i>Arenaria macrophylla</i>	Big-leaf sandwort	Caryophyllaceae	P

<i>Arenaria obtusiloba</i>	Arctic sandwort	Caryophyllaceae	P
<i>Arenaria rubella</i>	Reddish sandwort	Caryophyllaceae	P
<i>Artemesia douglasiana</i>	Douglas' sagewort	Asteraceae	P
<i>Artemesia lindleyana</i>	Columbia River mugwort	Asteraceae	P
<i>Artemesia ludoviciana</i>	Western mugwort	Asteraceae	P
<i>Artemesia michauxiana</i>	Michaux mugwort	Asteraceae	P
<i>Artemesia norvegica</i>	Mountain sagewort	Asteraceae	P
<i>Artemesia tilesii</i>	Aleutian mugwort	Asteraceae	P
<i>Balsamorhiza sagittata</i>	Arrow-leaf balsamroot	Asteraceae	P
<i>Calypso bulbosa</i>	Fairy slipper	Orchidaceae	P
<i>Campanula rotundifolia</i>	Common harebell	Campanulaceae	P
<i>Castilleja cervina</i>	Deer paintbrush	Scrophulariaceae	P
<i>Castilleja cusickii</i>	Cusick's paintbrush	Scrophulariaceae	P
<i>Castilleja elmeri</i>	Elmer's paintbrush	Scrophulariaceae	P
<i>Castilleja exilis</i>	Alkali paintbrush	Scrophulariaceae	P
<i>Castilleja hispida</i>	Harsh paintbrush	Scrophulariaceae	P
<i>Castilleja miniata</i>	Scarlet paintbrush	Scrophulariaceae	P
<i>Castilleja parviflora albida</i>	Small-flowered paintbrush	Scrophulariaceae	P
<i>Castilleja parviflora oreopola</i>	Magenta paintbrush	Scrophulariaceae	P
<i>Castilleja rhexifolia</i>	Rhexia-leafed paintbrush	Scrophulariaceae	P
<i>Castilleja thompsonii</i>	Thompson's paintbrush	Scrophulariaceae	P
<i>Chrysopsis villosa</i>	Hairy golden-aster	Asteraceae	P
<i>Coreopsis atkinsoniana</i>	Columbia tickseed	Asteraceae	P
<i>Eriogonum compositum</i>	Northern buckwheat	Polygonaceae	P
<i>Eriogonum elatum</i>	Tall buckwheat	Polygonaceae	P
<i>Eriogonum heracleoides</i>	Parsnip-flowered buckwheat	Polygonaceae	P
<i>Eriogonum niveum</i>	Snow buckwheat	Polygonaceae	P
<i>Eriogonum ovalifolium</i>	Oval-leaf buckwheat	Polygonaceae	P
<i>Eriogonum pyrolifolium</i>	Alpine buckwheat	Polygonaceae	P
<i>Eriogonum strictum</i>	Strict buckwheat	Polygonaceae	P
<i>Eriogonum thymoides</i>	Thyme-leaf buckwheat	Polygonaceae	P
<i>Eriogonum umbellatum</i>	Sulfur buckwheat	Polygonaceae	P
<i>Gaillardia aristata</i>	Blanket-flower	Asteraceae	P
<i>Geranium bicknellii</i>	Bicknell's geranium	Geraniaceae	P
<i>Geranium carolinianum</i>	Wild geranium	Geraniaceae	P
<i>Geranium viscosissimum</i>	Sticky geranium	Geraniaceae	P
<i>Linum perenne</i>	Wild blue-flax	Linaceae	P
<i>Oenothera andina</i>	Tiny evening-primrose	Onagraceae	P
<i>Oenothera contorta</i>	Bentpod evening-primrose	Onagraceae	P
<i>Oenothera hilgardii</i>	Hilgard's evening-primrose	Onagraceae	P

<i>Oenothera hookeri</i>	Hooker's evening-primrose White-stemmed evening	Onagraceae	P
<i>Oenothera pallida</i>	primrose	Onagraceae	P
<i>Penstemon davidsonii</i>	Davidson's penstemon	Scrophulariaceae	P
<i>Penstemon deustus</i>	Hot-rock penstemon	Scrophulariaceae	P
<i>Penstemon diphyllus</i>	Two-leaf penstemon	Scrophulariaceae	P
<i>Penstemon fruticosus</i>	Shrubby penstemon	Scrophulariaceae	P
<i>Penstemon gairdneri</i>	Gairdner's penstemon	Scrophulariaceae	P
<i>Penstemon glandulosus</i>	Glandular penstemon	Scrophulariaceae	P
<i>Penstemon payettensis</i>	Payette penstemon	Scrophulariaceae	P
<i>Penstemon procerus</i>	Small-flowered penstemon	Scrophulariaceae	P
<i>Penstemon pruinus</i>	Chelan penstemon	Scrophulariaceae	P
<i>Penstemon richardsonii</i>	Richardson's penstemon	Scrophulariaceae	P
<i>Penstemon rydbergii</i>	Rydberg's penstemon	Scrophulariaceae	P
<i>Penstemon serrulatus</i>	Cascade penstemon	Scrophulariaceae	P
<i>Penstemon speciosus</i>	Showy penstemon	Scrophulariaceae	P
<i>Penstemon venustus</i>	Blue mountain penstemon	Scrophulariaceae	P
<i>Penstemon washingtonensis</i>	Washington penstemon	Scrophulariaceae	P
<i>Salvia dorrii</i>	Gray ball sage	Lamiaceae	P
<i>Viola glabella</i>	Stream violet	Violaceae	P
<i>Viola macloskeyi</i>	Small white violet	Violaceae	P
<i>Viola nephrophylla</i>	Northern bog violet	Violaceae	P
<i>Viola nuttallii</i>	Yellow prairie violet	Violaceae	P
<i>Viola orbiculata</i>	Round-leaved violet	Violaceae	P
<i>Viola palustris</i>	Marsh violet	Violaceae	P
<i>Viola purpurea</i>	Goosefoot violet	Violaceae	P
<i>Viola selkirkii</i>	Selkirk's violet	Violaceae	P
<i>Viola sempervirens</i>	Evergreen violet	Violaceae	P

Vines (V)

<i>Clematis columbiana</i>	Columbia virgin's bower	Ranunculaceae	V
<i>Clematis lingusticifolia</i>	Virgin's bower	Ranunculaceae	V
<i>Lathyrus ochroleucus</i>	Cream-flowered peavine	Fabaceae	V

(List compiled from Okanogan County Native Plants, Washington Native Plant Society, http://www.wnps.org/plant_lists/counties/okanogan/okanogan_county.html by Terri Williams, Okanogan County Master Gardener. Non-profit use permitted.)

APPENDIX H: SHORELINE DESIGNATIONS COMMON LEGAL DESCRIPTIONS

Columbia River

Right Bank

Beginning at the intersection of the Urban Growth Boundary, and the Ordinary High Water Mark of the Columbia River, said intersection being the southeast corner of Tax 29, being portions of Lots 1 and 2 of Section 18, Township 30 North, Range 25 East, Willamette Meridian;

Thence northwesterly along said River to its intersection with the westerly line of Tax 13, being a portion of the southwest quarter of the southeast quarter of Section 12, Township 30 North, Range 24 East, Willamette Meridian; *Shoreline Residential*

Thence continuing northwesterly and westerly along said River to its intersection with the easterly city limits of the City of Brewster; *Urban Conservancy* to the top of bank; *Shoreline Residential* for balance of shoreline jurisdiction.

Thence continuing southwestwesterly, northerly, southwestwesterly, and southeasterly along said River to the intersection with the easterly prolongation of the southerly right-of-way of East Main Street; *Urban Conservancy* to the top of bank, *High Intensity* for balance of shoreline jurisdiction

Thence continuing southeasterly, southerly, southwestwesterly, and westerly along said River to its intersection with southerly prolongation of the easterly line of the westerly 14 feet of the right-of-way of Bridge Street South; *Urban Conservancy* to the top of bank, *Shoreline Residential* for balance of shoreline jurisdiction

Thence continuing in a general northwesterly direction along said River to its intersection with the southerly prolongation of the westerly right-of-way of 7th Street South; *High Intensity*

Thence continuing southerly and westerly along said River to its intersection with the southeast corner of Tax 113, being a portion of the south one half of the southwest quarter of Section 14, Township 30 North, Range 24 East, Willamette Meridian; *Shoreline Recreation*

Thence continuing westerly along said River to its intersection with the southwestwesterly prolongation of the southeasterly line of Tax 175, being a portion of the southwest quarter of the southwest quarter of said Section 14; *Urban Conservancy* to the top of bank; *Shoreline Recreation* for balance of shoreline jurisdiction.

Thence continuing in general westerly direction, and then southwestwesterly along said River to its intersection with the easterly line of Tax 4, Lot 5, in Riverview Acreage, Brewster; *Urban Conservancy* to the top of the bank; *Shoreline Residential* to the northeasterly right-of-way of

Sunset Drive; ***High Intensity*** for balance of shoreline jurisdiction.

Thence continuing southerly along said River, and along said easterly line of Tax 4, Lot 5, in Riverview Acreage, Brewster to an angle point in the southeasterly line of the Urban Growth Boundary; ***Shoreline Residential*** to the northeasterly right-of-way of Sunset Drive; ***High Intensity*** for balance of shoreline jurisdiction.

CHAPTER 17.46

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Tables and Figures

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-
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17.46.010 Purpose

The purpose of this Chapter is to regulate development in shoreline areas as required by the Shoreline Management Act, as it now exists or hereinafter amended, to protect these areas and their functions and values in a manner that also allows reasonable use of private property. This chapter is intended to:

- A.** Implement the Brewster Comprehensive Plan and the requirements of the Shoreline Management Act;
- B.** Protect shoreline areas, in accordance with the Shoreline Management Act and through the application of the goals and policies in the Comprehensive Plan and implementation of the regulations contained herein in consultation with state and federal agencies and other qualified professionals;
- C.** Protect the general public, resources and facilities from injury, loss of life, property damage or financial loss due to flooding, erosion, landslides, or steep slopes failure within the shoreline area;
- D.** Protect unique, fragile and valuable elements of the shoreline environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats;
- E.** Prevent cumulative adverse environmental impacts within the shoreline area to water quality and availability, wetlands, and fish and wildlife habitat;
- F.** Provide flexibility and attention to site specific characteristics, so as to ensure reasonable use of property; and
- G.** Provide appropriate guidance and protection measures for addressing the needs and concerns associated with shorelines areas that help define the quality of life in Omak.

17.46.020 Applicability

These shoreline regulations shall apply as an overlay to zoning and other land use regulations established by the city. Critical Areas lying within the shoreline area, shall comply with the regulations established herein.

- A.** All land uses and/or development permit applications on all lots or parcels within the city that lie within shoreline jurisdiction as designated in the City of Brewster Comprehensive Plan (See Shorelines Element and Map VIII-2 in the Map Appendix) shall comply with the provisions of this chapter. No action shall be taken by any person that results in any alteration of any shoreline area except as consistent with the purposes, objectives and intent of this chapter.
- B.** These shoreline regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA), as locally adopted. Any conditions required pursuant to this chapter shall be included in the SEPA review and threshold determination.

17.46.030 General Provisions

In the event of any conflict between these regulations and any other regulations, that which provides greater protection to shoreline area(s) shall apply. The provisions contained herein shall be the minimum requirements and shall be liberally interpreted to serve the purposes of this chapter.

17.46.040 Definitions

This chapter lists the official (legal) definitions of terms used in this Chapter. As used in this Chapter, unless the context requires otherwise, the following definitions and concepts apply:

“A”

“**Accessory structure or use**” see 17.08.020 BMC.

“**Accessory utility**” means local transmission and collection lines, pipes, and conductors associated with water, sewer, gas, telephone, cable-TV, or similar utilities, or with irrigation systems, and other similar facilities intended to serve a development or an individual use, including access roads and appurtenant structures necessary to facilitate the utility use.

“**Act**” means Shoreline Management Act of 1971, Chapter 90.58 RCW, as amended.

“**Administrative Authority**” shall, in the context of these regulations, mean the city of Brewster.

“**Administrator**” see 17.08.020 BMC.

“**Advertising devices**” see 17.08.020 BMC.

“**Agriculture**” “Agriculture” and “Agricultural Activities” see 17.08.020 BMC.

“**Agricultural Equipment**” and “**Agricultural Facilities**” see 17.08.020 BMC.

“**Agricultural Land**” see 17.08.020 BMC.

“**Agricultural Products**” see 17.08.020 BMC.

“**Animal feeding operation**” or “**AFO**” see 17.08.020 BMC.

“**Appeal**” see 17.08.020 and 19.01.005 BMC.

“**Appurtenance**” means development that is necessarily connected to the use and enjoyment of an exempt single family residence and is located landward of the OHWM and/or the perimeter of a wetland. Appurtenances include a garage, deck, driveway, utilities, fences, installation of a septic tank and drainfield and grading which does not exceed the threshold established in local SEPA or building regulations, whichever is less, and which does not involve placement of fill in any wetland, floodway, floodplain or waterward of the ordinary high water mark.

“**Associated Wetlands**” is synonymous with “**wetlands**” or “**wetland areas**” means wetlands that are in proximity to, lakes, rivers or streams that are subject to the SMA and either influence or are influenced by such waters. 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.

“**Aquifer Recharge Area**” see 17.30.025 BMC.

“**Aquaculture**” means the culture or farming of fish, shellfish, or other aquatic plants and animals.

“**Archaeological resource/site**” means archaeological and historic resources that are either recorded at the state historic preservation office and/or by local jurisdictions or have been inadvertently uncovered, are located on city of Brewster shorelands and, including, but not limited to, submerged and submersible lands and the bed of the rivers within the state’s

jurisdiction, that contains archaeological objects. 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 chapter. “Significant” is that quality in American history, architecture, archaeology, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of significant persons in our past; or
- C. That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That has yielded or may be likely to yield, information important in history or prehistory.

“**Area of shallow flooding**” see 17.30.025 BMC.

“**Average Grade Level**” means 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; provided that in the case of structures to be built over water, average grade level shall be the elevation of ordinary high water. Calculation of the average grade level shall be made by averaging the ground elevations at the center of all exterior walls of the proposed building or structure.

“B”

“**Bed and breakfast**” see 17.08.020 BMC.

“**Best Available Science**” see 17.30.025 BMC.

“**Best management practices**” “17.08.020 BMC.

“**Boating facilities**” means developments and uses that support access to shoreline waters for purposes of boating.

“**Boat garage**” means indoor, over-water boat storage. Such as a garage or machine shed located on or next to a pier, also a floating structure used to store one’s boat out of the elements.

“**Breakaway wall**” see 07.30.025 BMC.

“**Building (structure)**” see 17.08.020 BMC.

“**Buffer, Shoreline Use (Zone 2)**” means an area that is contiguous to and protects the Zone 1 vegetation buffer area that is required for the continued maintenance, functioning, and/or structural stability of vegetation buffer.

“**Buffer, Shoreline Vegetation (Zone 1)**” means the vegetation area adjacent to a shoreline that separates and protects the shoreline aquatic area from adverse impacts associated with adjacent land uses.

“**Buffer, Wetland**” see 17.30.025 BMC.

“Bulkhead” A structure erected generally parallel to and near the OHWM for the purpose of protecting adjacent uplands from waves or current action.

“Bulk storage” see 17.08.020 BMC.

“C”

“CAFO” see 17.08.020 BMC.

“Campground (RV park)” see 17.08.020 BMC.

“CARA” means Critical Aquifer Recharge Area, see 17.30.025 BMC.

“Channel migration zone (CMZ)” means the area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings.

“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 use” means facilities used or established to provide goods, merchandise or services for compensation or exchange, excluding facilities for the growth, production, or storage of agricultural products.

“Community boating facilities” including docks, piers, ramps, etc...are typically designed and constructed to serve all or a significant component of the members of a residential development; which typically include waterfront property owners and often include non-water front property owners. A homeowner’s association usually owns a shoreline tract(s) or easement (s) providing for the potential placement of the facilities; and is responsible for the ownership and maintenance of the facilities. Where the shoreline is owned by a public entity and the entity has authorized the facilities, then the multiple upland property owners of a residential development would also be considered community boating facilities.

“Community joint-use recreational dock” means a dock intended for the common use of the residents of adjoining parcels or subdivision, shore subdivision, or community located on adjacent uplands. A community joint-use recreational dock shall not be a commercial endeavor and shall not for the purpose of serving the public.

“Conditional use” see 17.08.020 BMC.

“Critical Areas” see 17.08.020 BMC.

“Critical Areas Report” see 19.01.005 BMC.

“Cumulative Impacts” means the impact on the environment resulting from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

“D”

“Density” see 17.08.020 BMC.

“Development, shoreline” means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; 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)(d).)

“Development regulations” see 17.08.020 BMC.

“Dike” means 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” means all platform structures or anchored devices in or floating upon water bodies to provide moorage for pleasure craft or landing for water-dependent recreation including but not limited to floats, swim floats, float plane moorages, and water ski jumps. Excluded are launch ramps.

A. Private docks- over-water structures are constructed and utilized for private moorage by a single residential waterfront property owner; or an upland property owner adjacent to publicly owned shoreline where the public entity has authorized the placement of a private dock. Joint use docks - are constructed and utilized by two or more contiguous residential waterfront property owners. Joint use dock facilities may also serve one waterfront property owner and one or more contiguous upland property owners; or may consist of two or more upland property owners adjacent to publicly owned shoreline, where the public entity has authorized the placement of a joint use dock.

B. Community docks- are typically designed and constructed to serve all or a significant component of the members of a residential development; which typically include waterfront property owners and often include non-water front property owners. A homeowner’s association usually owns a shoreline tract(s) or easement (s) providing for the potential placement of the dock facilities; and is responsible for the ownership and maintenance of the facilities. Where the shoreline is owned by a public entity and the entity has authorized dock facilities, the dock facilities for multiple upland property owners of a residential development would also be considered community dock facilities.

C. Public docks- are constructed and utilized for use by the general public, typically owned and managed by a public agency and may include a boat ramp.

“Dredge material disposal” means the disposal of material excavated waterward of the ordinary high watermark according to the DNR disposal procedures manual.

“Dredging” means the removal, displacement, and disposal of unconsolidated earth material such as silt, sand, gravel, or other submerged material from the bottom of water bodies or from wetlands.

“Multi-unit dwelling” see 17.08.020 BMC.

“Single-unit dwelling” see 17.08.020 BMC.

“Dwelling unit” see 17.08.020 BMC.

“E”

“Ecological functions” or **“shoreline functions”** means 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. See WAC 173-26-201 (2)(c).

“Ecological restoration and/or enhancement” means an intentional activity that initiates, accelerates, or intended to recover ecosystem functions with respect to its health, integrity and sustainability. The practice of ecological restoration and/or enhancement includes a wide scope

of projects including, but not limited to: erosion control, reforestation, removal of non-native species and weeds, revegetation of disturbed areas, daylighting streams (e.g. culvert/pipe removal, bring an artificially underground stream to the surface), reintroduction of native species, as well as habitat and range improvement for targeted species.

“Ecologically intact” shorelines, means those shoreline areas that retain the majority of their natural shoreline functions, as evidenced by the shoreline configuration and the presence of native vegetation. Generally, but not necessarily, ecologically intact shorelines are free of structural shoreline modifications, structures, and intensive human uses. In forested areas, they generally include native vegetation with diverse plant communities, multiple canopy layers, and the presence of large woody debris available for recruitment to adjacent water bodies.

“Ecosystem-wide processes” means 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.

“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” is construed narrowly as that which is necessary to protect property from the elements (RCW 90.58.030(3eiii)).

“Exempt, Single –Family” see “Residential Development”

“Exempt, shorelines” means those developments set forth in WAC [173-27-040](#) and RCW [90.58.030](#) (3)(e), 90.58.140(9), 90.58.147, 90.58.355, and 90.58.515 which are not required to obtain a substantial development permit but which must otherwise comply with applicable provisions of the act and this Chapter.

“Exempt, substantial development” means 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)¹ or dollar value as amended by the State of Washington Office of Financial Management, if such development does not materially interfere with the normal public use of the water or shorelines of the state, and any development which does meet the definition of substantial development contained herein.

“Experimental aquaculture” means an aquaculture project that uses methods or technologies that are unprecedented or unproven in the State of Washington.

“F”

“Fair Market Value” of a development is the expected price at which the development can be sold to a willing buyer. For developments which involve nonstructural operations such as dredging, dumping or filling, the fair market value is the expected cost of hiring a contractor to perform the operation or where no such a value can be calculated, the total of labor, equipment use, transportation, and other costs incurred for the duration of the permitting project.

“Feasible” means, for the purpose of this chapter, 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 in similar circumstances, or studies or tests have demonstrated in similar

¹ - dollar value as of September 15, 2012.

circumstances 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; and

C. The action does not physically preclude achieving the project's primary intended legal use. In cases where this Chapter requires certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, the City may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.

“Feedlot” see 17.08.020 BMC.

“Fill, shoreline” means 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.

“Fish and Wildlife Habitat Conservation Areas” see 17.30.025 BMC.

“Floats” means a detached, anchored structure that is free to rise and fall with water levels including any floating, anchored platform or similar structure, used for boat mooring, swimming or similar recreational activities that is not anchored or accessed directly from the shoreline.

“Flood control works” means all development on rivers and streams designed to retard bank erosion, to reduce flooding of adjacent lands, to control or divert stream flow, or to create a reservoir, including but not limited to revetments, dikes, levees, channelization, dams, vegetative stabilization, weirs, flood and tidal gates. Excluded are water pump apparatus.

“Floodplain” see 17.30.0025 BMC.

“Floodplain management” means a long-term program to reduce flood damages to life and property and to minimize public expenses due to floods through a comprehensive system of planning, development regulations, building standards, structural works, and monitoring and warning systems.

“Floodway” means the area that has been established in federal emergency management agency flood insurance rate maps or floodway maps.

“Frequently Flooded Area” see 17.30.025 BMC.

“Frontage, shoreline” is the distance measured along the ordinary high water mark.

“Future Service Area” see 17.08.020 BMC.

“G”

“Geologically Hazardous Areas” see 17.30.025 BMC.

“Geotechnical report” or **“geotechnical analysis”** see 17.30.025 BMC.

“Grade” see 17.08.020 BMC.

“Grading” see 17.08.020 BMC.

“Guidelines” means the State of Washington’s adopted Shoreline Master Program Guidelines (WAC 173-26, as amended).

“H”

“Habitat” see 17.30.025 BMC.

“Hard shoreline stabilization” means shore erosion control practices using hardened structures that armor and stabilize the shoreline landward of the structure from further erosion including but not limited to, bulkheads, rip-rap, jetties, groins, breakwaters, and stone reinforcement.

“Height, building” means the distance measured from average grade level to the highest point of a structure: Provided, that television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines, or this Chapter specifically requires that such appurtenances be included: Provided further, that temporary construction equipment is excluded in this calculation.

“Historic Site” see 17.08.020 BMC.

“Hotel” see 17.08.020 BMC.

“Houseboat” means a vessel, principally used as an over water residence. Houseboats are licensed and designed for use as a mobile structure with detachable utilities or facilities, anchoring and the presence of adequate self-propulsion and steering equipment to operate as a vessel. Principal use as an over-water residence means occupancy in a single location, for a period exceeding 30 days in any one calendar year. This definition includes liveaboard vessels.

“I”

“Industrial use” means a use including manufacturing, processing, warehousing, storage, distribution, shipping and other related uses.

“In-stream Structure” means a structure placed by humans within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

“L”

“Landfill” means a disposal site or part of a site at which waste is placed in or on land and which is not a landspreading disposal facility, or as otherwise defined by the city of Brewster. The most stringent definition shall apply.

“Land Use, High Impact” “High Intensity Land Use” means land use that includes the following uses or activities: commercial, urban, industrial, institutional, retail sales, residential (more than 1 unit/acre), high intensity new agriculture (dairies, nurseries, greenhouses, raising and harvesting crops requiring annual tilling, raising and maintaining animals), high intensity recreation (golf courses, ball fields), and hobby farms.

“Land Use, Low Impact” means land use that includes the following uses or activities, forestry (cutting of trees only), low-intensity open space (hiking, bird-watching, preservation of natural resources, etc.), unpaved trails, utility corridor without a maintenance road and little or no vegetation management.

“Land Use Medium Impact” means land use that includes the following uses or activities, residential (1 unit/acre or less), moderate-intensity open space (parks with biking, jogging, etc.),

conversion to moderate-intensity agriculture (orchards, hay fields, etc.), paved trails, building of logging roads, utility corridor or right-of-way shared by several utilities and including access/maintenance road.

“**Large Woody Debris**” or “**LWD**” means all wood greater than four inches (4”) in diameter naturally occurring or artificially placed in streams, including, branches, stumps, logs and logjams.

“**Litter container**” means a container provided on public or private property for temporary disposal of wastepaper, used beverage or food containers, and other small articles of rubbish, trash, or garbage by users of the site. Every litter container shall be closed with a well-fitting lid or designed to reasonably prevent its contents from becoming litter.

“**Local Government**” see 19.01.005 BMC.

“**Lot Coverage, shoreline**” means that portion of a lot which, when viewed directly from above, would be covered by building(s) and/or structure(s) and/or impervious surfaces. The portion of the lot covered by the roof projection or eaves beyond the wall of the building(s) and/or structure(s), is not included as lot coverage in shoreline areas.

“**Lot Width**” see 17.08.020 BMC.

“**M**”

“**Manure lagoon**” see 17.08.020 BMC.

“**May**” means an action is acceptable, provided it conforms to the provisions of this Chapter.

“**Manufacturing, Heavy**” see 17.08.020 BMC.

“**Manufacturing, Light**” see 17.08.020 BMC.

“**Marina**” means a facility which provides boat launching, storage, supplies and services for small pleasure craft. There are two basic types of Marinas; open type construction (floating breakwater and/or open pile work) and solid type construction (bulkhead and/or landfill).

“**Mineral Resource Lands**” see 17.30.025 BMC.

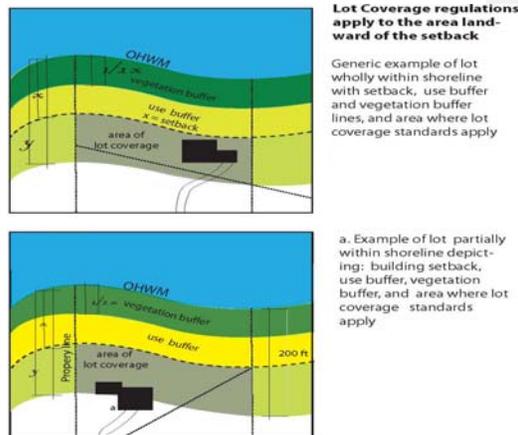
“**Mineral prospecting**” see 17.08.020. BMC.

“**Mining**” see 17.08.020 BMC.

“**Mitigation plan**” see 17.30.025 BMC.

“**Mixed use development**” means 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 developments must include a water dependent use(s) and provide a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration, except as provided for in WAC 173-26-241(3)(d).

“**Monitoring**” means evaluating the impacts of development on the environment (which may include biology, geology, hydrology, hydraulics, and other factors related to safety and shoreline ecological function) and determining how well any required mitigation measures are functioning through the monitoring period. Monitoring may also include collection and analysis



of data by various methods for the purpose of understanding and documenting changes in natural ecosystems and features; and does also include gathering baseline data.

“**Multi-family dwelling (residence)**” see 17.08.020 BMC.

“**Municipal uses**” means those uses and facilities in support of local government functions and services. For the purposes of this Chapter, recreational uses and utility facilities are excluded.

“**Must**” means an action is required.

“N”

“**Natural or existing topography**” means the topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling.

“**Natural Resource Lands**” see 07.30.025 BMC.

“**New construction**” means structures for which the “start of construction” commenced on or after the effective date of this chapter.

“**Nonconforming Structure, shoreline (legal)**” means an existing structure built in conformance with the requirements in place at the time of construction or prior to the effective date of the adoption of this Chapter that could not be built under the terms of this Chapter or any amendment thereto.

“**Nonconforming Use**” see 17.08.020 BMC.

“**Non-exempt single family residence**” see “Residential development”

“**Non-structural shoreline stabilization**” means areas and activities including building setbacks, ground water management, and planning and regulatory measures to avoid the need for structural stabilization, vegetation stabilization and bioengineered stabilization.

“**Non-water-oriented use**” means a use that is not a water-dependent, water-related, or water-enjoyment use.

“**Normal maintenance**” means those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition.

“**Normal protective bulkhead**” means those structural and nonstructural developments installed at or near, and parallel to, the ordinary high water mark for the sole purpose of protecting an existing single-family residence and appurtenant structures from loss or damage by erosion.

“**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.

“O”

“**OFM**” means the Office of Financial Management of the State of Washington.

“**Official Map of Shorelines**” means all maps adopted as part of the Shoreline Section of the City of Omak Comprehensive Plan and this Chapter delineating the geographic boundaries of all designated water bodies in Omak coming under the jurisdiction of the Shoreline Management Act of 1971.

“**Open Space**” see 17.08.020 BMC.

“Ordinary high water mark (OHWM)” means on all lakes, streams, and tidal water, 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: 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.

“Over-water structures” means any structure located waterward of the OHWM. Common examples include, but are not limited to, docks, piers and bridges.

“P”

“Permit” see 19.01.005 BMC.

“Person” see 17.08.020 BMC.

“Placer mining” see 17.08.020 BMC.

“Primary utilities” means transmission, collection, production, or treatment facilities that are generally regional or area wide in scope and provide the primary service to a large area and may or may not be connected directly to the uses along the shoreline. Utilities include primary transmission facilities related to a hydropower and communications, and distribution or collection systems for water, sewer mains, gas and oil pipelines, and wastewater and water treatment plants.

“Priority Habitat” see 17.30.025 BMC.

“Priority Species” see 17.30.025 BMC.

“Provisions” means policies, regulations, standards, guideline criteria or shoreline designations.

“Public Access” means the public's right to get to 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/or visual access facilitated by means such as scenic roads and overlooks, viewing towers and other public sites or facilities.

“Public interest” means 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 including, but not limited to, an effect on public property or on health, safety, or general welfare resulting from a use or development.

“Public Trust Doctrine” means a legal principle derived from English Common Law. The essence of the doctrine is 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 and that this trust is not invalidated by private ownership of the underlying land. The doctrine limits public and private use of tidelands and other shorelands to protect the public's right to use the waters of the state.

“Q”

“Qualified professional” see 17.08.020 BMC.

“R”

“Recreation, low-intensity” means recreation that does not require developed facilities other than unpaved trails and can be accommodated without change to the area or resource other than development of trails and placement of litter containers and directional and interpretive signs. Examples are hiking, shore fishing, and bicycling.

“Recreational development” see 17.08.020 BMC.

“Recreational uses” means 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, 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 not related to the water, nor provide significant public access are considered nonwater-oriented. For example, a recreation uses solely offering indoor activities would be considered nonwater-oriented.

“Residential development, shorelines” means one or more 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, mobile homes, short and long divisions of land and other structures that serve to house people:

- A. Exempt Single Family Residential: Construction on shorelands by an owner, lessee, or contract purchaser of a single-family residence for his own use or the use of his family.
- B. Non-exempt single family dwellings (e.g. seasonal or year round rentals), development of a single-family unit not lived in by owner or his/her own family.
- C. Multi-family Residential: can include duplex, 3 or more residential units, apartments, townhomes, and condominiums.

“Responsible Official” means the duly elected Mayor or Public Works Director of the city of Brewster or their designee.

“Restore”, “restoration” or “ecological restoration” means the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, revegetation, 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.

“Riparian Area” means those transitional areas between terrestrial and aquatic ecosystems and are distinguished by gradients in biophysical conditions, ecological processes, and biota. They are areas through which surface and subsurface hydrology connect waterbodies with their adjacent uplands. They include those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems (i.e., a zone of influence). Riparian areas are adjacent to perennial, intermittent, and ephemeral (with existing riparian vegetation) streams, lakes, and estuarine-marine shorelines..

“Riprap” means broken stone or other hardening material placed along the shoreline of a lake, river, or stream to prevent erosion or provide stability.

“S”

“Sanitary landfill” see 17.08.020 BMC.

“Seasonal” see 17.08.020 BMC.

“Shoreline setback” means the required minimum distance between the Ordinary High Water Mark and the outer-most vertical plane of any building, structure, device, fence, swimming

pool, landscaped or graded area, or other improvement causing a disturbance to the natural landscape.

“**Shoreline frontage**” means the land measured in linear feet along the OHWM of a lake, river, or stream subject to this Chapter.

“**Shoreline ecological function**” see “Ecological function”

“**Shoreline Jurisdiction**” or “**Shoreline Area**” means that area lying within 200 feet on a horizontal plane from the OHWM of the Columbia River.

“**Shoreline Master Program**” or “**SMP**” means the Shoreline Section of the Land Use Element of the City of Brewster Comprehensive Plan and Chapter 17.46 BMC 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 enunciated in RCW 90.58.

“**Shoreline Modifications**” means 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, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals.

“**Shoreline permit**” means a shoreline substantial development permit, a shoreline conditional use, or a shoreline variance, or any combination thereof issued by Brewster pursuant to RCW 90.58.

“**Shorelines**” means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except

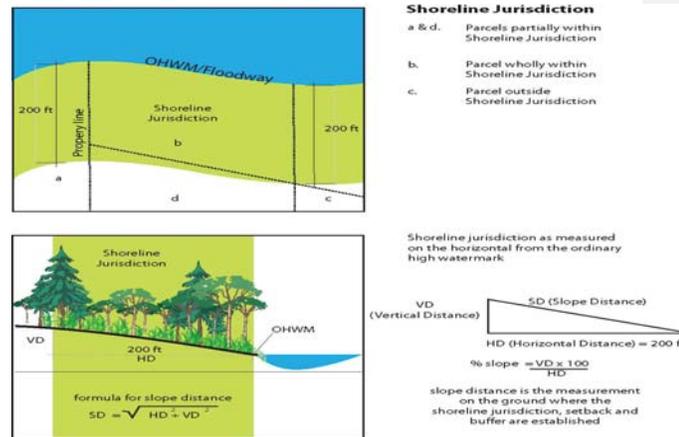
- A. Shorelines of statewide significance;
- B. Shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and
- C. shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes;

“**Shorelines of the State**” are the total of all "shorelines" and "shorelines of state-wide significance" within the state.

“**Shorelines of State-wide Significance**” in Brewster means:

- A. The Columbia River; and,
- B. Those wetlands associated with the river.

“**Short subdivision**” see 16.08.150 BMC.



“Significant vegetation removal” means the removal or alteration of trees, shrubs, and/or ground cover 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.

“Soft shoreline stabilization” means shore erosion control and restoration practices using only plantings or organic materials to restore, protect or enhance the natural shoreline environment.

“Solid waste” see 17.08.020 BMC.

“Special Event” see 17.08.020 BMC.

“Special Event Camping” see 17.08.020 BMC.

“Start of construction” see 17.08.020 BMC.

“Structural shoreline stabilization” means shore erosion control practices using hardened structures that armor and stabilize the shoreline landward of the structure from further erosion, examples include, bulkheads, concrete walls, rip-rap, jetties, groins, breakwaters, stone reinforcement.

“Structure” see 17.08.020 BMC.

“Subdivision, Long” see 17.08.020 BMC.

“Substantial accessory use facilities” Substantial accessory including but not limited to rest rooms, recreation halls and gymnasiums, commercial services, access roads, and parking areas associated with recreational development.

“Substantial development” shall mean any development of which the total cost or fair market value exceeds six thousand four hundred sixteen dollars (\$6,416)² or dollar value as amended by the State of Washington Office of Financial Management, or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. "Consumer price index" means, for any calendar year, that year's annual average consumer price index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the bureau of labor and statistics, United States department of labor. The office of financial management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the Washington State Register at least one month before the new dollar threshold is to take effect.

“Substantially degrade” means cause significant ecological impact.

“Substantial improvement” see 17.08.020 BMC

“T”

“Temporary” see 17.08.020 BMC.

“Temporary sign” see 17.08.020 BMC.

“Temporary Use” see 17.08.020 BMC.

2 - dollar value as of September 15, 2012.

“U”

“Upland” means that when used as an adjective, means outside of the shoreline area.

“Uplands” means those lands outside of the shoreline area and not under shoreline jurisdiction.

“Use (development)” see 17.08.020 BMC.

“V”

“Variance, shoreline” means an adjustment in the application of the bulk, height and setback regulations of this Chapter to a particular piece of property, in a situation where the property, because of special circumstances found to exist on the land, is deprived as a result of the imposition of the shoreline regulations of privileges commonly enjoyed by other properties in the same vicinity and shoreline designation. A variance shall be limited to only that adjustment necessary to remedy the disparity in privilege. A variance shall not be used to convey special privileges not enjoyed by other properties in the same vicinity and zone and subject to the same restrictions. Economic hardship is not grounds for a variance.

“Vegetation conservation” means activities to prevent the loss of plant communities that contribute to the ecological functioning of shoreline areas. Vegetation conservation deals with the protection of existing diverse plant communities along the shorelines, aquatic weed control, and the restoration of altered shorelines by reestablishing natural plant communities as a dynamic system that stabilizes the land from the effects of erosion.

“Vessel” includes ships, boats, barges, or any other floating craft which are designed and used for navigation and do not interfere with the normal public use of the water.

“Visual public access” see public access.

“W”

“Wetlands” see 17.30.025 BMC.

“Water-dependent use” means a use or portion of a use which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses may include marinas, water intake systems and sewer outfalls.

“Water-enjoyment use” means a recreational or similar use facilitating public access to the shoreline as a primary character 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 character of use and which, through location, design and operation assures the public’s ability to enjoy physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the public and the shoreline oriented space within the project must be devoted to the specific aspects of the use that foster enjoyment. Primary water-enjoyment uses may include, but are not limited to, parks, piers and other improvements facilitating public access to shorelines of the state; and general water-enjoyment uses may include but are not limited to restaurants, museums, aquariums, scientific/ecological reserves, resorts, and mixed use commercial; PROVIDED that such uses conform to the above water-enjoyment requirements and the provisions of this Chapter.

“Water-oriented use” means any one or combination of water-dependent, water-related or water-enjoyment uses.

“Water quality” means the physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this chapter, the term "water quantity" refers only to development and uses regulated under this chapter and affecting water quantity, such as impermeable surfaces and storm water handling practices. Water quantity, for purposes of this Chapter, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340.

“Water-related use” means 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:

- 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. Water-related uses may include fish hatcheries.

“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 miles of streamreach, in which less than twenty-five 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;
- 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 ordinary high water mark of the stream.

“Watershed restoration plan” means 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.

“Woody Debris” means all wood naturally occurring or artificially placed in streams, including, branches, stumps, logs and logjams.

Words used in the present tense shall include the future; the singular shall include the plural and the plural the singular; the word "shall" is mandatory and not permissive.

Definitions for terms requiring definitions not found herein shall be determined from the following sources, and if a conflict should arise between sources, such definition shall be established in the following priority:

- A. RCW 90.58, WAC 173-26, WAC 173-27, WAC 173-22
- B. Black's Law Dictionary by Henry Campbell Black, 3rd Edition, Publisher's Editorial Staff, St. Paul, West Publishing Company 1933, and subsequent amendments thereto.
- C. Webster's New Collegiate Dictionary, G. & C. Merriam Company, Springfield, Massachusetts, U.S.A., and subsequent amendments thereto.

17.46.050 Exemptions

- A. Application and interpretation of exemptions.
 1. 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 requirements for a substantial development permit.
 2. An exemption from the substantial development permit process is not an exemption from compliance with the act or the Chapter, nor from any other regulatory requirements. A development or use that is listed as a conditional use pursuant to 17.46.070 Table 3 BMC herein or is an unlisted use, must obtain a conditional use permit even though the development or use does not require a substantial development permit. When a development or use is proposed that does not comply with the bulk, dimensional and performance standards of the master program, such development or use can only be authorized by approval of a variance.
 3. The burden of proof that a development or use is exempt from the permit process is on the applicant.
 4. If any part of a proposed development is not eligible for exemption, then a substantial development permit is required for the entire proposed development project.
 5. The city 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 Chapter.
- B. The following developments shall not require substantial development permits:
 1. 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)³, if such development does not materially interfere with the normal public use of the water or shorelines of the state. For purposes of determining whether or not a permit is required, the total cost or fair market value shall be based on the value of development that is occurring on shorelines of the state as defined in RCW [90.58.030](#) (2)(c). The total cost or fair market value of the development shall include the fair market value of any

3 - The dollar threshold established in this subsection must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. "Consumer price index" means, for any calendar year, that year's annual average consumer price index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the Bureau of Labor and Statistics, United States Department of Labor. The office of financial management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the *Washington State Register* at least one month before the new dollar threshold is to take effect.

donated, contributed or found labor, equipment or materials;

2. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. 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;

3. Construction of the normal protective bulkhead common to single-family residences. 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 ordinary high water mark 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 ordinary high water mark. 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.

4. Emergency construction necessary to protect property from damage by 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 the local master program, obtained. All emergency construction shall be consistent with the policies of chapter [90.58](#) RCW and the local 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;

5. 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;

6. Construction or modification of navigational aids such as channel markers and anchor buoys;

7. 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 jurisdiction thereof, other than requirements imposed pursuant to chapter [90.58](#) RCW. An "appurtenance" is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and the perimeter of a wetland. On a statewide basis, normal appurtenances include a garage; deck; driveway; utilities; fences; 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 ordinary high water mark. Construction authorized under this exemption shall be located landward of the ordinary high water mark;

8. Construction of a dock, including a community dock, designed for pleasure craft only, for the private noncommercial use of the owner, lessee, or contract purchaser of single-family and multiple-family residences. A dock is a landing and moorage facility for watercraft and does not include recreational decks, storage facilities or other appurtenances. This exception applies if:

a) In fresh waters the fair market value of the dock does not exceed ten thousand dollars, but if subsequent construction having a fair market value exceeding two thousand five hundred dollars occurs within five years of completion of the prior construction, the subsequent construction shall be considered a substantial development for the purpose of this chapter.

9. 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 groundwater from the irrigation of lands;

10. 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;

11. 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;

12. Any project with a certification from the governor pursuant to chapter [80.50](#) RCW;

13. Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:

a) The activity does not interfere with the normal public use of the surface waters;

b) 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;

c) 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;

d) A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the local jurisdiction to ensure that the site is restored to preexisting conditions; and

e) The activity is not subject to the permit requirements of RCW [90.58.550](#);

14. 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;

15. Watershed restoration projects as defined herein. Local government 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.

16. A public or private project that is designed to improve fish or wildlife habitat or fish passage, when all of the following apply:

- a) The project has been approved in writing by the department of fish and wildlife;
- b) The project has received hydraulic project approval by the department of fish and wildlife pursuant to chapter [77.55](#) RCW; and
- c) The City has determined that the project is substantially consistent with the shoreline section of the Comprehensive Plan and this Chapter. The City shall make such determination in a timely manner and provide it by letter to the project proponent.
- d) Fish habitat enhancement projects that conform to the provisions of RCW [77.55.181](#) are determined to be consistent with local shoreline goals, policies and regulations, as follows:

1) In order to receive the permit review and approval process created in this section, a fish habitat enhancement project must meet the criteria under 17.46.050 16 d) 1) 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;
 - 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.
- ii. 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
- iii. 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;
 - By the sponsor of a watershed restoration plan as provided in chapter [89.08](#) RCW;
 - By the department as a department of fish and wildlife-sponsored fish habitat enhancement or restoration project;
 - Through the review and approval process for the jobs for the environment program;
 - 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;
 - 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.
- e) Fish habitat enhancement projects meeting the criteria of 17.46.050 16 d) 1) of this subsection are expected to result in beneficial impacts to the environment. Decisions pertaining to fish habitat enhancement projects meeting the criteria of 16 d) 1) 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).
- f) A hydraulic project approval permit is required for projects that meet the criteria of 17.46.050 16 d) 1) 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 the City. The City 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.
- i. 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.

- g) The City may require permits or charge fees for fish habitat enhancement projects that meet the criteria of 17.46.050 16 d) 1) of this subsection and that are reviewed and approved according to the provisions of this section.

17.46.052 Shoreline Substantial Development Permits

A. A Shoreline Substantial Development Permit shall be required for all development of shorelines, unless the proposal is specifically exempt per Section 17.46.050. Application requirements are contained in 19.02.020 BMC.

B. In order to be approved, the decision maker must find that the proposal is consistent with the following criteria:

1. All regulations of this Chapter appropriate to the shoreline designation and the type of use or development proposed shall be met, except those bulk and dimensional standards that have been modified by approval of a shoreline variance under Section 17.46.056.
2. All policies of the Shoreline Element of the Comprehensive Plan appropriate to the shoreline area designation and the type of use or development activity proposed shall be considered and substantial compliance demonstrated.
3. For projects located on shorelines of statewide significance, the policies in the Shoreline Element related to such shorelines shall be also be adhered to.

C. The Administrator may attach conditions to the approval of permits as necessary to assure consistency of the project with the Act and this Chapter.

17.46.054 Conditional Use Permits

A. Uses which are specifically prohibited by this Chapter may not be authorized pursuant to this section.

B. Uses specifically classified or set forth in this Chapter as conditional uses shall be subject to review and condition by the Administrator.

C. Other uses which are not classified or set forth in this Chapter 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 Chapter.

D. Conditional Use Permit Review Criteria

1. The purpose of a conditional use permit is to provide a system within the master program which allows flexibility in the application of use regulations in a manner consistent with the policies of RCW 90.58.020. In authorizing a conditional use, special conditions may be attached to the permit by the city of Brewster or the Department of Ecology to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the act and the local master program.
2. Uses which are classified or set forth in this Chapter as conditional uses may be authorized provided that the applicant demonstrates all of the following:
 - a. That the proposed use is consistent with the policies of RCW 90.58.020 and the master program;

- b. That the proposed use will not interfere with the normal public use of public shorelines;
- c. That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and this Chapter;
- d. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and
- e. That the public interest suffers no substantial detrimental effect.

E. 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.

17.46.056 Variances

A. The purpose of a variance is to grant relief to specific bulk or dimensional requirements set forth in this Chapter and any associated standards appended to this Chapter such as critical areas buffer requirements where there are extraordinary or unique circumstances relating to the property and/or surrounding properties such that the strict implementation of this Chapter would impose unnecessary hardships on the applicant/proponent or thwart the policy set forth in RCW 90.58.020. Use restrictions may not be varied.

B. 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 shall be shown and the public interest shall suffer no substantial detrimental effect.

C. Variance permits for development and/or uses that will be located landward of the ordinary high water mark (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 can demonstrate all of the following:

1. That the strict application of the bulk, dimensional or performance standards set forth in this Chapter precludes, or significantly interferes with, reasonable use of the property;
2. That the hardship described in (17.46.056 C. 1.) of this subsection is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of the master program, and not, for example, from deed restrictions or the applicant's own actions;
3. That the design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan, shoreline element and this Chapter and will not cause adverse impacts to the shoreline environment;
4. That the variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;
5. That the variance requested is the minimum necessary to afford relief; and
6. That the public interest will suffer no substantial detrimental effect.

D. Variance permits for development and/or uses that will be located waterward of the ordinary high water mark (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 can demonstrate all of the following:

1. That the strict application of the bulk, dimensional or performance standards set forth in this chapter precludes all reasonable use of the property;
2. That the proposal is consistent with the criteria established under Section 17.46.056 C 1 through 6; and
3. That the public rights of navigation and use of the shorelines will not be adversely affected.

E. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. 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 RCW [90.58.020](#) and shall not cause substantial adverse effects to the shoreline environment.

F. Variances from the use regulations of the master program are prohibited.

G. In authorizing a variance, special conditions may be attached to the permit by the City of Brewster or the Department of Ecology to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the act and this Chapter.

H. On all variance applications the plans shall clearly indicate where development could occur without approval of a variance, the physical features and circumstances on the property that provide a basis for the request, and the location of adjacent structures and uses.

17.46.060 General Regulations

A. General

1. Regulation of private property to implement any Shoreline goals such as public access and protection of ecological functions must be consistent with all relevant constitutional and other legal limitations. These include, but are not limited to, property rights guaranteed by the United States Constitution and the Washington State Constitution, applicable federal and state case law, and state statutes.
2. Rights reserved or otherwise held by Indian Tribes pursuant to Treaties, Executive Orders, or Statutes, including right to hunt, fish, gather, and the right to reserved water, shall not be impaired or limited by any action taken or authorized by the City under its Shoreline Master Program, and all rights shall be accommodated.
3. All development or use activity which occurs within the areas coming under the jurisdiction of this Chapter and the Shoreline Management Act (SMA), whether it requires a permit or not, must be consistent (in design, development and operation) with the intent of the SMA, conform to Chapter RCW 90.58 (SMA), this Chapter, adopted comprehensive plans, all applicable local regulations (including current zoning, subdivision, SEPA, critical areas, flood damage prevention or hazard reduction, health, sanitation, and building ordinances or codes), and any applicable state and federal regulations.

- 4.** Emergency construction may be permitted subject to WAC 173-27-040(2)(d) (“Developments exempt from substantial development permit requirement”), when, as determined by Okanogan County Emergency Services or other formally designated local official in consultation with the Shoreline Administrator, that life and/or property is in danger. Emergency construction must be consistent with the policies of Chapter [90.58](#) RCW and this Chapter and with the regulations for shoreline modifications (Sections 17.46.060 B, C and E and Sections 17.46.070 F, I and S herein). Prior to emergency construction, the landowner must agree that, upon abatement of the emergency situation any 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, or this Chapter, shall be obtained. Mitigation pursuant to consultation with appropriate resource agencies shall be required for any permit issued after an emergency action. Regular flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency.
- 5.** The provisions of this Chapter do not require modification of or limitations on agricultural activities legally underway on agricultural lands as of the date of adoption of this Chapter.
- 6.** All shoreline and shoreland uses and activities shall be located and designed to minimize or prevent the need for shoreline stabilization measures, flood protection works, filling and/or substantial site re-grading. The use of car bodies, scraps of building materials, tires, asphalt or concrete from street work, or any discarded pieces of equipment, appliances or other debris for the stabilization of shorelines is prohibited. This prohibition shall not preclude the use of recycled/repurposed materials where the applicant has demonstrated the use of such used materials is equivalent to similar new materials. See regulations in Sections 17.46.060 B, C and E and Sections 17.46.070 F, I and S, for specific shoreline stabilization regulations and standards.
- 7.** The disposal or dumping of solid waste is strictly prohibited in all shoreline areas, except in litter containers, which shall be regularly emptied, with the contents collected for transportation to an approved sanitary landfill or transfer station.
- 8.** Dumping and/or burning of residential, commercial, industrial or municipal yard waste within the Zone 1 Vegetation Buffer is prohibited in all shoreline designations.
- 9.** No development designed for human habitation (e.g. houseboats, floating homes or cantilever type construction) is permitted on or over water.
- 10.** All shoreline development shall be conducted so as to minimize the effects on water quality from the addition of suspended solids, leaching of contaminants, or disturbances to habitat, and shall be consistent with this Chapter as well as the requirements of applicable regulatory agencies, including but not limited to the Washington departments of Ecology and of Fish & Wildlife and the U. S. Army Corps of Engineers.
- 11.** 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 habitats and species.
- 12.** All uses and activities, including those exempt from the requirement to obtain a

shoreline substantial development permit, shall adhere to all required setbacks and other development standards, and shall retain all required buffers, in accordance with the provisions of this Chapter unless the use or activity is granted a variance.

13. No new development shall be allowed in wetlands, shoreline vegetation conservation areas or their buffers without following mitigation sequencing as regulated by Chapter 19.02.025.

14. All clearing and grading activities shall be limited to the minimum necessary for the allowed or permitted development and shall comply with the provisions of 17.46.060 Table 1 and 17.46.060 Table 2 and the regulations in Sections 17.46.060 B, and 17.46.060 C.

15. The city shall give preference to biological or mechanical means rather than herbicides or insecticides for weed and pest control in shoreline areas. When agricultural chemicals, fertilizers and other spray materials are used, provisions shall be made to minimize their entry into any body of water by following guidance found in Eastern Washington Storm Water manual and seeking guidance provided by Washington State Dept of Agriculture. Spraying over open water is prohibited except to control known risks to public health or as approved by the State for treatment of aquatic weeds. Herbicides and pesticides shall not be applied or allowed to directly enter water bodies or wetlands unless approved for such use by the appropriate agencies.

16. All shoreline uses and activities shall comply with the Storm Water Management Manual for Eastern Washington (Washington Department of Ecology Publication 04-10-076, as amended). Specific requirements include, but are not limited to:

a. Solid and liquid wastes, untreated effluents, oil, chemicals, and other hazardous materials shall not be allowed to enter any body of water or to be discharged onto land. Equipment for the transportation, storage, handling, or application of such materials shall be maintained in a safe and leak-proof condition. If there is evidence of leakage, the further use of such equipment shall be suspended until the deficiency has been satisfactorily corrected.

b. All shoreline uses and activities in all shoreline designations, both during construction and for the life of the project, shall use storm water best management practices to minimize any increase in surface water runoff and to control, treat, and release surface water runoff so that receiving water quality and shoreline ecological functions are not adversely affected. Such measures may include but are not limited to low impact development, dikes, catch basins, settling ponds, oil/water separators, grassy swales, interceptor drains, and landscaped buffers. All measures shall be adequately maintained to insure proper functioning over time. The *Storm Water Management Manual for Eastern Washington* (Washington Department of Ecology Publication 04-10-076, as amended) shall provide the preferred guidance for surface water runoff best management practices.

17. All shoreline areas to be disturbed by proposed individual uses and developments in all shoreline designations which cause adverse environmental impacts to occur to shoreline functions shall be restored in compliance with an approved mitigation management plan as found in Chapter 09.02.025) and be subject to posting a reclamation bond. Vegetation from the recommended list (in Comprehensive Plan Shoreline Element Appendix B) or other species authorized by the City shall be used. Planting of non-native plant species shall be prohibited in Zone 1 buffer areas. Plants that may compromise shoreline values shall be prohibited. The permit application submittal shall identify the size, location, and species of

plants that will be used. The owner, manager, agency or developer maintaining the facility/parcel shall also be responsible for maintaining the vegetation until it is established. See Section 17.46.060 E. Vegetation Conservation for specific regulations and standards.

18. Any vacation of right-of-way within the shoreline must comply with RCW 35.79.035, “Limitations on vacations of streets abutting bodies of water — Procedure”, as it now exists and hereinafter amended.

19. All shoreline modification activities not in support of an existing conforming use or other allowed use are prohibited, unless it can be demonstrated, that such activities are necessary to protect primary structures and in the public interest or are for the maintenance, restoration or enhancement of shoreline ecological functions.

20. Shoreline modifications shall result in no net loss of shoreline ecological functions. The number and extent of shoreline modifications shall be limited to the minimum required.

21. Only shoreline modifications that are appropriate to the specific type of shoreline and environmental conditions shall be allowed. Preference shall be given to those types of shoreline modifications that have a lesser impact on ecological functions. For example, planting vegetation that will stabilize the shoreline is preferred rather than a concrete bulkhead.

22. Ecological impacts of shoreline modifications shall be mitigated in conformance with the regulations contained herein.

23. All shoreline modification activities must conform to this Chapter.

B. Clearing and Grading

1. Clearing and grading shall be addressed and identified in the permit or exemption application for the shoreline use or activity with which it is associated.

2. Clearing or grading within required Zone 1 Vegetation and Zone 2 Use buffers and/or wetland buffers shall comply with the requirements of Section 17.46.080 F.

3. No clearing or grading shall be initiated before the permit, exemption or variance approval is issued.

4. Existing native riparian vegetation shall be retained whenever possible.

5. Grading permits:

a. A grading permit issued by the City shall be required in the following situations:

1) Where more than 50 cubic yards of material will be moved within a shoreline area for any reason; or

2) Any clearing or grading within building setbacks or buffers.

3) Where clearing and grading will modify a percentage of a site’s shoreline area landward of the building setback that is greater than the percentage or square footage (whichever is greater) as specified in 17.46.060 Table 1.

b. An increase of up to 25% cleared and graded area may be permitted through the submittal of a critical areas report and mitigation plan that demonstrates the grading and clearing will not impact the shoreline ecological function or value.

17.46.060 Table 1 Shoreline Clearing and Grading Standards⁴

Shoreline Designation	Percent of site located within shoreline jurisdiction that may be cleared and/or graded ⁵
High Intensity	60%
Shoreline Residential	50%
Urban Conservancy	15%
Shoreline Recreation	50%
Aquatic	N/A

6. In its review of clearing and grading proposals, the City shall require and utilize a clearing and grading plan that addresses species removal, replanting, irrigation, storm water control (including runoff from structures and pervious surfaces), erosion and sedimentation control, and plans for protecting shoreline resources and results in no net loss of ecological function.

7. Grading of a development site shall not alter natural drainage patterns in manner that would increase the rate or quantity of surface run-off. Such grading activities shall require a grading plan compliant with storm water best management practices.

8. Immediately upon completion of the construction or maintenance activity, remaining cleared areas shall be restored to a naturalistic condition using compatible, self-sustaining vegetation in accordance with Section 17.46.060 E Vegetation Conservation.

9. Clearing by hand-held equipment of invasive non-native vegetation on the State Noxious Weed List is permitted in shoreline areas provided the disturbed area is promptly replanted with vegetation from the recommended list (Comprehensive Plan Shoreline Element Appendix B) or if the site will fully re-vegetate with plants that will support healthy shoreline function on its own within three growing seasons.

10. All shoreline development and activity shall use applicable BMPs from Eastern Washington Storm Water Management to minimize increases in surface water runoff that may result from clearing and grading activity.

11. Soil stabilization associated with clearing and grading shall, whenever feasible, use bioengineering or other soft stabilization techniques.

12. Any significant placement of materials from off of the site, or substantial creation or raising of dry upland, shall be considered filling and shall comply with the fill provisions of Section 17.46.060 C Fill.

13. Clearing and grading that is not part of an allowed and permitted shoreline use shall

4 - The standards in the table provide for the maximum percentage that may be cleared outside of Vegetation and Use Buffers.

5 - The percentages represent the maximum allowable with an increase of up to 25% permitted subject to a critical areas report and mitigation management plan that considers present ecological function, cumulative impacts of the development and restoration opportunities, both on and off-site, DOES NOT INCLUDE CLEARING WITHIN THE ZONE 1 or ZONE 2 BUFFERS.

require a conditional use permit except on properties physically separated from the shoreline by another developed property or developed public right of way.

C. Fill.

- 1.** The City shall require and use the following information in its review of fill proposals and the applicant shall submit the following on their permit or exemption application:
 - a.** Proposed use of the fill area.
 - b.** Physical characteristics, such as chemical and biological composition if appropriate, depending on where it is to be placed or will be subject to inundation.
 - c.** Source of the fill material.
 - d.** Method of placement and compaction.
 - e.** Location of fill relative to existing drainage patterns and wetlands.
 - f.** Location of the fill perimeter relative to the ordinary high water mark.
 - g.** Perimeter erosion control or stabilization measures.
 - h.** Type of surfacing and runoff control devices.
- 2.** Fill waterward of the ordinary high water mark or in wetlands shall only be permitted as a conditional use in all shoreline designations, and only when necessary for one of the following purposes:
 - a.** water-dependent use,
 - b.** public access,
 - c.** cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan,
 - d.** disposal of dredged material considered suitable under, and conducted in accordance with the dredged material management program of the department of natural resources,
 - e.** Expansion or alteration of transportation facilities of statewide significance currently located on the shoreline and then only upon a demonstration that alternatives to fill are not feasible, mitigation action, environmental restoration, beach nourishment or enhancement project.
 - f.** Fill in wetlands must comply with the wetlands provisions of this Chapter and shall result in no net loss of wetland area in functions including lost time when the wetland does not perform the function and is subject to mitigation in this Chapter.
- 3.** Pier or pile support shall be utilized whenever feasible in preference to filling. Fills for approved road, bridge or navigational structure development in floodways or wetlands shall be permitted only if pile or pier supports are proven infeasible.
- 4.** Fills are prohibited in floodplains except where it can be clearly demonstrated that the geo-hydraulic characteristics and floodplain storage capacity will not be altered to cause increased flood hazard or other damage to life or property in excess of accepted standards provided by state and/or federal agencies.
- 5.** Fills are prohibited in floodways.
- 6.** Fills shall be permitted only when it is demonstrated that the proposed action will not:

- a. Result in significant damage to water quality or fish and wildlife habitat;
- b. Adversely affect natural drainage and circulation patterns or significantly reduce flood water capacities;
- c. Affect slope stability; or
- d. Otherwise damage shoreline or aquatic resources.

7. Placing fill in water bodies or wetlands to create usable land for shoreline development is prohibited and shall not be used to calculate parcel size proposed for subdivision.

8. Fills shall be designed, constructed, and maintained to prevent, minimize, and control all material movement, erosion, and sedimentation from the affected area. Perimeters of permitted fill projects shall be designed and constructed with silt curtains, vegetated buffer areas, or other methods, and shall be adequately sloped to prevent erosion and sedimentation both during initial fill activities and afterwards. Such containment practices shall occur during the first growing season following completion of the fill and shall be maintained until self-sustaining. The design shall incorporate natural-appearing and self-sustaining control methods unless they can be demonstrated to be infeasible due to existing environmental conditions such as currents and weather.

9. Fill materials shall be sand, gravel, rock, soil, or similar materials. Use of polluted dredge spoils, solid waste, and sanitary landfill materials is prohibited.

10. Fills shall be designed to allow surface water penetration into ground water supplies where such conditions existed prior to fill. Fills shall not be permitted in aquifer recharge areas if they would have the effect of preventing percolation of the water.

11. The timing of fill construction shall be regulated to result in no net loss of shoreline ecological functions, including water quality and aquatic life.

12. Fill on dry land shall not result in substantial changes to patterns of surface water drainage from the project site and onto adjacent properties; within shoreline areas; into aquatic areas; or onto steep slopes or other erosion hazard areas.

D. Non-Wetland Setbacks and Buffers (for wetland buffers see Section 17.46.080 F.)

1. Shoreline buffers⁶ in shoreline areas shall be comprised of a vegetation and use buffers as follows:

a. **Zone 1 -Vegetation Buffer.** The area one-half the distance of the setback (setbacks are listed in 17.46.060 Table 2), in all shoreline areas is designated as a Vegetation Buffer. The vegetation buffer serves as restrictive protection zone for all shoreline functions and values in general and fish and wildlife habitat specifically. In these areas, existing native vegetation or vegetation from the recommended list (Comprehensive Plan Shoreline Element Appendix B) must be maintained and protected, except as provided for in Public Access – View Corridor Provisions (Section 17.46.070 N) and General Regulations (Section 17.46.060), Clearing and Grading (Section 17.46.060 B).

b. **Zone 2 - Use Buffer.** The area between the Zone 1 Vegetation Buffer and setback line (setbacks are listed in 17.46.060 Table 2) in all shoreline areas is designated as Zone 2 Use Buffer. In these areas, removal of existing native vegetation shall be limited as provided in 17.46.060 Table 1 and uses limited to low intensity recreation, agricultural,

6 - Shoreline buffers in this Chapter shall serve as Riparian fish and wildlife habitat buffers.

accessory residential uses and accessory water-dependent and accessory water-related commercial uses.

2. Measurement:

a. All setbacks and Zone 1, Vegetation buffers⁷ shall be measured on a horizontal plane from the ordinary-high-water-mark (OHWM) unless otherwise noted in 17.46.060 Table 2.

b. Zone 2, Use buffers shall be measured on a horizontal plane from the landward side of the vegetation buffer.

c. Use of Parallel Shoreline Designations – Parallel shoreline designations have been used throughout most of the community where the water front property is owned by the Douglas County Public Utility District. These areas are designated as Urban Conservancy with the intent of providing maximum protection to the immediate waterfront⁸. Where parallel shoreline designations have been applied in shoreline jurisdiction, the landward (higher intensity) Shoreline Designation's Zone 1 vegetation buffer shall be a minimum of 15 feet on a horizontal plane from the OHWM or the landward edge of the Urban Conservancy Designation, whichever is greater. The Zone 2 use buffer is measured on a horizontal plane from the landward edge of required Zone 1 vegetation buffer. Where the Urban Conservancy designation extends landward beyond the required Zone 2 use buffer, the landward edge of the Urban Conservancy designation shall be the extent of the Zone 2 use buffer.

d. All non-Wetland buffers shall be measured on a horizontal plane from the Ordinary High Water Mark.

3. All buffers, lot frontage and lot coverage requirements shall be as set forth in 17.46.060 Table 2 except as follows or noted as exempt in Section 17.46.060 D 3. e.:

a. Standard shoreline setbacks and/or Zone 1 or 2 buffers and/or lot coverage may be reduced by using procedures set forth in Section 17.46.060 D. 3. b and c. Lot coverage may be increased by using Section 17.46.060 D. 3. d. Administrative Lot Coverage Increase.

b. Administrative Buffer Width Averaging. The total required shoreline buffer (Zone 1+ Zone 2) width may be modified by the Administrator for existing lots of record in place at the time of adoption of this Program by averaging buffer widths based on a critical areas report and mitigation management plan prepared by a qualified professional and submitted by the applicant. A SEPA document may also be required depending on SEPA requirements found in WAC 197-11 and Brewster Municipal Code Title 14. Buffer width averaging shall only be allowed where the applicant demonstrates all of the following:

- 1) The project site and adjoining area contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation;
- 2) The width averaging shall not adversely affect the project site and adjoining area and buffer's functional value;

7 - Vegetation buffers are required for all shoreline developments in all environments.

8 - The majority of the waterfront in Brewster has been rip-rapped or otherwise altered as part of the construction of the Wells Pool behind the Douglas County PUD's Wells Dam.

- 3) The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging unless a standard reduction is permitted through an administrative reduction as specified in Administrative Buffer Reduction (Section 17.46.060 D. 3. c).
 - 4) The minimum buffer width at its narrowest point shall not be less than seventy-five (75%) percent of the buffer width established under 17.46.060 Table 2.
 - 5) Sites which have had buffer widths reduced or modified, by any prior action administered by the local government are not eligible for the provisions of this section. Sites which utilize this provision are not eligible for any future buffer width reductions, under any provisions of this program, except as administered as a Type III permit under Chapter 19.01 BMC.
- c. Administrative Buffer Reduction.** The Administrator shall have the authority to reduce buffer widths established in 17.46.060 Table 2 on a case-by-case basis; provided that the general standards for avoidance and minimization in Chapter 19.02.025 BMC shall apply, based on a critical areas report, mitigation management plan and SEPA document prepared by a qualified professional and submitted by the applicant, and when the applicant demonstrates to the satisfaction of the Administrator that all of the following criteria have been met:
- 1) The buffer reduction shall not result in a net loss of functions of the habitat buffer.
 - 2) The maximum buffer width reduction allowed shall not exceed twenty-five (25%) percent total required buffer established in 17.46.060 Table 2.
 - 3) The buffer width reduction is contingent upon the submittal and approval of a critical areas report, mitigation management plan and SEPA document in conformance with Chapters 19.02 and 19.04 BMC.
 - 4) Sites which have had buffer widths reduced or modified, by any prior action administered by the local government are not eligible for the provisions of this section. Sites which utilize this provision are not eligible for any future buffer width reductions, under any provisions of this program, except as administered under 17.46.056.
 - 5) In cases where there is less than 25' of existing riparian vegetation, the width of the buffers may be reduced, subject to the buffer Width Averaging (Section 17.46.060 D. 3. b.) or Administrative Buffer Reduction (Section 17.46.060 D. 3. c.) standards established above. To support a claim that the Buffer should be reduced, a planting plan shall be submitted in combination with a mitigation management plan (Chapter 19.02.025 BMC) and SEPA document prepared by a qualified professional and submitted by the applicant. The administrator's decision may be based on, but is not limited to, photographs of existing site conditions, and opinions of qualified professionals. In no case shall the Zone 1 buffer be decreased to less than 10' or the total slope of the bank, whichever is greater. There is an exception for the water dependent portion of the development which is allowed to be located directly adjacent to the OHWM.
- d. Administrative Lot Coverage Increase.** The Administrator shall have the authority to increase the lot coverage allowance in 17.46.060 Table 2 on a case-by-case basis; provided that the general standards for avoidance and minimization

in Chapter 19.02.025 BMC shall apply, and when the applicant demonstrates to the satisfaction of the Administrator that all of the following criteria have been met:

- 1) The increase in lot coverage will not increase surface water runoff, either onto other properties or toward the shoreline.
 - 2) The applicant is implementing best management techniques for the parcel's stormwater handling.
 - 3) No net loss of ecological functions and values will occur.
 - 4) Sites which have had lot coverage increased or modified, by any prior action administered by the local government are not eligible for the provisions of this section. Sites which utilize this provision are not eligible for any future lot coverage increases, under any provisions of this program, except as administered under the Section Variances.
- e. Activities Exempt from Non Wetland Buffers and Setbacks:** The following development activities are not subject to buffers and setbacks, provided that they are constructed and maintained in a manner that minimizes adverse impacts on shoreline ecological functions, these exceptions do not eliminate the proponent's need to apply mitigation sequencing or the need to provide mitigation for development's impacts, and provided further that they comply with all the applicable regulations herein:
- 1) **Water-Dependent Development:** Those portions of approved water-dependent development that requires a location directly adjacent to the ordinary high water mark of streams, rivers, lakes, ponds, associated wetlands, and/or within their associated buffers.
 - 2) **Modifications Necessary for Agency 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 this Chapter, provided that the administrator determines that:
 - i. The facility cannot meet the dimensional standard and accomplish the state, federal or court ordered modifications necessary to bring it into compliance;
 - ii. The facility modifications are located, designed, and constructed to meet specified required modification standards necessary while complying with mitigation sequencing and minimizing damage to ecological functions and values of the critical area and/or shoreline; and
 - iii. The modification follows necessary provisions for non-conforming development and uses.
 - 3) **Shared Moorage:** Shared moorages shall not be subject to side yard setbacks when located on or adjacent to a property line shared in common by the project proponents and where appropriate easements or other legal instruments have been executed providing for ingress and egress to the facility.
- f. Non-Wetland Buffer Exemption Criteria:** As determined by the Administrator, for development proposed on sites separated from the shoreline by intervening, and lawfully created public roads, railroads, or an intervening parcel under separate ownership (e.g. Douglas County PUD), the requirements of this code for a vegetation buffer may be waived. For the purposes of this section, the intervening lots/parcels, roads, or other

substantial improvements shall be found to:

- 1) Separate the subject upland property from the water body due to their width or depth;
- 2) Substantially prevent or impair delivery of most ecological functions from the subject upland property to the water body;
- 3) Be greater than 20' in width, measured horizontally and perpendicular from the OHWM of the Shoreline; and
- 4) Be in separate ownership, which has not been subdivided in the last 5 years and the applicant does not have a vested interest in the waterward intervening parcel; and
- 5) Be developed; the Buffer Exemption shall not be allowed if the intervening parcel is not developed.

E. Vegetation Conservation.

1. Restoration or enhancement of any shoreline area that has been disturbed or degraded shall use plant materials from the recommended list (Comprehensive Plan Shoreline Element Appendix B) or other species approved by agencies or organizations operating within the jurisdiction, such as the departments of Ecology, County Extension, Fish & Wildlife or the Native Plant Society.
2. Stabilization of erosion-prone surfaces along shorelines shall primarily use vegetative, non-structural means and shall comply with the provisions of Sections 17.46.060 E and 17.46.070 S. More intensive measures may be permitted providing the project will result in no net loss in shoreline function.
3. Vegetation removal that would be likely to result in significant soil erosion or the need for structural shoreline stabilization measures is prohibited. This does not preclude the removal of noxious weeds, provided a mitigation management plan is submitted and approved.
4. Weed abatement shall comply with all provisions of this Chapter.
5. Non-destructive pruning and trimming of vegetation for maintenance purposes shall be permitted in compliance with View Corridor provisions of Section 17.46.070 N.
6. Permits issued for projects in ecologically degraded areas shall include a condition that appropriate shoreline vegetation shall be planted or enhanced, to contribute to the restoration of ecological processes and functions.
7. If weather does not permit immediate restoration of disturbed areas, replanting shall be completed during the next planting season, and the soil shall be protected until replanting is complete.
8. If necessary, a temporary sterile cover crop (e.g., a sterile non-persistent member of the grass family such as sterile Triticale, barley, or oats) shall be planted to prevent erosion during the establishment period; said cover crop shall be maintained until the permanent vegetation is sufficiently established to prevent erosion.
9. Replanted areas shall be maintained until desired vegetation is well established (a minimum of three years). In the case of transportation, utility, or other capital facility construction, the agency or developer constructing the facility shall also be responsible for maintaining the vegetation until it is established.

17.46.060 Table 2 Shoreline Development Standards

All uses and activities must comply with all applicable standards for the shoreline designation where the use or activity will occur. All development standards are subject to modification based on a site specific assessment, but in no case shall the standards be reduced greater than 25% of the standards stated below without the approval of a Shoreline Variance.

Standards	Aquatic	Shoreline Recreation	Urban Conservancy	Shoreline Residential	High Intensity
Zone 1 + 2 Combined Vegetation and Use Buffer Width and Setback⁹					
Non-Water Dependent or Oriented Uses and Activities	N/A	50'	50'	20'	20' ¹⁰
Water-Oriented Uses and Activities	N/A	30'	30'	15'	15' ⁵
Water Dependent Uses and Activities ¹¹	N/A	0'	0'	0'	0'
Zone 1 Vegetative Buffer Width¹²					
Non-Water Dependent or Oriented Uses and Activities	N/A	25'	25'	10'	10'
Water-Oriented Uses and Activities	N/A	15'	15'	7.5'	7.5'
Water Dependent Uses and Activities	N/A	0'	0'	0'	0'
% of Vegetation Buffer that may be altered for view corridor ¹³	N/A	20%	10%	30%	40%
Zone 2 Use Buffer Width¹⁴					
Non-Water Dependent or Oriented Uses and Activities	N/A	25'	25'	10'	10'
Water-Oriented Uses and Activities	N/A	15'	15'	7.5'	7.5'
Water Dependent Uses and Activities	N/A	0'	0'	0'	0'
Zone 2 Use Buffer Allowed Alterations					
% of Use Buffer that may be altered in total for allowed uses and view corridors	N/A	40%	20%	50%	60%
Dimensions/Lot Coverage Requirements					
Minimum Lot size (acres) ¹⁵	N/A	1	1	6,000 sq ft	2,500 sq ft
Minimum Water Frontage ¹⁶	N/A	100'	75'	50'	50'
Maximum lot Coverage	N/A	30%	40%	60%	80%
Side Yard setbacks	N/A	5'	5'	5'	0' ¹⁷
Maximum Structure Height¹⁸					

10 - Measured from the top of the bank.

11- The setback may be reduced to 0' for those water-dependent uses (e.g. aquaculture, marinas, boat launches) that require location adjoining the water, but in all cases such a setback shall be limited to the smallest area possible.

12- The Zone 1 Vegetation Buffer is 50% of the particular use setback and is measured on a horizontal plane from the OHWM.

13- Percent of shoreline that maybe altered is the given percentage or 30' for every 100' in shoreline frontage for view corridor, whichever is less. See section 17.46.070 K. 1. View Corridor Provisions for more guidelines.

14- The area between the Vegetation Buffer and Setback intended for low impact uses and activities subject to standards. Use buffer measured on a horizontal plane from the landward edge of the Vegetation Buffer.

15- Minimum lot size may be increased based on applicable comprehensive plan and zoning regulations, but in no case shall be reduced without the approval of a variance. In addition minimum lot size only applies to lots or parcels created subsequent to the date of adoption of this Chapter, lots existing at the time of adoption shall be considered existing conforming parcels.

16- Minimum water frontage (measured along OHWM) only applies to lots or parcels created subsequent to the date of adoption of this Chapter, lots existing at the time of adoption shall be considered existing conforming parcels.

17- Zero (0') lot lines may be allowed through submittal of a development plan as part of a permit process (such as a building permit, PD, Long plat, binding site plan etc) as long as views of the shoreline from upland properties or right-of-ways are maintained and the cumulative sideyard setbacks meet or exceed 20'.

18 - height limitations do not apply to bridges, transmission lines, water crossings and related appurtenances.

Standards	Aquatic	Shoreline Recreation	Urban Conservancy	Shoreline Residential	High Intensity
Non-Water Oriented Uses and Activities	N/A	35'	35'	35'	35'
Water-Oriented Uses and Activities	N/A	25'	25'	25'	35'
Water Dependent Uses and Activities	10'	20'	20'	20'	35'

17.46.070 Use and Designation Specific Regulations

The following use and designation specific regulations are in addition to the General Regulations contained in 17.46.060.

A. Accessory Utilities

1. Sites disturbed for utility installation shall be stabilized during and immediately following construction to avoid adverse impacts from erosion.
2. Sites disturbed for utility installation shall be replanted using native species from the recommended list (Comprehensive Plan Shoreline Element Appendix B), with a diversity and type similar to or better than that which originally occurred on the site. Questions about appropriate diversity, plant type, and plant species shall be directed to agencies with expertise, such as the departments of Ecology and Fish and Wildlife.
3. Accessory utilities shall be placed landward of the permitted use setback requirements found in 17.46.060 Table 2. If feasible, utility lines shall be placed underground. Where lines must be placed aboveground, consideration shall be given to the maintenance of trees in the vicinity of the lines, and the utility line located to eliminate the need for topping or pruning trees.
4. Existing rights of way and corridors shall be used whenever possible to accommodate the location of utilities. Except where no other feasible alternative exists, accessory utilities that require continued maintenance (i.e. electrical transmission lines that require removal of undergrowth) shall not be placed in Zone 1 or 2 Buffers (between OHWM and structure setback).
5. Accessory Utilities should not obstruct views or vistas that may alter the visual character of the shoreline environment and its associated water body. Measures to conceal or shield accessory utilities in the shoreline from the water or to protect important view sheds or vistas from the shoreline may be required as conditions for building and development permits.
6. Aesthetic measures such as material and color selections to mitigate visual impacts including, but not limited to, light pollution, glare, visual obstructions of views and vistas may be required by the administrator.
7. Underground placement shall given preference over overhead or above ground utilities where feasible.
8. 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.

B. Agriculture

1. New agricultural activities on lands that did not have agricultural activities in place at the time of adoption of this Chapter; conversion of agricultural lands or the development of non-agricultural activities on agricultural lands; and uses in support of agricultural activities are governed by the provisions of this Chapter and subject to the following criteria:

- a. Non-Agricultural land¹⁹ converted to an agricultural use shall preserve pre-existing riparian habitat and will have a buffer strip of native vegetation no less than the Zone 1 Vegetation Buffer setback for the shoreline designation where it is located. Said buffer will be established and maintained along shorelines to protect shoreline ecological functions. Disturbance of ground in Zone 2 of the Use Buffer is subject to Lot Coverage standards (see 17.46.060 Table 2).
- b. Uses and activities shall be consistent with regulations specific to the shoreline designation and critical area (if applicable) in which the site is located, including regulations in 17.46.060 Tables 1 and 2 and 17.46.060 A and E;
- c. Nothing in this section limits or changes the terms of the current exception to the definition of substantial development. A substantial development permit shall be required for all agricultural development not specifically exempted by the provisions of RCW 90.58.030(3)(a)(vi), as it now exists or hereinafter amended.

C. Aquaculture

Aquaculture is prohibited in all shoreline designations.

D. Archaeological, Cultural, Educational, Historic and Scientific Resources

The following regulations apply to all shoreline uses and activities in all shoreline designations and on all sites within shoreline jurisdiction having archaeological, cultural, or historic resources that are recorded at the Washington Department of Archaeology and Historic Preservation (DAHP) and/or with local jurisdictions, including the City, the Confederated Tribes of Colville Reservation (CCT) and affected Indian tribes and bands; or that have been or may be inadvertently uncovered.

1. Archaeological sites are subject to the National Historic Preservation Act, as amended (16USC470), RCW 27.44 (Indian Graves and Records), RCW 27.53 (Archaeological Sites and Resources), and WAC 25-48 (Archaeological Excavation and Removal Permit).
2. The Columbia River has been identified by the DAHP and/or the CCT as having a high probability of containing significant archaeological and historic resources shall be considered suspected historic, cultural, or archaeological resources.
3. Known or suspected historic, cultural, and archaeological sites:
 - a. Notification of DAHP, or CCT and, if required, preparation of an evaluation and a report meeting the minimum reporting standards of the DAHP or Colville (as appropriate). Such a report shall be prepared by a cultural resource management professional who meets the qualification standards promulgated by the National Park Service and published in 36 CFR Part 61, shall be required before the start of any ground disturbance work in any area known to contain archaeological, cultural, or historic resources, regardless of whether a shoreline permit or exemption is required.
 - b. Upon receipt of application for a shoreline permit or request for a statement of exemption for development on properties within 200 feet of a site known to contain an historic, cultural or archaeological resource(s), the local government with jurisdiction shall require an evaluation and a report meeting the minimum reporting standards of the DAHP, Colville (as appropriate), prepared by a cultural resource management professional who meets the qualification standards promulgated by the National Park

¹⁹ - Non-agricultural lands are those lands that have not been subject to agriculture uses as defined in 17.08 BMC..

Service and published in 36 CFR Part 61; provided that, the provisions of this section may be waived if the Administrator determines that the proposed development activities do not include any ground disturbing activities and will not impact a known historic, cultural or archaeological site.

c. The fee for the services of the cultural resource management professional shall be paid by the applicant. The applicant shall submit a minimum of five (5) copies of the site assessment (or electronic equivalent) to the Administrator for distribution to the applicable parties for review.

4. If the evaluation identifies the presence of significant historic, cultural, or archaeological resources, a Cultural Resource Management Plan (CRMP) shall be prepared by a cultural resource management professional who meets the qualification standards promulgated by the National Park Service and published in 36 CFR Part 61. The fee for the services of the cultural resource management professional shall be paid by the applicant. In the preparation of such plans, the cultural resource management professional shall solicit comments from the DAHP, the History and Archeology Department of the CCT, and any Indian or First Nations tribes or bands known to be affected. Comments received shall be incorporated into the conclusions and recommended conditions of the CRMP to the maximum extent practicable. The applicant shall submit a minimum of five (5) copies (and an electronic equivalent) of the CRMP to the Administrator for distribution to the applicable parties for review.

5. The recommendations and conclusions of the CRMP shall be used to assist the Administrator in making final administrative decisions concerning the presence and extent of historic, cultural, and archaeological resources and appropriate mitigating measures. The Administrator shall consult with the DAHP, the History and Archeology Department of the CCT, and any affected Indian or First Nations tribes or bands prior to approval of the CRMP.

6. The Administrator may reject or request revision of the conclusions reached in a CRMP when the Administrator can demonstrate that the assessment is inaccurate or does not fully address the historic, cultural, and archaeological resource management concerns involved.

7. Upon receipt of a complete development permit application in an area of known or suspected historic, cultural, or archaeological resources, the City shall notify and request a recommendation from appropriate agencies, including the DAHP, the CCT, and any Indian or First Nations tribes or bands known to be affected. Recommendations of such agencies and other affected persons shall be duly considered and adhered to whenever feasible. Notification shall include the following information:

- a.** The date of application, the date of notice of completion of the application, and the date of the notification;
- b.** A site map including the street address, tax parcel number, township, range, and section of the proposed project area;
- c.** A description of the proposed project action and a list of the project permits included in the application, and, if applicable, a list of any studies requested by the local government with jurisdiction;
- d.** The identification of other permits not included in the application, to the extent known by the local government with jurisdiction;

e. The identification of existing environmental documents that evaluate the proposed project and, if not otherwise stated on the document providing notice of application, the location where the application and any studies can be reviewed;

f. Any other information determined appropriate by the local government with jurisdiction;

g. A statement indicating those development regulations that will be used for project mitigation or a determination of consistency, if they have been identified at the time of notice;

h. A statement of the limits of the comment period and the right of each agency to comment on the application within a thirty (30) day time period, request a copy of the decision once made, and appeal a decision when allowed by law.

d. In granting shoreline permits or statements of exemption for development on properties within 500 feet of a site known to contain an historic, cultural or archaeological resource(s), the local government with jurisdiction may attach conditions to provide sufficient time and/or conditions for consultation with the DAHP, the CCT, and any affected Indian or First Nations tribes or bands, and to ensure that historic, cultural, and archaeological resources are properly protected, or for appropriate agencies to contact property owners regarding purchase or other long-term arrangements. Provision for the protection and preservation of historic, cultural, and archaeological sites shall be incorporated to the maximum extent practicable. Permit or other requirements administered by the DAHP pursuant to RCW 27.44 and RCW 27.53 may apply in addition to the provisions of this CHAPTER.

8. Inadvertent Discovery

a. All shoreline permits shall contain provisions requiring that, whenever historic, cultural or archaeological sites or artifacts are discovered in the process of development in shoreline areas, all work on that portion of the development site shall be stopped immediately, the site secured, and the find reported as soon as possible to the DAHP and Administrator.

b. Upon notification of such find, the property owner shall notify the DAHP, the History and Archaeology Department of the CCT, and any Indian or First Nations tribes or bands known to be affected. Notification to agencies shall include the information specified for notification under the heading “Known or suspected historic, cultural, and archaeological sites” above.

c. Upon notification of such find, the Administrator shall conduct a site investigation to determine the significance of the discovery. Based upon the findings of the site investigation and consultation with the parties listed above, the Administrator may require that an immediate evaluation be conducted or may allow stopped work to resume. The evaluation shall meet the minimum reporting standards of the DAHP and shall be conducted by a cultural resource management professional who meets the qualification standards promulgated by the National Park Service and published in 36 CFR Part 61, to determine the presence of significant historic, cultural, or archaeological resources. The fee for the services of the cultural resource management professional shall be paid by the landowner or responsible party. The applicant shall submit a minimum of five (5) copies of the evaluation and accompanying report to the Administrator for distribution to the applicable parties for review.

d. If an evaluation is required, the area of inadvertent discovery shall be stabilized, contained or otherwise protected until the evaluation is completed. The evaluation shall be distributed to the DAHP, the History and Archaeology Department of the CCT, and any Indian or First Nations tribes or bands known to be affected for a thirty (30) day review period or, in the case of inadvertent discovery of human remains, a thirty (30) day review period to determine the significance of the discovery. If the above listed agencies or governments have determined that the site is not significant, or if the above listed agencies or governments have failed to respond within the applicable review period following receipt of the site assessment, stopped work may resume.

e. Upon receipt of a positive determination of a site's significance, the Administrator may invoke the provisions for known sites, above, for a Cultural Resource Management Plan.

9. The requirements of this section shall not apply where an applicant has obtained an approved Archeological Excavation and Removal permit from the DAHP pursuant to WAC 25-48-060, provided that the applicant must adhere to the requirements of said approved permit.

E. Boating Facilities

1. When establishing regulation of motorized vs non-motorized uses, whether by Okanogan or Douglas County or the city of Brewster, hours and other limitations on boating use of waters in and near Brewster, the regulations shall be based, in part, on protection of shoreline functions and values.

2. Mitigation for any adverse development impacts of boating facilities shall be required. On-site mitigation shall be preferred; however, in cases in which meaningful on-site mitigation is not feasible, off-site mitigation may be allowed. In such instances a mitigation management plan shall be required, and shall specify a suitable mitigation site. Adverse development impacts to adjacent properties shall not be allowed.

3. New boating facilities shall be consistent with the applicable local comprehensive and recreation plans. When new sites are considered, sufficient evidence must be presented to show that existing public and commercial marinas, docks, and boat launches are inadequate and cannot be expanded to meet regional demand.

4. For commercial and public boating facilities, the perimeter of parking and storage areas shall be landscaped to provide a visual and noise buffer between adjoining dissimilar uses or scenic areas, using primarily native, self-sustaining vegetation from the recommended list (Comprehensive Plan Shoreline Element Appendix B). Landscaping along the waterward side shall also be required. The permit application submittal shall identify the size, location, and species of plants that will be used.

5. Boating facilities shall be located where no or minimal shoreline stabilization will be necessary and where water depths are adequate to eliminate or minimize the need for offshore or foreshore channel construction dredging, maintenance dredging, spoil disposal, filling, beach enhancement, and other maintenance activities.

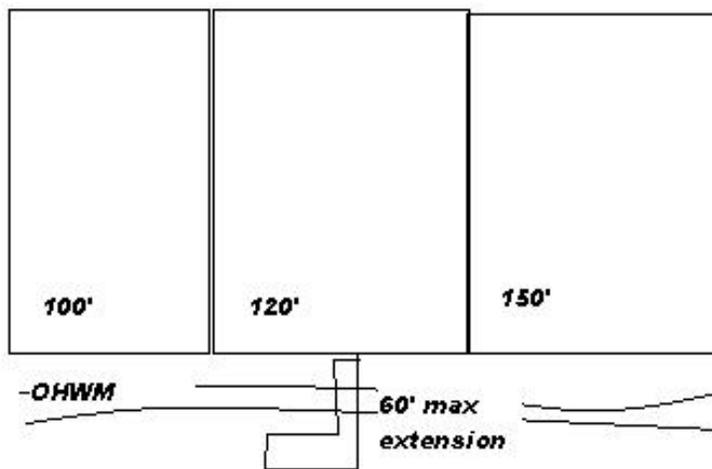
6. When plastics and other non-biodegradable materials are used in boating facilities, precautions shall be taken to ensure their containment.

7. Boating facility design shall minimize interference with geohydraulic processes and disruption of existing shore forms.

8. Parking facilities serving a boating facility shall be located outside shoreline jurisdiction, or, if that is not feasible, shall be located landward of the Zone 2 - Use Buffer (17.46.060 Table 2).
9. Boating facilities, including boat lifts, and navigation aids shall be positioned so as not to be a hazard to navigation. To minimize impacts to navigation, boating facilities, including docks, piers, floats, etc... shall extend no farther into the Columbia River than the minimum required for compliance with the standards of the Douglas County PUD or 100 feet, whichever is less.
10. Boating facilities shall provide public access in accordance with Section 17.46.070 N.
11. Boating facilities shall be located and designed so their structures and operations will be aesthetically compatible with the area visually affected and will not unreasonably impair shoreline views. Use of natural non-reflective materials is encouraged.
12. The City shall request technical assistance from agencies with jurisdiction and/or knowledge, including but not limited to the Washington departments of Ecology, of Fish and Wildlife, and of Health, US Army Corps of Engineers and Douglas County PUD; and shall make available to those agencies the *Shoreline Inventory and Characterization* (Comprehensive Plan Shoreline Element Appendix A) and maps developed as part of this master program. The City shall consider the comments received from those agencies before making a decision on whether or not to approve the permit, and any conditions or modifications required.
13. New pier or dock construction, excluding docks accessory to single-family residences, shall be permitted only when the applicant has demonstrated that a specific need exists to support the intended water-dependent uses. If a port district or other public or commercial entity involving water-dependent uses has performed a needs analysis or comprehensive master plan projecting the future needs for pier or dock space, and if the plan or analysis is approved by the City and consistent with these guidelines, it may serve as the necessary justification for pier design, size, and construction. The intent of this provision is to allow ports and other entities the flexibility necessary to provide for existing and future water-dependent uses.
14. New boat garages are prohibited in all shoreline designations.
- a. Marina-Specific Regulations:**
- 1) Public access, both physical and visual, shall be required as part of all marinas.
 - 2) Marinas shall be constructed in accordance with the provisions all applicable current state and local regulations.
 - 3) Marinas or expanded constructed after the effective date of these regulations that provide moorage space for watercraft shall provide sewage pump-out facilities.
 - 4) Marinas shall be sited, designed, and built to minimize conflicts with agriculture.
 - 5) Marinas shall be designed to not interfere with existing navigation on the Columbia River (Lake Pateros).
- b. Docks and Moorage - Specific Regulations**
- 1) The Administrator shall require and use the following information in his or her review of proposals for docks:

- a) Description of the proposed structure, including its size, location, design, materials, and any shoreline stabilization or other modifications required by the project.
 - b) Proposed location of the dock relative to property lines and the ordinary high water mark.
 - c) Orientation of the dock relative to neighboring docks.
 - d) Anticipated impacts on views and on access to existing docks, and other reasonably foreseeable impacts on adjacent properties.
 - e) Any provisions for public access, enjoyment and use of the water and shorelines.
- 2) Any person or succession of different persons resides on the vessel in a specific location, and/or in the same area on more than a total of thirty days in any forty-day period or on more than a total of ninety days in any three hundred sixty-five-day period results in a “Residential Use” Status and is prohibited. "In the same area" means within a radius of one mile of any location where the same vessel previously moored or anchored on state-owned aquatic lands. A vessel that is occupied and is moored or anchored in the same area, but not for the number of days described in this subsection, is considered used as a recreational or transient vessel;

17.46.070 Figure 1 - Docks



- 3) Docks shall not significantly interfere with the use of shoreline waters or with public use of shorelines. The length of any dock shall be the minimum necessary to assure navigability and protect public use of the water body. On “T” or “L” shaped docks, the length of the extension or extensions perpendicular to the main body of the dock shall not exceed 50% of the length of the lot property line at the OHWM, or the upland property line adjacent to the lake or encroach into required side yard setbacks, as shown in 17.46.070 Figure 1. Docks may be prohibited where necessary

to protect navigation or public use of the water body. Docks not attached to the shoreline may be allowed where the dock serves a water-dependent or water-oriented use and measures have been taken to reduce the hazard to navigation.

4) All docks shall be constructed and maintained in a safe condition. Wood treated with creosote, pentachlorophenol or other similarly toxic materials is prohibited. Abandoned or unsafe docks shall be removed or repaired promptly by the adjoining upland property owner. Where any such structure constitutes a hazard to the public, the local government with jurisdiction may, following notice to the owner, abate the structure if the owner fails to do so within 90 days. Said government may impose a lien on the associated shoreline property in an amount equal to the cost of the abatement.

5) No over-water application of preservative treatment or other chemical compounds shall be permitted. Docks may be painted provided brush application is used and best management practices are followed to prevent paint from coming in contact with the water.

6) Bulk storage for gasoline, oil, and other petroleum products is prohibited on docks.

7) All docks shall be designed and constructed in compliance with the following standards:

a) Pilings must be structurally sound prior to placement in the water.

b) Piles, floats, or other materials in direct contact with the water must be approved by applicable state agencies, including the Washington Department of Fish and Wildlife and, in the case of state owned bedlands, the Washington Department of Natural Resources and federal agencies.

c) Floating docks shall include stops to keep the floats off the bottom of the water body at low water level.

d) Overhead wiring or plumbing is not permitted on docks.

e) Lighting shall be the minimum necessary to locate the dock at night and shall focus downward to minimize glare. Any dock extending more than fifty feet (50') beyond the OHWM shall have white lights marking the outer dimensions. In all cases, solar-powered lights shall be preferred.

f) Docks with feet or plates that rest on the lakebed or streambed are preferred over those requiring excavation and footings.

g) Dock design, placement, and orientation shall allow for access to existing docks in the vicinity and shall minimize impacts on adjacent properties, including impacts on views.

8) All residential moorage facilities shall be subject to number, size, and setback standards as follows:

a) Number:

i. All new residential developments (including subdivisions if moorage facilities are proposed) serving more than two dwelling units that intend to

provide moorage facilities must create shared moorage facilities rather than individual docks. Such development, including, new residential subdivisions or planned developments shall be required to indicate the location of shoreline access to proposed moorage facilities at the time of plat or subdivision.

ii. All multi-family residences proposing to provide moorage facilities shall be limited to a single shared moorage facility, provided that the Administrator may authorize more than one shared moorage facility if, based on conditions specific to the site, a single facility would be inappropriate for reasons of safety, security, or impact to the shoreline environment; and if the additional facility or facilities will have no net impact on shoreline ecological resources.

iii. For existing residential lots, no more than one dock shall be permitted for each shoreline lot.

b) Size:

i. The length of any dock shall be the minimum necessary to accomplish moorage for the intended boating use and shall be only long enough to accommodate slips for one boat for each residence served plus one slip for transient moorage.

ii. A dock serving a single family use over 200 square feet or 25 feet in length is allowed only as a conditional use in all shoreline designations.

c) Side yard setbacks:

i. Docks shall be set back a minimum of ten feet (10') from side property lines, except that shared moorage facilities may be located adjacent to or upon a side property line when mutually agreed to by a legal instruments such as a contract, covenant or easement with the owners of all properties with access privilege. A copy of the contract, covenant or easement must be recorded with the Okanogan County Auditor and filed with the application for permit or shoreline exemption.

9) All shared moorage facilities shall be subject to the following standards:

a) Shared moorage facilities shall include no more than one moorage space per dwelling unit or lot and one transient slip.

b) The size of the moorage facility shall be the minimum necessary to accomplish moorage for one boat for each residence served plus one transient slip, and the moorage facility shall be configured to cause minimal disturbance to shoreline resources.

c) Any requirement for shared moorage shall be documented with a restriction on the face of the plat. Restrictive covenants prohibiting individual docks and requiring shared moorage, and providing that the covenants shall not be altered without the approval of the Administrator, shall be recorded with the Okanogan County Auditor.

d) If shared moorage is provided, the applicant shall file a legally enforceable joint use agreement or other legal instrument at the time the permit application for the mooring facility is submitted. Said instrument shall, at minimum, address the following:

- i.** Provisions for maintenance and operation;
- ii.** Easements or tracts for community access; and
- iii.** Provisions for joint or community use for all benefiting parties.

e) Any site for shared moorage shall be owned in undivided interest, leased or permitted by property owners or managed by the homeowners' association as a common easement within the residential development. Shared moorage facilities shall be available to property owners in the residential development for community access.

c. Float-Specific regulations:

- 1)** No more than one float shall be permitted for each shoreline lot.
- 2)** Floats shall not significantly interfere with navigation or with public use of shorelines. No portion of the float shall be placed more than eighty feet (80') from the OHWM by the point at which the depth of the water exceeds seven feet (7') during high water. Floats may be prohibited where necessary to protect navigation or public use of the water body.
- 3)** No float shall have more than one hundred (100') square feet of surface area.
- 4)** All multi-family residences proposing to provide floats shall be limited to a single shared float, provided that the Administrator may authorize more than one shared float if, based on conditions specific to the site, a single float would be inappropriate for reasons of safety, security, or impact to the shoreline environment; and if the additional float or floats will have no net impact on shoreline ecological resources.

F. Bulkheads

- 1.** All bulkheads are also subject to the provisions of Sections 17.46.060 A, B, C and D, 17.46.070 I and S., and 17.46.080.
- 2.** New or enlarged bulkheads for an existing principal structure or use, including residences and accessory structures, shall not be allowed unless there is conclusive evidence, documented by a geotechnical report prepared according to the local jurisdiction's standards for a critical areas report for geologically hazardous areas, that the principal structure is in danger from shoreline erosion caused by currents or waves. Normal sloughing, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis shall evaluate on-site drainage issues and address drainage in a manner that does not degrade shoreline function before considering structural shoreline stabilization. The project design and analysis shall also evaluate vegetation enhancement as a means of reducing undesirable erosion. The geotechnical analysis shall demonstrate that the stabilization measure chosen is the least intrusive means that will be sufficient to achieve stabilization. The geotechnical analysis shall evaluate impacts that could pose stabilization problems to neighboring properties.

3. An existing bulkhead may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by currents or waves. In this case, demonstration of need does not necessarily require a geotechnical report; need must, however, be demonstrated using documentable information sources. The replacement structure shall be designed, located, sized, and constructed to ensure no net loss of ecological functions. Replacement bulkheads shall not encroach waterward of the ordinary high water mark or existing structure unless the residence was occupied prior to the date of adoption of this Chapter, and there is overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing stabilization structure. The Administrator may permit vegetative stabilization that restores ecological functions waterward of the ordinary high water mark.
4. A bulkhead-type structure used to stabilize a dock may be permitted, but the size shall be limited to the minimum necessary for the dock. The stabilization structure shall not exceed 1' wider than the gangplank or pier structure on each side nor shall it exceed 6' landward in total distance from the OWHM into the shoreline area.

G. Commercial Uses and Activities

1. Commercial development permitted in shoreline areas are, in descending order of preference:
 - a. Water-dependent uses;
 - b. Water-related uses;
 - c. Water-enjoyment uses; and
 - d. Non-water-oriented uses
2. The Administrator shall require and use the following information in his or her review of commercial development proposals:
 - a. Consistency with local comprehensive plan and zoning;
 - b. Specific nature of the commercial activity;
 - c. Need for shoreline frontage; determination if use qualifies as water-dependent, water-related or water-enjoyment
 - d. Provisions for public visual and/or physical access to the shoreline;
 - e. Provisions to ensure that the development will not result in loss of shoreline functions including conditions for ecological restoration;
 - f. Measures for enhancing the relationship of the use to the shoreline, including aesthetics and landscaping; and
 - g. The *Shoreline Inventory and Characterization* (Comprehensive Plan Shoreline Element Appendix A) and accompanying maps.
3. Nonwater-oriented commercial uses are prohibited in all shoreline designations unless they meet two or more of the following criteria:
 - a. The use entails the reuse of an existing structure or developed area.

- b.** The subject property is designated and zoned for commercial development in the City's Comprehensive Plan and Zoning Code.
 - c.** The use is part of a mixed-use project that includes water-dependent uses and provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration; or
 - d.** The commercial use provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration.
 - e.** In areas designated or zoned for commercial use, nonwater-oriented commercial development may be allowed if the site is physically separated from the water by property under separate ownership (e.g. Douglas PUD) or public right of way.
- 4.** Commercial development shall be designed and maintained in a neat, orderly, and environmentally-compatible manner, consistent with the character and features of the surrounding area.
- 5.** All commercial loading and service areas shall be located on the upland (landward) side of the commercial structure to the maximum extent practical or provisions shall be made to separate and screen the loading and service areas from the shoreline.
- 6.** Commercial developments where landscaping is proposed shall be landscaped to visually enhance the shoreline area and contribute to shoreline functions and values, using primarily native, self-sustaining vegetation. Plants from the recommended list (Comprehensive Plan Shoreline Element Appendix B) are preferred. The permit application submittal shall identify the size, location, and species of plants that will be used.
- 7.** Water-related and water dependent commercial development on private and public lands shall be required to consider incorporating public access and ecological restoration as mitigation for impacts to shoreline functions and values unless public access cannot be provided which does not result in significant interference with operations or hazards to life or property, where commercial use is proposed for location on land in public ownership, public access shall be required. Refer to Section 17.46.070 N. and WAC 173-26-221(4) for public access provisions. Any intended public access facilities must be platted, or incorporated into a binding site plan, improved, and maintained and in compliance with local comprehensive planning and shoreline recreational access planning.

H. Flood Hazard Prevention Projects

- 1. Purpose.** It is the purpose of this section to promote the public health, safety, and general welfare; reduce the annual cost of flood insurance; and minimize public and private losses due to flood conditions in specific areas by provisions designed:
- a.** To protect human life and health;
 - b.** To minimize expenditure of public money and costly flood control projects;
 - c.** To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - d.** To minimize prolonged business interruptions;

- e. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- f. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- g. To ensure that potential buyers are notified that property is in an area of special flood hazard;
- h. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

2. Methods of reducing flood losses. In order to accomplish its purposes, this section includes methods and provisions for:

- a. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- b. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- c. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- d. Controlling filling, grading, dredging, and other development which may increase flood damage; and
- e. Preventing or regulating the construction of flood barriers that unnaturally divert floodwaters or may increase flood hazards in other areas.

3. Lands to which this section applies. (44 CFR 59.22(a)) This Chapter shall apply to all areas of special flood hazards within the shoreline jurisdiction of the city of Brewster, Washington.

4. Basis for establishing the areas of special flood hazard. (44 CFR 60.3(c)(1)(d)(2)). The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Brewster, Washington" to be completed, and any revisions thereto, with an accompanying flood insurance rate map (FIRM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this Chapter. The flood insurance study and the FIRM will be on file at 105 S. Third St when completed. The best available information for flood hazard area identification as outlined in 17.46.080 shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under said section.

5. Abrogation and greater restrictions. This section is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

6. Interpretation. In the interpretation and application of this Chapter, all provisions shall be:

- a. Considered as minimum requirements;

- b. Liberally construed in favor of the governing body; and
- c. Deemed neither to limit nor repeal any other powers granted under state statutes.

7. Warning and disclaimer of liability. The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This section does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This section shall not create liability on the part of the City, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this section or any administrative decision lawfully made hereunder.

8. Use of Other Base Flood Data (in A and V Zones) (44 CFR 60.3(b)(4)). When base flood elevation data has not been provided (in A or V Zones) in accordance with Section 17.46.080 C., Basis for establishing the areas of special flood hazard, the administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer this Section and Section 17.46.080 C.

9. Alteration of Watercourses (44 CFR 60.3(b)(6)).

- a. Notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
- b. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

10. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation. Such appeals shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program (44 CFR 59-76).

11. General standards. In all areas of special flood hazards within shoreline jurisdiction, the standards of this Section and Sections 17.46.060 A. and 17.46.080 C. are required.

- a. Development in floodplains should not significantly or cumulatively increase flood hazards or be inconsistent with comprehensive flood hazard management plans adopted pursuant to Chapter 86.12 RCW.
- b. New development or new uses in shoreline jurisdiction, including the subdivision of land, should not be permitted when it would be reasonably foreseeable that the development or use would require structural flood hazard reduction measures within the channel migration zone or floodway.
- c. The following uses and activities may be appropriate and/or necessary within the channel migration zone or floodway:
 - 1) Actions that protect or restore the ecosystem-wide processes or ecological functions.

- 2) Existing and ongoing agricultural practices provided that no new restrictions to channel movement occur.
 - 3) Bridges, utility lines, and other public utility and transportation structures where no other feasible alternative exists or the alternative would result in unreasonable and disproportionate costs. Where such structures are allowed, mitigation shall address impacted functions and processes in the affected shoreline.
 - 4) Repair and maintenance of an existing nonagricultural legal use, provided that channel migration is not further limited and that the new development includes appropriate protection of ecological functions.
 - 5) Development in incorporated municipalities and designated urban growth areas, as defined in Chapter 36.70A RCW, where structures exist that prevent active channel movement and flooding.
 - 6) 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 measure does not interfere with fluvial hydrological and geo-morphological processes normally acting in natural conditions, and that the measure includes appropriate mitigation of impacts to ecological functions associated with the river or stream.
- d.** Allow new structural flood hazard reduction measures in shoreline jurisdiction 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 this Chapter, and WAC 173-26-221(5).
- e.** Structural flood hazard reduction measures shall be consistent with adopted comprehensive flood hazard management plans approved by the Department of Ecology.
- f.** Place new structural flood hazard reduction measures landward of the associated wetlands, and designated vegetation conservation areas, except for actions that increase ecological functions, such as wetland restoration; provided that such flood hazard reduction projects be authorized if it is determined that 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.
- g.** Require that new structural public flood hazard reduction measures, such as dikes and levees, dedicate and improve public access pathways unless public access improvements would cause unavoidable health or safety hazards to the public, inherent and unavoidable security problems, unacceptable and unmitigated significant ecological impacts, unavoidable conflict with the proposed use, or cost that is disproportionate and unreasonable to the total long-term cost of the development.
- h.** Require that the removal of gravel for flood management purposes be consistent with an adopted flood hazard reduction plan and with the provisions of WAC 173-26, Section 17.46.070 I. Dredging and Section 17.46.070 K 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.

I. Dredging and Dredge Material Disposal

1. The City shall require and use the following information in its review of shoreline dredging and dredge material disposal proposals:

- a. Dredging volumes, methods, schedules, frequency, hours of operation, and procedures.
- b. Analysis of material to be dredged in compliance with Model Toxics Control Act.
- c. Method of disposal, including the location, size, capacity, and physical characteristics of the disposal site, transportation methods and routes, hours of operation, and schedule.
- d. Stability of bedlands adjacent to the proposed dredging site.
- e. Stability of geologically hazardous areas in the vicinity of the proposed dredging site.
- f. Assessment of water quality impacts.
- g. Habitat assessment meeting the standards prescribed for Fish and Wildlife Habitat Conservation Areas in Critical Areas regulations contained in this Chapter, including migratory, seasonal, spawning, migration, wetland and riparian use areas.

2. In evaluating permit applications for any dredging project, the Administrator and/or appropriate hearing or review body shall consider the need for and adverse effects of the initial dredging, subsequent maintenance dredging, and dredge disposal. Dredging and dredge material disposal shall only be permitted where it is demonstrated that the proposed actions will not:

- a. Result in significant and/or on-going damage to water quality, fish, or other biological elements;
- b. Adversely alter natural drainage and circulation patterns, or significantly reduce flood storage capacities;
- c. Affect slope stability; or
- d. Otherwise damage shoreline or aquatic resources.

3. Proposals for dredging and dredge disposal shall prepare a mitigation management plan that includes measures to protect fish and wildlife habitat and other critical areas in compliance with the regulations herein that includes measures to minimize adverse impacts such as turbidity; release of nutrients, heavy metals, sulfides, organic materials, or toxic substances; dissolved oxygen depletion; or disruption of food chains.

4. Dredging and dredge material disposal shall not occur in wetlands except as authorized by Conditional Use Permit in compliance with the regulations herein with conditions providing that valuable functions of the wetland, such as wildlife habitat and natural drainage, will not be diminished.

5. Dredging waterward of the ordinary high water mark shall be allowed by conditional use permit only when:

- a. It has been proven that the development cannot be sited elsewhere and has been designed to avoid and minimize new and maintenance dredging (WAC 173-26-231(3)(f))
 - b. For navigation or existing navigational access;
 - c. In conjunction with a conforming allowed water-dependent use of water bodies or adjacent shorelands;
 - d. As part of a habitat management plan that has been approved by the City, and has been accepted by the Washington Department of Fish and Wildlife or other agency with jurisdiction;
 - e. To improve water quality;
 - f. For mineral prospecting and placer mining as provided in Section 17.46.070 K Mining;
 - g. In conjunction with a bridge or a navigational channel, basin, or structure for which there is a documented public need and where other feasible sites or routes do not exist; or
 - h. To improve water flow and/or manage flooding only when consistent with an approved flood and/or stormwater comprehensive management plan in conjunction with a habitat mitigation management plan.
6. Any impacts of dredging that cannot be avoided shall be mitigated in a manner that assures no net loss of shoreline ecological functions.
7. Dredging shall use techniques that cause the minimum dispersal and broadcast of bottom material.
8. Dredging for the primary purpose of obtaining material for fill is prohibited, except when the material is necessary for the restoration of ecological functions. The fill must be associated with a significant habitat enhancement project that is listed as part of a regional or watershed-scale plan, MTCA or CERCLA habitat restoration project. When allowed, the site where the fill is to be placed must be located waterward of the OHWM (WAC 173-26-231(3)(f)) and conducted in accordance with the dredged material management program of the department of natural resources.
9. Dredging to construct canals or basins for boat moorage or launching, water ski landings, swimming holes, and similar uses shall only be permitted as a conditional use and shall include a habitat enhancement/mitigation plan.
10. Disposal of dredged materials shall be accomplished at approved contained upland sites in compliance with all Federal, State and local regulations.
11. Depositing dredge materials in water areas shall be allowed only by Conditional Use Permit, for one or more of the following reasons:
 - a. For wildlife habitat improvement.
 - b. To correct problems of material distribution adversely affecting fish resources.
 - c. For permitted enhancement of beaches that provide public access, where it has been conclusively demonstrated that no net loss of shoreline ecological functions will result or for public safety.

12. Use of dredged material for beach enhancement shall be conducted so that:

- a.** Erosion from the disposal site is minimized. Erosion of the dredged material shall not smother emergent vegetation or other shallow productive areas.
- b.** To the extent possible, the volume of dredged material and frequency of disposal maintain a stable beach profile. Dredged material shall be graded as a uniform slope and contoured to reduce cove and peninsula formation and to preclude stranding of juvenile fish.

13. Land disposal sites shall be replanted as soon as feasible, and in no case later than the next planting season, in order to retard wind and water erosion and to restore the wildlife habitat value of the site. Vegetation from the recommended list (Comprehensive Plan Shoreline Element Appendix B) or other species authorized by the City shall be used. Native plants are preferred. Plants that may compromise shoreline values are prohibited. The permit application submittal shall identify the size, location, and species of plants that will be used. The agency or developer responsible for the land disposal shall also be responsible for maintaining the vegetation as established in the approved mitigation management plan.

14. Proposals for disposal in the channel migration zone is discouraged and only allowed by Conditional Use Permit (WAC 17-26-231(3)(f)). Disposal in other shoreline areas must provide for the implementation of adopted regional interagency dredge material management plans or watershed management planning that benefits shoreline resources.

J. Industrial Uses and Activities

1. Industrial developments permitted in shoreline areas are, in descending order of preference:

- a.** Water-dependent uses;
- b.** Water-related uses;
- c.** Water-enjoyment uses; and
- d.** Non-water-oriented uses

2. New non water-oriented industrial development shall be prohibited in all shoreline designations except when:

- a.** The use entails reuse of an existing structure or existing developed site.
- b.** The use is part of a mixed-use project that includes water-dependent uses and provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration; or
- c.** Navigability is severely limited at the proposed site; and the industrial use provides a significant public benefit with respect to the Shoreline Management Act's objectives such as providing public access and ecological restoration.
- d.** In areas designated or zoned for industrial use, nonwater-oriented industrial uses may be allowed if the site is physically separated from the shoreline by another property or public right of way.

- 3.** The Administrator shall require and use the following information in his or her review of industrial development proposals:
- a.** Consistency with local comprehensive plans and zoning;
 - b.** Specific nature of the industrial activity;
 - c.** Need for shoreline frontage;
 - d.** Provisions for public visual and/or physical access to the shoreline;
 - e.** Provisions to ensure that the development will not result in loss of shoreline functions or reduction in shoreline values;
 - f.** Measures for enhancing the relationship of the use to the shoreline, including aesthetics and landscaping; and
 - g.** The *Shoreline Inventory and Characterization* (Comprehensive Plan Shoreline Element Appendix A) and accompanying maps.
- 4.** Industrial development shall consider incorporating public access as mitigation for impacts to shoreline resources and values unless public access cannot be provided in a manner that does not result in significant interference with operations or hazards to life or property, as provided in WAC [173-26-221](#)(4).
- 5.** Industrial development and redevelopment are encouraged to locate where environmental cleanup and restoration of the shoreline area can be incorporated.
- 6.** Where industrial development is allowed, it shall be located, designed, or constructed in a manner that assures no net loss of shoreline ecological functions and such that it does not have significant adverse impacts to other shoreline resources and values.
- 7.** Industrial development shall be designed and maintained in a neat, orderly, and environmentally-compatible manner, consistent with the character and features of the surrounding area. To that end, the Administrator may, following a public hearing, adjust the project dimensions and increase required setbacks established in 17.46.060 Table 2 and/or prescribe reasonable use-intensity and screening conditions. Need and special considerations for landscaping and buffer areas shall also be subject to review and approval.
- 8.** New over-water construction for industrial uses is prohibited unless it can be shown to be essential to a water-dependent industrial use.
- 9.** All loading and service areas shall be located on the upland (landward) side of the industrial facility or provisions shall be made to separate and screen the loading and service areas from the shoreline, unless such provisions are infeasible due to the specific nature of the water-dependent industrial use or the proposed circulation poses a safety hazard to existing traffic patterns.
- 10.** Industrial development on private and public lands shall consider incorporating public access as mitigation for impacts to shoreline resources and values unless public access cannot be provided in a manner that does not result in significant interference with operations or hazards to life or property, as provided in WAC [173-26-241](#)(3)(f). Where industrial use is proposed for location on land in public ownership, public access shall be required. Any intended public access facilities must be platted, or incorporated into a planned development or binding site plan, improved, and maintained in compliance with

local comprehensive planning and shoreline recreational access planning.

11. Industrial developments shall be landscaped to visually enhance the shoreline area and contribute to shoreline functions and values, using primarily native, self-sustaining vegetation. Plants from the recommended list (Comprehensive Plan Shoreline Element Appendix B) are preferred. Plants that may compromise shoreline values shall be prohibited. The permit application submittal shall identify the size, location, and species of plants that will be used.

12. Drainage and surface runoff from industrial developments shall be controlled so that pollutants will not be carried into water bodies.

K. Mining Uses and Activities

1. Mineral prospecting and placer mining are allowed subject to compliance with the current edition of the Washington State Department of Fish and Wildlife’s Gold and Fish pamphlet, all other prospecting and placer mining activities at different times or locations, or with different equipment than allowed in WDFW Gold and Fish pamphlet shall be prohibited.

2. All Mining not meeting the definition of mineral prospecting or placer mining shall be prohibited.

L. Municipal (includes all local governments)

Municipal uses are those in support of local government functions and services (e.g. public schools, city hall, maintenance facilities, hospitals, etc...). For the purposes of this section, recreational uses and utility facilities are excluded and shall comply with applicable sections.

1. Non-water-oriented municipal uses will be permitted in shoreline areas only when no other feasible location is available, and only in compliance with standards in this Chapter including bulk and dimensional standards established in 17.46.060 Table 2 and shall be in compliance with the clearing and grading section.

2. The Administrator shall require and use the following information in his or her review of municipal use proposals:

- a.** Specific nature of the proposed activity;
- b.** Need for shoreline location; including minimizing portion of use within shoreline jurisdictions.
- c.** Other locations considered and the reasons for choosing a shoreline site;
- d.** Provisions for public visual and/or physical access to the shoreline;
- e.** Provisions to ensure that the development will not result in loss of shoreline functions or reduction in shoreline values;
- f.** Measures for enhancing the relationship of the use to the shoreline, including aesthetics and landscaping; and
- g.** The *Shoreline Inventory and Characterization* (Comprehensive Plan Shoreline Element Appendix A) and maps developed as part of this Chapter.

3. Municipal uses shall be designed and maintained in a neat, orderly, and environmentally-compatible manner, consistent with the character and features of the surrounding area and result in no net loss of shoreline function. To that end, the Administrator may, following a public hearing, adjust the project dimensions and increase required setbacks established in 17.46.060 Table 2 and screening conditions. Need and special considerations for landscaping and buffer areas shall also be subject to review and approval.
4. All loading and service areas shall be located on the upland (landward) side of the principal structure or provisions shall be made to separate and screen the loading and service areas from the shoreline.
5. Municipal uses shall be landscaped to visually enhance the shoreline area and contribute to shoreline functions and values, using primarily native, self-sustaining vegetation. Plants from the recommended list (Comprehensive Plan Shoreline Element Appendix B) are preferred. Plants that may compromise shoreline values shall be prohibited. The permit application submittal shall include a landscape plan identifying the size, location, and species of plants that will be used.
6. Drainage and surface runoff from municipal uses shall be controlled so that pollutants will not be carried into water bodies complying with the Eastern Washington Stormwater Manual.
7. Public access facilities must be provided, dedicated, improved, and maintained as part of any shoreline municipal use.

M. Parking

1. Any new and expanded parking area in a shoreline area shall directly serve an existing (legal at the time of adoption of this Chapter) shoreline use.
2. All parking shall be prohibited over water.
3. Parking facilities in shorelines are not a preferred use and shall be allowed only as necessary to support an authorized use.
4. Parking facilities shall prevent surface water runoff from contaminating water bodies, using the best available technology and best management practices, including complying with applicable Eastern Washington Storm Water Manual, and a maintenance program to assure proper functioning over time of any storm water facilities required to comply with this regulation.
5. New commercial and industrial parking facilities, necessary to support an authorized use, in shoreline areas shall be sited in compliance with bulk and dimensional standards of 17.46.060 Table 2, comply with Clearing and Grading Standards and designed to minimize visual, pedestrian, and other transportation network impacts as well as to minimize environmental impact on shoreline resources.
6. Commercial parking facilities shall be adequately screened and landscaped along the waterward side with plants from the recommended list (Comprehensive Plan Shoreline Element Appendix B). Where a flood levee exists, it shall be considered screening.

7. Parking facilities that will serve more than one use, such as recreational use on weekends and commercial use on weekdays shall be allowed and preferred to single use parking facilities.

N. Public Access (Physical and Visual)

1. Physical Access - Regulations

a. For the purpose of this Chapter, the city of Brewster Comprehensive Plan and Douglas PUD land use policies and recreational plans shall be considered the official public access plans. Additional recreation plans approved by the City Council may be used to supplement public access provisions of the Comprehensive Plan for this Chapter, provided said plans are not in conflict with the regulations herein.

b. Development, uses, and activities shall be designed and operated to avoid unnecessarily impairing or detracting from the public's physical or visual access to the water and shorelines.

c. Public access sites shall be dedicated to a public or non-profit entity unless a formal homeowners association or other legal entity exists or will be established to ensure the long term viability of the access.

d. Provisions for public or community access to the shoreline shall be incorporated into the shoreline development proposal for any action requiring such access unless the applicant demonstrates that such access is infeasible because at least one of the following provisions applies:

1) Unavoidable health or safety hazards to the public exist which cannot be prevented by any practicable means;

2) Inherent security requirements of the use cannot be satisfied through the application of alternative design features, such as fencing or limiting hours of use or other solutions;

3) Unacceptable environmental harm will result from the public access which cannot be mitigated;

4) Significant undue and unavoidable conflict between the proposed access and adjacent uses would occur and cannot be mitigated;

5) In determining that public access (physical and/or visual) is infeasible the shoreline administrator and applicant shall ensure that all reasonable alternatives have been evaluated, including but not limited to:

a) Regulating access by such means as limiting hours of use to daylight hours;

b) Designing separation of uses and activities, i.e., fences, terracing, hedges, landscaping, signage, etc;

c) Provision of an access at a site physically separated from the proposal such as a nearby street end, providing off-site public access improvements such as building a shoreline view point or establishment or providing improvements to a trail system.

- 6)** Dedication and improvement of physical public access shall be required as part of all shoreline development by public entities, including local governments, port districts, state agencies, and public utility districts, with the following exceptions:
- a)** Where an approved public access plan developed as part of a regulatory licensing process is submitted. Said public access plan must provide adequate public access to the shoreline, based on a needs analysis. Said public access facilities shall be developed, improved, and maintained as part of an approved Shoreline Recreational Plan and installed in a timely manner in coordination with the approved shoreline development.
 - b)** Where more effective public access to the shoreline can be achieved through implementation of the adopted recreation plan of the local government with jurisdiction, the public entity proposing the development may contribute proportionally to implementation of the recreation plan in lieu of providing public access on site, unless onsite improvements are part of the public access plan.
 - c)** Where the community makes a finding that no additional public access is required consistent with local comprehensive plans.
- 7)** Dedication and improvement of public physical access shall be required in all shoreline areas as follows:
- a)** As part of all marina development if consistent with 17.46.070 E;
 - b)** As part of commercial boating facilities designed to serve the public or located on and adjoining on publically owned uplands.
 - c)** As part of all new water-enjoyment, water -related and water-dependent commercial and industrial development, where consistent with local comprehensive plans, Sections 17.46.070 G. and J. and provided the intended use does not pose a safety threat to the general public.
 - d)** As part of all primary utility development on public land. The requirement may be waived when an approved public access plan has been adopted as part of a regulatory licensing process. Said public access plan must provide adequate public access, based on a needs analysis.
 - e)** As part of all subdivisions of land into more than five parcels, when consistent with local comprehensive and recreational public access plans.
 - f)** As part of new structural public flood hazard reduction measures, such as dikes and levees.
 - g)** As part of publicly financed or subsidized shoreline erosion control measures, where feasible, incorporate ecological restoration and public access improvements into the project, except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to ecological functions. These shoreline erosion measures shall not restrict existing public access to the shoreline.

- 8)** Adjoining short plats totaling more than eight parcels and submitted within 5 years of each other by the same applicant shall be subject to public access dedications if consistent with locally adopted plans.
- 9)** The scope and scale of public access shall be commensurate with the scale of the proposed land use action and the need for public physical and visual access opportunities in the vicinity of the proposed action.
- 10)** In all cases, the minimum width of shoreline public access easements shall be ten feet (10'), unless the Administrator determines that undue hardship would result. In such cases, easement or right-of-way widths may be reduced by no more than 25% only to the extent necessary to relieve the demonstrated hardship.
- 11)** Where there is an irreconcilable conflict between water-dependant shoreline uses or physical public access and maintenance of views from adjacent properties, the water-dependant uses and physical public access shall have priority, unless there is a compelling reason to the contrary.
- 12)** Public access sites shall be connected directly to a public street by way of a right of way or easement dedicated, improved, and maintained for public use. This requirement may be modified if the cost would be disproportionate to the scale of the proposed land use action.
- 13)** Where feasible, and in accordance with the Americans with Disabilities Act (ADA), public access sites shall be made barrier-free for people with disabilities.
- 14)** Required public access sites shall be developed and available for public use at the time of occupancy of the use or activity; or in accordance with other provisions for guaranteeing installation through a monetary performance assurance.
- 15)** Public access facilities shall be maintained over the life of the use or development. Future actions by successors in interest or other parties shall not diminish the usefulness or value of required public access areas and associated improvements.
- 16)** Public access easements shall be recorded on the deed of title and/or on the face of the plat or short plat as conditions running in perpetuity. Said recording with the Okanogan County Auditor's Office shall occur at the time of permit approval. Future actions by the applicant, successors in interest, or other parties shall not diminish the usefulness or value of the public access provided.
- 17)** The standard State-approved logo or other approved signs that indicate the public's right of access and hours of access shall be installed and maintained by the owner. Such signs shall be posted in conspicuous locations at public access sites.

2. View Corridor - Regulations.

- a.** View corridors shall comply with provisions for vegetation management and buffer requirements for the shoreline designation for the project site. View Corridors shall be allowed up to the percentage listed 17.46.060 Table 2 but limited to a width of 30 feet for every 100 linear feet of shoreline, in no case shall a view corridor be approved that will result in a view corridor greater than 30 feet in width paralleling the shoreline.

- b.** View corridors may be allowed, subject to the provisions of this section, to provide the general public and property owners with opportunities for visual access to water bodies associated with shoreline lots.
- c.** Vegetation removal that would be likely to result in significant soil erosion or the need for structural shoreline stabilization measures is prohibited.
- d.** Prior to removing vegetation for a view corridor, the owner of the shoreline parcel on which vegetation alterations are proposed must submit:
- 1) A signed application;
 - 2) A scaled graphic which demonstrates the areal extent of the view corridor (width and depth), showing existing vegetation and proposed alterations; and
 - 3) A graphic and/or site photos for the entire shoreline frontage, which demonstrates that the building site and proposed or existing structure does not, or will not when constructed, have a view of the water body, taking into account site topography and the location of shoreline vegetation on the parcel.
- e.** In creating a view corridor, removal of vegetation shall be limited to the minimum necessary to preserve or enhance views. In no case shall the view corridor exceed the provisions found in 17.46.060 Table 2.
- 1) The following standards apply:
 - a)** View corridors are not allowed in the Urban Conservancy designations unless associated with an existing use.
 - b)** View corridor widths are established as percentages in 17.46.060 Table 2 but in no case shall exceed a width greater than 30'. A maximum width of 30' running parallel to the water's edge is permitted per 100' linear feet of shoreline in all designations (excluding Urban Conservancy, where view corridors are prohibited).
 - c)** Pruning of native trees shall not exceed 30% of a tree's limbs.
 - d)** "Topping" of native trees is prohibited.
 - e)** Shrubs shall not be pruned to a height of less than six feet (6').
 - f)** Removal or pruning of vegetation waterward of the ordinary high water mark is prohibited.
 - g)** Once a view corridor or other shoreline access corridor has been established, no additional vegetation pruning for the view corridor is authorized except as may be permitted to maintain the approved view corridor from the re-growth of pruned limbs.
 - h)** On any site on which a buffer has been reduced or modified, a view corridor will be allowed only when a critical areas report (17.30.080 BMC) can clearly establish that fragmentation of fish and wildlife habitat will not occur, and that there will be no net loss of shoreline ecological functions.
 - 2) The following additional requirements apply:

- a) Plants that represent a hazard to safety, security, or shoreline ecological functions may be replaced with plants from the recommended list (Comprehensive Plan Shoreline Element Appendix B), provided a mitigation plan is submitted and approved. The mitigation plan must meet the standards of the City for a mitigation plan for Critical Fish and Wildlife Habitat.
- b) Non-native or invasive species may be replaced with plants from the recommended list (Comprehensive Plan Shoreline Element Appendix B), provided a mitigation management plan is submitted and approved. The mitigation plan must meet the standards of 17.30.090 BMC.
- c) All developments proposing a view corridor shall provide a mitigation plan that will need to be approved by the administrator. The mitigation plan must meet the standards found in this Section and 17.30.080 BMC.
- f. Trimming and removal of trees to provide or enhance visual access shall be limited to the requirements found in this Section and 17.46.060 Table 2 as well as shoreline modification standards found in Sections 17.46.060 B, C and E. and 17.46.070 F, I and S.
- g. Removal of diseased, damaged or stressed trees for the purpose of forest stewardship and conservation, property protection, or fire safety are subject to approval through a shoreline exemption.

O. Utilities

1. Utility development shall be located within public rights-of-ways or existing infrastructure corridors whenever possible and be coordinated with government agencies to provide for compatible multiple uses.
2. Utilities shall be located and designed to avoid damage or degradation to shoreline ecological functions including wetlands, marshes, bogs and other swamps; important wildlife areas; and other unique and fragile areas.
3. Underwater pipelines which transport material intrinsically harmful to aquatic life or potentially injurious to water quality, including sewer lines, shall be provided with automatic shut off valves at each end of the underwater segments.
4. Sites disturbed for utility installation shall be stabilized during and immediately following construction to avoid adverse impacts from erosion and shoreline ecological function, including protection of water quality using Best Management Practices.
5. Sites disturbed for utility installation shall be replanted using native species from the recommended list (Comprehensive Plan Shoreline Element Appendix B), with a diversity and type similar to or better than that which originally occurred on the site. Questions about appropriate diversity, plant type, and plant species shall be directed to agencies with expertise, such as the departments of Ecology and Fish and Wildlife.
6. The placing of utility lines shall not obstruct or hinder physical or visual access to shoreline areas from public right-of-ways or public use areas. Utilities shall be placed landward of the primary structural setback requirements found in 17.46.060 Table 2. Compliance with local health district standards for the placement of onsite sewer systems shall be indicated on pre-application drawings. If feasible, utility lines shall be placed

underground. Where lines must be placed aboveground, consideration shall be given to the maintenance of trees in the vicinity of the lines, and the utility line located to eliminate the need for topping or pruning trees.

7. Except where no other feasible alternative exists, utilities that require continued maintenance and therefore disrupt ecological processes (i.e. electrical transmission lines that require removal of undergrowth) shall not be placed in Vegetation Conservation areas (between OHWM and structure setback).

P. Recreation

1. Recreation – Use Regulations

a. The location, design and operation of shoreline recreational developments shall be primarily related to access, enjoyment and use of the water and shorelines of the state, consistent with the comprehensive plan and recreation plan of the local government with jurisdiction. All such uses shall not result in a net loss of shoreline function.

b. Commercial recreational development shall comply with the provisions for commercial development Section 17.46.070 G. Commercial.

c. Substantial accessory use facilities, such as rest rooms, recreation halls and gymnasiums, commercial services, access roads, and parking areas shall be set back from the ordinary high water mark as specified in the Development Standards Table (17.46.060 Table 2), unless it can be shown that such facilities are water dependent and the planned location will not adversely affect shoreline functions. Such facilities may be linked to the shoreline by walkways.

d. Shoreline recreational developments shall maintain, and, when feasible, enhance or restore desirable shoreline features including those that contribute to shoreline ecological functions and processes, scenic vistas, and aesthetic values. Removal of healthy native vegetation to enhance views shall be allowed only in compliance under Sections 17.46.060 E and 17.46.070 N.

e. Recreational uses shall be designed to complement their environment and surrounding land and water uses.

f. No recreational buildings or structures shall be built over water, other than water-dependent and/or public access structures such as piers, docks, bridges, boardwalks, or viewing platforms.

g. Each development proposal shall include a landscape plan that uses native, or native compatible self-sustaining vegetation. Removal of on-site native vegetation shall be limited to the minimum necessary for the permitted development or structures.

h. For recreational uses such as golf courses or parklands that require the use of fertilizers, pesticides, or other chemicals, the applicant shall specify the methods that will be used to ensure that the use complies with all provisions of this master program, including preventing the chemicals from entering adjacent water bodies or wetlands. Chemical-free buffer strips may be required at the discretion of the Administrator.

i. Recreational uses shall provide facilities for non-motorized access to the shoreline, such as pedestrian and bicycle paths, where those facilities will not result in loss of shoreline ecological functions.

- j.** Recreational uses shall include adequate provisions for water supply, sewage, garbage disposal, and fire protection.
- k.** Recreational development shall include adequate provisions, such as screening, buffer strips, fences, and signs, to buffer adjacent private property and natural areas and protect the value and enjoyment of those sites.
- l.** Trails and paths on steep slopes shall be located, designed, and maintained to protect bank stability.
- m.** Recreational uses shall be consistent with local comprehensive plan provisions and zoning regulations and required buffer and use setbacks in 17.46.060 D. and critical area protection regulations in contained herein.
- n.** Non-motorized recreation trails shall be allowed in the Zone 2 Buffer provided they are consistent with the local comprehensive plan and zoning regulations and the regulations contained herein, including standards below. Non-motorized, non-impervious surface trails no greater than the minimum width required by state and/or federal statute for the type of facility (e.g. ADA requirements) to provide shoreline access may be allowed in the Zone 1 buffer through the submittal of a vegetation planting plan, mitigation management plan and compliance with mitigation sequencing standards found in 17.30.080 BMC, subject to the following minimum standards:
- 1) Trail facilities shall, to the extent feasible, be placed on existing road grades, utility corridors, or any other previously disturbed areas;
 - 2) Trail facilities shall minimize the removal of trees, shrubs, snags and important habitat features. Vegetation management performed in accordance with best management practices as part of ongoing maintenance to eliminate a hazard to trail users is considered consistent with this standard;
 - 3) Viewing platforms, interpretive centers, campsites, picnic areas, benches and their associated access shall be designed and located to minimize disturbance of wildlife and/or critical characteristics of the affected conservation area;
 - 4) All facilities shall be constructed with materials complementary to the surrounding environment;
 - 5) Trail facilities that parallel the shoreline may be located in Zone 2, setback area and as allowed in this Chapter and 17.46.060 Table 2, percent alteration of Zone 2;
 - 6) Commercial and Public trails shall be the minimum width necessary to meet the designed need, but in no case shall they exceed 12 feet in width;
 - 7) Private trails shall not exceed 5 feet in width;
 - 8) Trails that provide direct shoreline access (Perpendicular or angled to the water) shall not exceed 5 feet in width and shall be kept to the minimum number necessary to serve the intended purpose;
 - 9) Review and analysis of a proposed trail facility shall demonstrate no net loss of ecological functions and values in conformance with this Chapter;
 - 10) Trail facilities shall not be exempt from special report requirements, as may be required by this Chapter; and

- o. No recreational uses are allowed that require fill.

Q. Residential Development

1. No lot for residential use shall be created that would not accommodate a buildable area, based on the zoning district, comprehensive plan designation and critical areas regulations, that meets the minimum building setback and other standards for the shoreline designation in which the lot is located.
2. No lots or plats will be approved that do not meet the minimum requirements of this Chapter.
3. Plats and subdivisions shall not rely upon new shoreline stabilization or flood hazard reduction measures that would cause significant impacts to other properties or public improvements or a net loss of shoreline ecological functions.
4. In its review of proposals for multi-lot and or multi-unit subdivisions and/or planned developments and other large developments, the City shall require and use information about the impacts of the proposed development on shoreline ecological functions, including the cumulative impacts of exempt uses and activities within the development over time, and ensure there will be no net loss of shoreline function.
5. All single family and multi-unit residential developments shall comply with the buffer, setback, bulk and dimensional standards set forth in 17.46.060 Table 2 of this Chapter, and shall be authorized only after approval of a site development plan, indicating the total disturbance footprint as required by this section. The disturbance footprint shall include:
 - a. All driveways and parking areas;
 - b. Wildfire defensible space;
 - c. Building footprint(s);
 - d. Water access pathway location and width, not to exceed 5 feet;
 - e. View access corridor, if applies;
 - f. Location of storage and staging of materials and equipment during construction;
 - g. Location of well and septic systems, if applicable;
 - h. Location of public access, joint use or community recreational facilities; and
 - i. Location of accessory utilities.
6. The construction of home(s) (inside the buffer or utilizing a buffer reduction) shall require preparation of a critical areas report and mitigation management plan as described in 17.30.080 BMC.
7. Location of the landward boundary of shoreline buffers as specified in 17.46.060 Table 2 BMC shall be approved by the Administrator, and marked with permanent or temporary fencing sufficient to prevent any incidental incursion into, or disturbance of the buffer, by equipment, vehicles, building materials or other means.
8. Buildings constructed in areas of 20 percent or greater slope, or slide-prone areas, shall conform to the requirements for geologically hazardous areas.

9. Except for minimal pathways no greater than 5 feet in width to afford access to allowed docks, boat access or swimming areas or to remove hazard trees as set forth in Section 17.46.060 E., native plant communities and species in buffers specified in 17.46.060 Table 2 shall not be disturbed for any reason.

10. New parcels/lots created through land division within jurisdiction of this Chapter shall accomplish the following:

- a. Plats and subdivisions as regulated elsewhere in this Chapter must be designed, configured and developed in a manner that assures that no net loss of ecological functions results from the plat or subdivision at full build-out of all lots.
- b. Plats and subdivisions as regulated elsewhere in this Chapter must be designed, configured and developed in a manner that assures that no need for new shoreline stabilization or flood hazard reduction measures that would cause significant impacts to other properties or public improvements or a net loss of shoreline ecological functions. Such review shall require using geotechnical analysis of the site and shoreline characteristics when development is to occur in known or suspected geologically hazardous areas (see Map VII-6 in the Map Appendix to the Brewster Comprehensive Plan). 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 shall not be allowed.
- c. Plats and subdivisions as regulated elsewhere in this Chapter must be designed and configured such that a buildable area is available on each lot in conformance with Comprehensive Plan as well as required shoreline and critical area buffer/setbacks, unless a specific, unbuildable lot is being created as a shoreline open space/conservancy lot and is so recorded Plats.

R. Signage

The following provisions apply to any commercial or advertising sign directing attention to a business, professional service, community, site, facility, or entertainment; and to temporary and interpretive signs. Highway, public information, and temporary signs are addressed in 17.46.070 Table 3 Use Chart.

1. All signs shall comply with applicable regulations of the City and any other applicable regulations (e.g., Scenic Vistas Act).
2. Signs shall be designed and placed so that they are compatible with the aesthetic quality of the existing shoreline and adjacent land and water uses. Except as necessary for safe navigation, moorage, or public safety signs shall be located landward of the required building setback.
3. All signs shall be located and designed to minimize interference with vistas, viewpoints, and visual access to the shoreline.
4. No signs shall be placed on trees or other natural features that will permanently damage or kill tree or feature.

5. Off premises and non-appurtenant signs shall not be permitted, with the following exception: temporary signs and interpretive signs related to shoreline uses and ecological functions shall be allowed where they comply with the other policies of this Chapter and, in the case of temporary signs, where adequate provisions are made for timely removal.
6. No sign shall have a surface area larger than 36 square feet.
7. Lighting of signs shall be prohibited unless the sign is necessary for safe navigation, moorage, or public safety. On-demand lighting shall be used whenever feasible.
8. Signs shall be located landward of the Zone 1 Buffer.

S. Shoreline Stabilization (See WAC 173-26-231(3)(a)(iii))

1. New development shall be located and designed to avoid the need for future shoreline stabilization to the extent feasible. Subdivisions shall be reviewed to assure that the lots created will not require shoreline stabilization in order for reasonable development to occur. Such review shall require using geotechnical analysis of the site and shoreline characteristics when development is to occur in known or suspected geologically hazardous areas. 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 shall not be allowed.
2. New structural stabilization measures shall not be allowed²⁰ except to protect an existing primary structure when all of the conditions below apply:
 - a. New or enlarged structural shoreline stabilization measures for an existing primary structure, including residences, should not be allowed unless there is conclusive evidence, documented by a geotechnical analysis that the structure is in danger from shoreline erosion caused by tidal action, 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 structural shoreline stabilization.
 - b. The erosion control structure will not result in a net loss of shoreline ecological functions.
3. New shoreline stabilization for water-dependent development shall not be allowed except when all of the conditions below apply:
 - a. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.
 - b. Nonstructural measures, such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
 - c. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report.

20 - Except for approved habitat restoration or enhancement projects

- d.** The erosion control structure will not result in a net loss of shoreline ecological functions.
- 4.** New structural stabilization measures shall not be allowed for the restoration of ecological functions or hazardous substance remediation projects pursuant to Chapter 70.105D RCW (as it now exists or hereinafter amended) except when all of the conditions below apply:
- a.** Nonstructural measures, planting vegetation or installing on-site drainage improvements are not feasible or not sufficient;
 - b.** The erosion control structure will not result in a net loss of shoreline ecological functions.
- 5.** Use of shoreline stabilization measures to create new land is prohibited including creation of new lots that will require shoreline stabilization in order to allow development.
- 6.** New development should be located and designed to avoid the need for future shoreline stabilization to the extent feasible. Subdivision of land must be regulated to assure that the lots created will not require shoreline stabilization in order for reasonable development to occur using geotechnical analysis of the site and shoreline characteristics. 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.
- 7.** An existing shoreline stabilization structure may be replaced with a similar structure²¹ if there is a demonstrated need to protect principal uses or structures from erosion caused by currents or waves.
- a.** The replacement structure should be designed, located, sized, and constructed to assure no net loss of ecological functions.
 - b.** Replacement walls or bulkheads shall not encroach waterward of the ordinary high-water mark or existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.
 - c.** Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark.
 - d.** For purposes of this section standards on shoreline stabilization measures, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure which can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.
- 8.** A geotechnical report prepared to address the need to prevent potential damage to a primary structure shall address the City's standards for a critical areas report (17.30.080 BMC) for geologically hazardous areas as well as the issues below.

²¹ Said replacement structure shall be engineered and designed to address the issues of the failure of the existing structure

9. Geotechnical reports that address the need to prevent potential damage to a primary structure shall address the necessity for shoreline stabilization by estimating time frames and rates of erosion and report on the urgency associated with the specific situation.

10. Hard armoring solutions shall not be authorized except when a geotechnical report confirms that there is a significant possibility that the primary structure will be damaged within three years as a result of shoreline erosion in the absence of hard armoring measures, or where waiting until the need is that immediate, would foreclose the opportunity to use measures that avoid impacts on ecological functions. Where the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as the three years, the report may still be used to justify more immediate authorization to protect against erosion using soft measures.

11. Shoreline stabilization shall not be allowed for new uses if it would cause a net loss of shoreline ecological functions on the site, or within the watershed; or if it would cause significant ecological impacts to adjacent properties or shoreline areas. Those impacts include accelerated erosion of adjacent properties caused by the stabilization measures.

12. New uses, including exempt uses, in areas above unstable slopes and moderately unstable slopes shall be set back sufficiently to ensure that shoreline stabilization will not be needed during the life of the structure, as demonstrated by a geotechnical analysis.

13. Where structural shoreline stabilization measures are shown to be necessary, the extent of the stabilization measures shall be limited to the minimum necessary.

14. Stabilization measures shall be designed to minimize harm to and as much as possible restore ecological functions. Lost functions shall be mitigated to ensure no net loss of shoreline ecological functions. Soft approaches shall be used unless demonstrated to be insufficient to protect the primary structure or structures.

15. Where stabilization is necessary to alleviate erosion caused by removal of vegetation, vegetative stabilization measures shall be the only stabilization measures allowed, except where a report by a qualified professional is submitted. See Section 17.46.060 E Vegetation Conservation.

16. Where feasible, ecological restoration and public access improvements shall be incorporated into public projects. Publicly financed or subsidized shoreline erosion control measures shall not restrict appropriate public access to the shoreline, except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to ecological functions.

17. All applicable federal, state, and local permits shall be obtained and complied with in the construction of shoreline stabilization measures. All permits must be issued before any stabilization work takes place.

T. Transportation

1. Transportation development serving non-water dependent uses should avoid the shoreline area where possible to avert damage to shoreline ecological function. Transportation development serving water oriented and water related uses shall be considered as part of that use and subject to the following provisions:

a. Plan, locate, and design proposed transportation and parking facilities 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.

- 1) New roads or road expansions should not be built within shoreline jurisdiction, unless other options are unavailable and infeasible. Design of roadways through shoreline areas should occupy the least narrow horizontal profile (road width) possible to convey traffic in a safe manner measured from ditch to ditch or shoulder to shoulder (whichever is narrowest) to minimize the footprint of roadway.
- 2) Stormwater runoff from roadways should be contained using Best Management Practices
- 3) De-icing, salting, and graveling of roads should be conducted in accordance with Best Management Practices.
- 4) Surfacing materials should not input or erode sediment into waterways.

b. Transportation and parking plans and projects shall be consistent with the master program public access policies, public access plan, and environmental protection provisions.

c. Circulation system planning shall include integrated corridors for pedestrian, bicycle, and public transportation where appropriate. Circulation planning and projects should support existing and proposed shoreline uses that are consistent with the master program.

d. Transportation and circulation systems shall be applied for at same time the primary development permit is being applied for complying with lot clearing and impervious surface standards found in 17.46.060 Table 2.

17.46.070 Table 3 Shoreline Use & Activity Designation Specific Regulations

All uses and activities must comply with all applicable provisions of this Chapter, including the General, Shoreline Modification, Use-Specific, and Shoreline Designation-Specific regulations. Uses and activities not listed in the Shoreline Use and Activity Chart may be allowed upon approval of a conditional use permit), subject to approval by the Administrator, if they comply with the standards in this section and with any regulations that apply to similar uses. All shoreline permits and exemptions are subject to conditions providing for maintenance, enhancement, and/or restoration of shoreline functions.

A = Allowed – requires exemption²²; or, Substantial Development or Conditional Use Permit, depending on fair market value and/or intensity of use or activity, or designation-specific requirements

E = Exempt from shoreline permitting, but not the regulations contained herein

SDP = Shoreline Substantial Development Permit required.

CUP = Shoreline Conditional Use Permit required.

X = Prohibited use

S = Same as in adjacent shoreline designation landward of the OHWM (applicable to areas designated Aquatic only)

N/A = Not Applicable

²² - exempt uses and activities are defined by statute, see definitions in Chapter 2.

(a) In the event that there is a conflict between the use(s) identified in 17.46.070 Table 3 and the policies in the Shoreline Element of the Brewster Comprehensive Plan, the policies shall apply.

(b) Aquatic: Water-dependent use only, subject to the use and development regulations of the abutting upland shoreline area designation.

17.46.070 Table 3 Use and Activity Chart

Uses and Activities	Aquatic ^(b)	Shoreline Recreation	Urban Conservancy	Shoreline Residential	High Intensity
Utilities (Sections 17.46.070 A and O)					
Primary (Section 17.46.070 O)	CUP	CUP	CUP	SDP	SDP
Accessory (Section 17.46.070 A)	X ²³	A	A	A	A
Agriculture (Section 17.46.070 B)					
Grazing/Cultivation/Orchards	X	A	A	A	A
Agricultural Buildings	X	A	A	A	A
Feedlots (CAFOS/AFOS)	X	X	X	X	X
Conversion from non-agricultural land to agricultural use	X	SDP	SDP	SDP	SDP
Aquaculture (Section 17.46.070 D)					
Floating Net Pen type & Accessory structures	X	X	X	X	X
On shore, confined types of facilities & Accessory structures	X	X	X	X	X
Archaeological, Scientific, Educational and Historic Resources (Section 17.46.070 C)					
Archaeological areas, scientific, educational or historic sites – low intensity	A	A	A	A	A
Archaeological areas, scientific, educational or historic sites – high intensity	SDP	SDP	SDP	SDP	SDP
Boating Facilities(Section 17.46.070 E)					
Marinas	S	CUP	CUP	CUP	CUP
Piers and Docks	S	SDP	SDP	SDP	SDP
Covered Moorage (Boat Canopies)	S	CUP	CUP	CUP	CUP
Covered Moorage (Boat Garages)	X	X	X	X	X
Commercial Wet Moorage	S	CUP	CUP	X	SDP
Commercial dry boat storage	S	SDP	X	X	SDP
Boat Launch Ramps					
Commercial	S	SDP	X	X	SDP
Public	S	SDP	SDP	SDP	SDP
Private, hard surfaced for motorized water craft	X	X	X	X	X
Private, low impact gravel or cobble for hand launching water craft	S	SDP	SDP	SDP	SDP

23 - Accessory utilities shall be prohibited except those required to serve a permitted water-dependent use, which shall require a conditional use permit.

Uses and Activities	Aquatic ^(b)	Shoreline Recreation	Urban Conservancy	Shoreline Residential	High Intensity
Boat Lifts	S	SDP	SDP	SDP	SDP
Mooring buoys/float plane moorage accessory to permitted moorage	S	SDP	CUP	SDP	SDP
Floats	S	SDP	CUP	SDP	SDP
Bulkheads (Section 17.46.070 F)					
Existing (17.46.070 F.3.)	X	SDP	SDP	SDP	SDP
New or enlarged (17.46.070 F.2.)	X	CUP	CUP	CUP	CUP
Commercial (Section 17.46.070 G)					
Water-dependent	CUP	SDP	SDP	SDP	SDP
Water-related/water-enjoyment	X	SDP	SDP	SDP	SDP
Non-water Oriented	X	X	X	X	X ²⁴
Flood Hazard Prevention Projects (Section 17.46.070 H)					
Structural	X	CUP	CUP	CUP	CUP
Non-Structural	X	SDP	SDP	SDP	SDP
Dredging and Dredge Material Disposal (Section 17.46.070 I)					
Waterward OHWM (17.46.070 I.5.)	CUP	CUP	CUP	CUP	CUP
Landward OHWM	X	CUP	CUP	CUP	CUP
Industry (Section 17.46.070 J)					
Water-dependent	S	X	X	X	SDP
Water-related	S	X	X	X	SDP
Nonwater Oriented	S	X	X	X	X ²⁵
Mining (Section 17.46.070 K)					
Surface Mining ²⁶	X	X	X	X	X
Other Mining	X	X	X	X	X
Mineral Prospecting and Placer Mining ²⁷	A	A	A	A	A
Municipal (Section 17.46.070 L)					
Water-dependent	S	A	A	A	A
Water-related/water-enjoyment	X	A	A	A	A
Non-water Oriented	X	CUP	CUP	SDP	SDP
Parking (Section 17.46.070 M)					
Parking appurtenant to existing permitted use	X	SDP	CUP	SDP	SDP
Parking as a primary use	X	X	X	X	X
Commercial parking	X	X	X	X	CUP

24 - unless approved using Section 17.46.070 G.

25 - unless approved using Section 17.46.070 J.

26 - unless the subject property has been designated as mineral lands of long-term commercial significance which shall require a conditional use permit.

27 - If performed in compliance with WDFW Gold and Fish Pamphlet, all others prohibited.

Uses and Activities	Aquatic ^(b)	Shoreline Recreation	Urban Conservancy	Shoreline Residential	High Intensity
Recreation (Section 17.46.070 P)					
High Impact	CUP ²⁸	SDP	SDP ²⁹	SDP	SDP
Medium Impact	CUP ²³	SDP	SDP ²⁴	SDP	SDP
Low Impact	CUP ²³	A	A	A	SDP
High Intensity (non-water-oriented)	CUP ²³	SDP	CUP	SDP	SDP
High Intensity (water-oriented)	CUP ²³	SDP	SDP	SDP	SDP
Medium Intensity	CUP ²³	A	SDP	SDP	A
Low Intensity / Passive	CUP ²³	A	A	A	A
Residential (Section 17.46.070 Q)					
Exempt single family dwellings ³⁰	X	A	A	A	A
Non-exempt single family dwellings (e.g. seasonal or year round rentals)	X	SDP	X	SDP	SDP
Multi-family	X	SDP	CUP	SDP	SDP
Subdivision	S	A	CUP	A	A
Signs (Section 17.46.070 R)					
Commercial Signs – on site advertising ³¹ (private)	X	SDP	X	SDP	SDP
Commercial Signs- off-site advertising (private)	X	X	X	X	X
Public Highway, Safety, Directional and Informational Signs (public)	A	A	A	A	A
Shoreline Stabilization (Section 17.46.070 S)					
Dredging and Material Disposal ³² (17.46.070 L)	S	CUP	CUP	CUP	CUP
Filling ³³ (17.46.060 C)	S	SDP	SDP	SDP	SDP
Clearing and Grading ³⁴ (17.46.060 B)	X	CUP	CUP	CUP	CUP
Bulkheads and revetments (17.46.070 F)	S	CUP	CUP	CUP	CUP
Shoreline Restoration and Enhancement ³⁵	S	A	A	A	A
Hardening, Structural approaches ³⁶	S	CUP	CUP	CUP	CUP

28 - Recreation development shall be limited to water-dependent uses and activities that require an over-the-water location and are allowed in the landward shoreline designation.

29 - Recreation uses limited to water-oriented uses and activities.

30 - RCW 90.58.030(3)(e)(vi) Construction on shorelands by an owner, lessee, or contract purchaser of a single family residence (inclusive of accessory utilities) for his own use or for the use of his or her 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 jurisdiction thereof, other than requirements imposed pursuant to this Chapter (SEE WAC 173-26-211(5)(a)(ii)(C))

31 - SDP requirement is only applicable to signs over the dollar threshold for an exemption.

32 - All dredging shall be the minimum required to support an existing permitted or proposed allowed use and shall be subject to a conditional use permit.

33 - All filling in the shoreline area is prohibited except for fill is limited to the minimum amount required for existing permitted or proposed allowed uses.

34 - Clearing and grading that is not part of an allowed and permitted shoreline use shall require a conditional use permit except on properties physically separated from the shoreline by another property or public right of way.

35 - Restoration and enhancement projects may be exempted if part of an approved recovery plan.

Uses and Activities	Aquatic ^(b)	Shoreline Recreation	Urban Conservancy	Shoreline Residential	High Intensity
Bioengineering approaches	S	SDP	SDP	SDP	SDP
<i>Transportation (Section 17.46.020 T)</i>					
Roads and Railroads	S	SDP	SDP	SDP	SDP

17.46.070 Table 4 Guidelines for Establishing Land Use Intensity

(To Be Used in Conjunction with this title and adopted Development and Performance Standards)

Level of Land Use Intensity	Types of Land Uses
High	Commercial, industrial, institutional, retail, residential density > 1 du/acre, high intensity recreation (ball fields, golf courses), highways and paved thoroughfares
Moderate	Residential < 1 du/acre, open space with active recreation development and activities, impervious drives serving > 3 du, paved trails, utility corridors and rights-of-way requiring vegetation management and service roads
Low	Open space with passive recreation, agriculture, unpaved roads serving < 2 du, unpaved trails, utility corridor without service road or vegetation management

36 - Subject to provisions in Section 17.46.080 E. for shoreline stabilization

17.46.080 Critical Areas

Critical areas (see Maps VII-1 through VII-6 in Comprehensive Plan Map Appendix) within shoreline areas shall be protected using the regulations herein unless otherwise specified in this section. Identified critical areas within shoreline jurisdiction are limited to aquifer recharge, fish & wildlife habitat and very limited areas designated as flood hazard, and wetlands. All uses and activities within identified critical areas shall require mitigation sequencing (see 17.30.090 BMC) and may require a critical areas report and mitigation management plan (17.30.080 and 17.30.090 BMC) depending on proposed impacts and location of project.

A. General

1. This section establishes protection measures for designated critical areas within shoreline jurisdiction. 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 administrator for compliance with this Chapter. “Adjacent” shall mean any activity located:

- a. On a site immediately adjoining a critical area;
- b. Within a distance equal to or less than the required critical area buffer width and/or building setback, whichever is greater;
- c. Within a distance equal to or less than one-half mile (2,640 feet) from a bald eagle nest;
- d. Within a distance equal to or less than 200 feet upland from a stream, wetland, or water body;
- e. Within a floodway, floodplain, or channel migration zone; or
- f. Within 200 feet from a critical aquifer recharge area.

2. General provisions

a. The presence of any known critical areas on or within one hundred (100) feet of property that is the subject of a development permit shall be identified by the applicant in the application materials submitted to the city.

b. In carrying out any of the provisions of this section, the city may utilize any available technical resources, with any associated costs being paid for by the applicant, including experts/professionals in a particular field, and maps and/or documents including without limitation the following:

- 1) City of Brewster Comprehensive Plan and critical area maps;
- 2) Brewster shoreline master program and maps;
- 3) Okanogan County Level I, Level II and Level III Habitat Maps;
- 4) US Fish and Wildlife Service National Wetlands Inventory;
- 5) U.S.G.S. 7.5 Minute Series Topographic Quadrangle Maps;
- 6) Aerial photos;
- 7) Approved special reports previously completed for a subject property;
- 8) Natural Resources Conservation Service Soils Survey;

- 9) Federal Wetlands Delineation Manual (1987);
- 10) Washington State Wetlands Identification and Delineation Manual (WDOE #96-94, March 1997, as amended);
- 11) Washington State Wetlands Rating System for Eastern Washington-Revised (WDOE #14-06-030, as updated);
- 12) Management Recommendations for Washington’s Priority Habitats and Species, May 1991, as amended;
- 13) Management Recommendations for Washington’s Priority Habitats- Riparian, December 1997, as amended;
- 14) Priority Habitats and Species List, July 1999, as amended;
- 15) US Army Corps of Engineers. (2006). Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. (Version 2.0), as amended;
- 16) Wetlands in Washington State- Volume 1: A Synthesis of the Science. Washington State Department of Ecology. Publication #05-06-006; and
- 17) Wetlands in Washington State- Volume 2: Guidance for Protecting and Managing Wetlands. Washington State Department of Ecology. Publication #05-06-008.

3. Special studies required

If the Administrator determines that the site of a proposed shoreline development potentially includes, or is adjacent to, a critical area(s), the applicant shall be notified in writing that a special study may be required. When required, the expense of undertaking the special study(ies) shall be borne by the applicant. The applicant's choice of consultant or technical expert and the content, format and extent of the special study(ies) shall be approved by Administrator.

- a. The requirement for special studies may be waived by the Administrator if there is substantial showing that:
 - 1) There will be no alteration of the critical area(s) and/or the required buffer(s);
 - 2) The proposal will not impact the critical area(s) in a manner contrary to the purpose, intent and requirements of this Chapter and the comprehensive plan; and
 - 3) The minimum standards of this section will be met.
- b. No special study is required for development proposals that are exempt from the provisions of this section as set forth in sections 17.30.030, 17.30.040 and 17.30.050 BMC.
- c. When required, a special study shall be conducted by a qualified professional who is knowledgeable about the specific critical area(s) in question. In general any required special study shall contain at least the following information, in addition to any other specific information determined pertinent by the Administrator (specific plan and special study requirements are found in applicable Critical Area sections below):

- 1) A map, of a scale no smaller than one inch equals two hundred (200) feet, showing the existing features on the site, such as topography, vegetation, etc., and including the extent of any critical area(s), and the plan for the proposed activity showing the relationship to the location of the critical area(s);
- 2) A written analysis of the existing critical area(s) and a description of how the proposed development will or will not impact the ecological functions and values of the critical area(s); and
- 3) A description (written and/or graphic) of any proposed mitigation measures/activities to address impacts to the critical area(s).

4. General process

The provisions of this section shall be implemented during the applicable review process for the requested shoreline permit approval, in accordance with the provisions of this Chapter.

5. Surety/bonding

If a development proposal within a designated critical area within shoreline jurisdiction is subject to mitigation, maintenance or monitoring plans, the city of Brewster, in a form acceptable to the city attorney, may require an assurance device or surety.

6. Permit conditions

Through the shoreline development review process, the city of Brewster shall have the authority to attach such conditions to the granting of any approval under this section as deemed necessary to alleviate adverse impacts to critical area(s) and to carry out the provisions of this Chapter. Such conditions of approval may include, but are not limited to the following:

- 1) Limitations on minimum lot sizes;
- 2) Provisions for additional buffers relative to the intensity of a use or activity;
- 3) Requirements and/or restrictions on the construction, size, location, bulk and/or height, etc., of structure(s);
- 4) Dedication of necessary easements for utilities, conservation, open space, etc.;
- 5) Imposition of easement agreements, sureties, deed restrictions, covenants, etc., on the future use and/or division of land;
- 6) Limitations on the removal of existing vegetation;
- 7) Additional measures to address issues such as erosion control, storm water management, filling, grading, etc.;
- 8) Development of a plan to create, enhance, or restore damaged or degraded critical area(s) on and/or off site; and
- 9) Any monitoring and/or maintenance plans necessary to implement the provisions of this Chapter.

B. Aquifer Recharge Areas

All areas within shoreline jurisdiction in Brewster are designated as aquifer recharge based on soil types (See Map VII-2 in the Map Appendix to the Comprehensive Plan). The general regulations in 17.46.060 and specific use and activity regulations in 17.46.070 are intended to protect these areas.

1. Development, uses and activities within identified aquifer recharge areas shall comply with the regulations contained in this Chapter and be subject to best management practices in compliance with the Eastern Washington Storm Water Management Manual. Any discharges that negatively affect an aquifer recharge area's water quality are prohibited.
2. For aquifer recharge areas found inside the shoreline jurisdiction, the following standards for development shall be required 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 aquifer recharge areas:
 - a. A hydrogeologic study and/or ongoing monitoring may be required to assess impacts of development activities on groundwater resources.
 - b. All storage tanks, whether above- or underground shall be required to be constructed so as to protect against corrosion for the operational life of the tank, to prevent any release of hazardous substances to the ground, groundwaters, or surface waters, and to utilize appropriate containment methods.
 - c. Application of pesticides, herbicides and fertilizers within aquifer recharge areas shall comply with timing and rates specified on product packaging.
 - d. Vehicle repair and servicing activities must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur.

C. Fish & Wildlife Habitat Conservation Areas

Nearly all of the area within shoreline jurisdiction in Brewster is designated as fish & wildlife habitat, primarily related to the limited riparian areas immediately adjoining the OHWM of the Columbia River (See Map VII-3 in Map Appendix to Comprehensive Plan). The shoreline designation applied to these areas – Urban Conservancy, and the regulations contained in this Chapter have been developed to protect these critical areas and ensure no net loss.

1. Development, uses and activities within or near identified fish and wildlife conservation areas shall comply with the regulations contained in this Chapter.

D. Frequently flooded areas.

1. Development, uses and activities within identified frequently flooded areas (see Map VII-5 in Map Appendix to the Brewster Comprehensive Plan) which are also within shoreline jurisdiction shall comply with the general regulations in this Chapter, the specific regulations in this Section and be compliant with Title 18 Brewster Municipal Code.

2. Standards. In addition to the general provisions of this Chapter and the requirements of the underlying zone, frequently flooded areas found inside shoreline jurisdiction, the following minimum standards shall apply to development activities within and adjacent to frequently flooded areas:

- a.** All development within frequently flooded areas shall be reviewed under and subject to the requirements of Title 18, Flood Damage Prevention, of the Brewster Municipal Code.
- b.** Where frequently flooded areas coincide with other designated critical areas, critical areas reports and mitigation plans shall address any combined functions and values.
- c.** Structures shall be located outside of frequently flooded areas except where no alternative location exists.
- d.** Fill and grading in frequently flooded areas shall only occur upon a determination by a qualified professional that the fill or grading will not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a defined channel migration zone, whether or not the city has delineated such zones as of the time of application.
- e.** Subdivision in frequently flooded areas is subject to the following:
 - 1)** All lots created shall have adequate building space outside flood hazard areas, including the floodway and channel migration zones and protect the functions and values of frequently flooded areas;
 - 2)** Plat maps shall indicate the location of the floodway, one-hundred-year floodplain with related elevations where applicable and channel migration zones;
 - 3)** Subdivisions shall be designed to minimize or eliminate the potential for flood damage; and
 - 4)** Subdivisions shall provide for stormwater drainage, in accordance with city standards, so as to reduce exposure to flood hazards.

D. Geologically hazardous areas

According to Map VII-6 in the Map Appendix to the Brewster Comprehensive Plan there are no designated geologically hazardous areas within shoreline jurisdiction in the City of Brewster or its adopted Future Service Area.

E. Wetlands

There are limited wetland areas designated within the City of Brewster and its Future Service Area. Map VII-4 in the Map Appendix to the Brewster Comprehensive Plan (based on USF&W Service National Wetlands Inventory) shows that wetlands within shoreline jurisdiction are very limited and primarily directly adjoining the water. Development and activities within or

adjoining designated wetlands or associated wetland buffers are limited to those uses authorized by this Chapter, and are subject to the provisions of this Chapter in general and this section specifically.

1. Identification and rating

a. Wetlands shall be identified and delineated by a qualified wetland professional in accordance with WAC 173-22-035 and designated based on the definitions, methods and standards set forth in the currently approved Federal Wetland Delineation Manual and supplements. The City may use the following information sources as guidance in identifying the presence of wetlands and the subsequent need for a wetland delineation study:

- 1) Hydric soils, soils with significant soil inclusions, and "wet spots" identified within the local soil survey;
- 2) National Wetlands Inventory;
- 3) Previous wetland rating evaluation; and,
- 4) On-site inspection

b. Wetland delineations are valid for five years after such date the Administrator shall determine whether a revision or additional assessment is necessary. The wetland boundary and any associated buffer area shall be identified on all plats, maps, plans and specifications submitted for the project. An evaluation of any unrated wetland is necessary when there is a proposed development or activity to be located adjacent to, or within an area containing a wetland.

c. Rating. Wetlands shall be conducted by a qualified wetland specialist and be rated according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Eastern Washington* (Ecology Publication #14-06-030, or as revised and approved by Ecology).

d. Illegal modifications. Wetland rating categories shall not change due to illegal modifications made by the applicant or with the applicant's knowledge or previous owner(s) in cases where the City has started enforcement actions and the owner sells/transfers ownership during the proceedings.

2. Regulated Activities.

a. The following activities are subject to the General Regulations in this Chapter and the specific regulations of this Section if they occur in a regulated wetland or its buffer:

- 1) The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind.
- 2) The dumping of, discharging of, or filling with any material.
- 3) The draining, flooding, or disturbing the water level or water table.
- 4) Pile driving.
- 5) The placing of obstructions.
- 6) The construction, reconstruction, demolition, or expansion of any structure.

7) The destruction or alteration of wetland vegetation through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated wetland.

8) Activities that result in:

- (a) A significant change of water temperature.
- (b) A significant change of physical or chemical characteristics of the sources of water to the wetland.
- (c) A significant change in the quantity, timing or duration of the water entering the wetland.
- (d) The introduction of pollutants.

b. For any regulated activity, a critical areas report or wetland critical areas report (see 17.30.080 BMC) may be required to support the requested activity.

3. Exemptions and Allowed Uses in Wetlands

a. The following wetlands are exempt from the buffer provisions contained in this Chapter and the normal mitigation sequencing process described in 17.30.090 BMC. They may be filled if impacts are fully mitigated based on provisions in 17.46.080 E. 4. In order to verify the following conditions, a critical area report for wetlands meeting the requirements in 17.30.080 BMC must be submitted.

- 1) All isolated Category III and IV wetlands less than 1,000 square feet that:
 - a) Are not associated with riparian areas or buffer
 - b) Are not part of a wetland mosaic
 - c) Do not contain habitat identified as essential for local populations of priority species identified by Washington Department of Fish and Wildlife or species of local importance identified on Map VII-3 in the Map Appendix to the Brewster Comprehensive Plan.
 - d) Are not a vernal pool
 - e) Are not an alkali wetland
 - f) Do not contain aspen stands

b. Activities Allowed in Wetlands. The activities listed below are allowed in wetlands. These activities do not require submission of a critical area or wetland critical area report, except where such activities result in a loss of the functions and values of a wetland or wetland buffer. These activities include:

- 1) Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.
- 2) 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 alteration of the wetland by changing existing topography, water conditions, or water sources.

3) Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland buffer, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column will be disturbed.

4) Enhancement of a wetland through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. 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. Re-vegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

5) Educational and scientific research activities

6) 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 expand the footprint or use of the facility or right-of-way.

4. Wetland Buffers

a. **Buffer Requirements.** The standard buffer widths in 17.46.080 Table 1 have been established in accordance with the best available science. They are based on the category of 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 17.46.010 Table 2, where applicable, to minimize the impacts of the adjacent land uses.

2) If an applicant chooses not to apply the mitigation measures in 17.46.080 Table 2 then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.

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 buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

4) Additional buffer widths are added to the standard buffer widths. For example, a Category I wetland scoring 32 points for habitat function would require a buffer of 150 feet (75 + 75).

17.46.080 Table 1 Wetland Buffer Requirements

	Buffer width (in feet) based on habitat score			
Wetland Category	3-4	5	6-7	8-9
Category I: Based on total score	75	90	120	150
Category I: Forested	75	90	120	150
Category I: Bogs and Wetlands of High Conservation Value	190			
Category I: Alkali	150			
Category II: Based on total score	75	90	120	150
Category II: Vernal pool	150			
Category II: Forested	75	90	120	150
Category III (all)	60	90	120	150
Category IV (all)	40			

17.46.080 Table 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	<p>Locate activity that generates noise away from wetland</p> <p>If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source</p> <p>For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer</p>
Toxic runoff	<p>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</p> <p>Establish covenants limiting use of pesticides within 150 ft of wetland</p> <p>Apply integrated pest management</p>
Stormwater runoff	<p>Retrofit stormwater detention and treatment for roads and existing adjacent development</p> <p>Prevent channelized flow from lawns that directly enters the buffer</p> <p>Use Low Intensity Development techniques (per PSAT publication on LID techniques)</p>
Change in water regime	Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	<p>Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion;</p> <p>Place wetland and its buffer in a separate tract or protect with a conservation easement</p>
Dust	Use best management practices to control dust
Disruption of corridors or connections	<p>Maintain connections to offsite areas that are undisturbed</p> <p>Restore corridors or connections to offsite habitats by replanting</p>

5) Increased Wetland Buffer Area Width. Buffer widths shall be increased on a case-by-case basis as determined by the Administrator when a larger buffer is necessary to protect wetland functions and values. This determination shall be supported by appropriate documentation showing that it is reasonably related to protection of the functions and values of the wetland. The documentation must include but not be limited to the following criteria:

- a) 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
 - b) The adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or
 - c) The adjacent land has minimal vegetative cover or slopes greater than 30 percent.
- 6) Buffer averaging to *improve wetland protection* may be permitted when **all** of the following conditions are met:**
- a) The wetland has 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.
 - b) The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.
 - c) The total area of the buffer after averaging is equal to the area required without averaging.
 - d) The buffer at its narrowest point is never less than either $\frac{3}{4}$ of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.
- 7) Averaging to *allow reasonable use* of a parcel may be permitted when **all** of the following are met:**
- a) There are no feasible alternatives to the site design that could be accomplished without buffer averaging.

b) The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional. The total buffer area after averaging is equal to the area required without averaging.

c) The buffer at its narrowest point is never less than either $\frac{3}{4}$ of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.

b. 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. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.

c. Buffers on Mitigation Sites. All mitigation sites shall have buffers consistent with the buffer requirements of this Section. Buffers shall be based on the expected or target category of the proposed wetland mitigation site.

d. Buffer Maintenance. Except as otherwise specified or allowed in accordance with this Section, wetland buffers shall be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive non-native weeds is required for the duration of the mitigation bond.

e. Impacts to Buffers. A wetland management and mitigation plan shall be required when impacts associated with development within a wetland or wetland buffer are unavoidable, demonstrated by compliance with requirements for the compensation for impacts to buffers outlined in 17.30.160 H BMC.

f. Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.

g. Allowed Buffer Uses. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this Section, provided they are not prohibited by any other applicable law and they are conducted in a manner 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 report, including:
 - a) Walkways and trails, provided that those pathways are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer twenty-five percent (25%) of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-leaching best practice of non-treated pilings may be acceptable.
 - b) Wildlife-viewing structures.

- 3) Educational and scientific research activities.
 - 4) 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 footprint or use of the facility or right-of-way.
 - 5) 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 alteration of the wetland by changing existing topography, water conditions, or water sources.
 - 6) Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside of the wetland buffer boundary, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.
 - 7) Enhancement of a wetland buffer through the removal of non-native 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.
 - 8) Stormwater management facilities. Stormwater management facilities are limited to stormwater dispersion outfalls and bioswales. They may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:
 - a) No other location is feasible; and
 - b) The location of such facilities will not degrade the functions or values of the wetland; and
 - c) Stormwater management facilities are not allowed in buffers of Category I or II wetlands.
 - 9) Non-Conforming Uses. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.
5. 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 Section, the Administrator may require the applicant to install permanent signs along the boundary of a wetland or buffer.

1) Permanent signs shall be made of an enamel-coated metal face and attached to a metal post or another non-treated material of equal durability. Signs must be posted at an interval of one (1) per lot or every fifty (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 city of Brewster Regarding Uses,
Restrictions, and Opportunities for
Stewardship**

2) The provisions of Subsection (a) may be modified as necessary to assure protection of sensitive features or wildlife.

c. Fencing

1) The applicant shall be required to install a permanent fence around the wetland or buffer when domestic grazing animals are present or may be introduced on site.

2) Fencing installed as part of a proposed activity or as required in this Subsection shall be designed so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

6. Critical Area Report requirements for Wetlands are found in 17.30.080 BMC.

7. Mitigation and Compensatory Mitigation requirements for wetlands are found in 17.30.090 BMC and the performance standards in 17.30.160 BMC.

17.46.090 Shorelines designations map.

The location and boundaries of the shoreline designations applied in this Chapter are established as shown on the map entitled the Brewster shorelines map. The shorelines map shall be adopted by ordinance with the ordinance number shown thereon, the date adopted, and shall be signed by the mayor. The signed map shall be maintained on display at City Hall and considered a part of this title.

A. Interpretation of shoreline designations map.

Where uncertainty exists as to the boundaries of shorelines designations as shown on the Brewster Shorelines Designation Map, the following rules shall apply:

1. Boundaries indicated as approximately following the centerlines of streets, highways, or alleys shall be construed as following such centerlines;
2. Boundaries indicated as approximately following platted lot lines shall be construed as following such lot lines;
3. Boundaries indicated as approximately following the corporate limits of the city shall be construed as following the corporate limits of the city;

4. Boundaries indicated as following shorelines shall be construed to following such shorelines, and in the event of change in the shoreline shall be construed as moving with the actual shoreline; boundaries indicated as approximately following the centerlines of streams, rivers, lakes or other bodies of water shall be construed to follow such centerlines;
5. Boundaries indicated as parallel to or extensions of features indicated in subsections (A) through (E) of this section shall be so construed. Distances not specifically indicated on the Brewster shorelines designation map shall be determined by the scale of the map;
6. Where physical or cultural features existing on the ground are inconsistent with those shown on the Brewster Shoreline Designations Map or in other circumstances not covered by subsections (A) through (F) of this section, the administrator shall interpret the designation boundaries.

B. Designations of shorelines in annexations.

Any shoreline areas annexed to the city shall be designated consistent with the comprehensive plan shoreline designation for the area to be annexed.

17.46.100 Non-Conforming Structures

Comment [LLJ1]: See HB 5451

- A. Structures that were legally established and are used for a use conforming at the time of establishment, but which are nonconforming with regard to setbacks, buffers or yards; area; bulk; height or density established in this Chapter may be maintained and repaired and may be enlarged or expanded upon issuance of a Conditional Use Permit provided that no reasonable alternative use is practical and the proposed use will be at least as consistent with the policies and provisions of the act and this SMP and as compatible with the uses in the area as the preexisting use.
- B. A structure for which a Variance has been issued shall be considered a legal nonconforming structure and the requirements of this section shall apply as they apply to preexisting nonconformities.
- C. A nonconforming structure which is moved any distance must be brought into compliance with this SMP.
- D. If a nonconforming development is damaged, it may be reconstructed provided the resulting configuration does not increase the nonconformity as it existed immediately prior to the time the development was damaged. An application shall be made for permits necessary to restore the development within one year of the date the damage occurred, all permits are obtained, and the restoration is completed within two years of permit issuance unless otherwise extended.
- E. Nothing in this section shall be deemed to prevent the normal maintenance and repair of a nonconforming structure or its restoration to a safe condition when declared to be unsafe by any official charged with protecting the public safety.

17.46.105 Non-Conforming Uses.

A. Uses and developments that were legally established and are nonconforming with regard to the use regulations of this Chapter may continue as legal nonconforming uses. Such uses shall not be enlarged or expanded, except that nonconforming single-family residences and water related commercial uses that are located landward of the OHWM may be enlarged or expanded in conformance with applicable bulk and dimensional standards by the addition of space to the main structure or by the addition of normal appurtenances as defined in 17.46.040 upon approval of a Conditional Use Permit.

B. A use which is listed as a conditional use, but which existed prior to adoption of this Chapter or any relevant amendment and for which a Conditional Use Permit has not been obtained, shall be considered a legal nonconforming use.

C. A structure which is being or has been used for a nonconforming use may be used for a different nonconforming use only upon the approval of a Conditional Use Permit. A Conditional Use Permit may be approved only upon a finding that:

- 1.** The proposed use will be at least as consistent with the policies and provisions of the Act and this Chapter and as compatible with the uses in the area as the preexisting use. In addition, such conditions may be attached to the permit as are deemed necessary to assure compliance with the above findings, the requirements of this Chapter and the Act, and to assure that the use will not become a nuisance or a hazard.

D. If a nonconforming use is discontinued for twelve consecutive months or for twelve months during any two-year period, the nonconforming rights shall expire and any subsequent use shall be conforming. A use authorized pursuant to this section shall be considered a conforming use for purposes of this section.

17.46.110 Non-Conforming Lots.

An undeveloped lot, tract, parcel, site, or division of land located landward of the OHWM which was established in accordance with local and state subdivision requirements prior to the effective date of this Chapter, but which does not conform to the present lot size standards, may be developed, if permitted by other land use regulations of the City and so long as such development conforms to all other requirements of this Chapter and the Act.

17.46.115 Violations and Penalties.

A. This part is adopted under RCW [90.58.200](#) and [90.58.210](#) to implement the enforcement responsibilities of the department and the city under the Shoreline Management Act. The act calls for a cooperative program between the city and the state. It provides for a variety of means of enforcement, including civil and criminal penalties, orders to cease and desist, orders to take corrective action, and permit rescission. The following should be used in addition to other mechanisms already in place at the local level and does not preclude other means of enforcement.

B. Policy. These regulations should be used by the city in carrying out enforcement responsibilities under the act. Enforcement action by the department or the city may be taken

whenever a person has violated any provision of the act or this Chapter or other regulation promulgated under the act. The choice of enforcement action and the severity of any penalty should be based on the nature of the violation, the damage or risk to the public or to public resources, and/or the existence or degree of bad faith of the persons subject to the enforcement action.

C. Order to cease and desist. The City and/or the department shall have the authority to serve upon a person a cease and desist order if an activity being undertaken on shorelines of the state is in violation of chapter [90.58 RCW](#) or this Chapter.

1. Content of order. The order shall set forth and contain:

- a.** A description of the specific nature, extent, and time of violation and the damage or potential damage; and
- b.** A notice that the violation or the potential violation cease and desist or, in appropriate cases, the specific corrective action to be taken within a given time. A civil penalty under WAC [173-27-280](#) may be issued with the order.

2. Effective date. The cease and desist order issued under this section shall become effective immediately upon receipt by the person to whom the order is directed.

3. Compliance. Failure to comply with the terms of a cease and desist order can result in enforcement actions including, but not limited to, the issuance of a civil penalty.

D. Civil penalty.

1. A person who fails to conform to the terms of a substantial development permit, conditional use permit or variance issued under RCW [90.58.140](#), who undertakes a development or use on shorelines of the state without first obtaining a permit, or who fails to comply with a cease and desist order issued under these regulations may be subject to a civil penalty by local government. The department may impose a penalty jointly with city, or alone only upon an additional finding that a person:

- a.** Has previously been subject to an enforcement action for the same or similar type of violation of the same statute or rule; or
- b.** Has been given previous notice of the same or similar type of violation of the same statute or rule; or
- c.** The violation has a probability of placing a person in danger of death or bodily harm; or
- d.** Has a probability of causing more than minor environmental harm; or
- e.** Has a probability of causing physical damage to the property of another in an amount exceeding one thousand dollars.

2. In the alternative, a penalty may be issued to a person by the department alone, or jointly with the city for violations which do not meet the criteria of subsection (a)(1) through (5) of this section, after the following information has been provided in writing to a person through a technical assistance visit or a notice of correction:

- a.** A description of the condition that is not in compliance and a specific citation to the applicable law or rule;

- b. A statement of what is required to achieve compliance;
- c. The date by which the agency requires compliance to be achieved;
- d. Notice of the means to contact any technical assistance services provided by the agency or others; and
- e. Notice of when, where, and to whom a request to extend the time to achieve compliance for good cause may be filed with the agency.

Furthermore, no penalty shall be issued by the department until the individual or business has been given a reasonable time to correct the violation and has not done so.

3. Amount of penalty. The penalty shall not exceed one thousand dollars for each violation. Each day of violation shall constitute a separate violation.

4. Aiding or abetting. Any person who, through an act of commission or omission procures aids or abets in the violation shall be considered to have committed a violation for the purposes of the civil penalty.

5. Notice of penalty. A civil penalty shall be imposed by a notice in writing, either by certified mail with return receipt requested or by personal service, to the person incurring the same from the department and/or the local government, or from both jointly. The notice shall describe the violation, approximate the date(s) of violation, and shall order the acts constituting the violation to cease and desist, or, in appropriate cases, require necessary corrective action within a specific time.

E. Appeal of civil penalty.

1. Right of appeal. Persons incurring a penalty imposed by the department or imposed jointly by the department and the city may appeal the same to the shorelines hearings board. Appeals to the shorelines hearings board are adjudicatory proceedings subject to the provisions of chapter [34.05](#) RCW. Persons incurring a penalty imposed by local government may appeal the same to the local government legislative authority.

2. Timing of appeal. Appeals shall be filed within thirty days of the date of receipt of the penalty. The term "date of receipt" has the same meaning as provided in RCW [43.21B.001](#).

3. Penalties due.

a. Penalties imposed under this section shall become due and payable thirty days after receipt of notice imposing the same unless application for remission or mitigation is made or an appeal is filed. Whenever an application for remission or mitigation is made, penalties shall become due and payable thirty days after receipt of the city and/or the department's decision regarding the remission or mitigation. Whenever an appeal of a penalty is filed, the penalty shall become due and payable upon completion of all review proceedings and upon the issuance of a final decision confirming the penalty in whole or in part.

b. If the amount of a penalty owed the department is not paid within thirty days after it becomes due and payable, the attorney general, upon request of the department, shall bring an action in the name of the state of Washington to recover such penalty. If the amount of a penalty owed to the city is not paid within thirty days after it becomes due and payable, the city may take actions necessary to recover such penalty.

4. Penalty recovered. Penalties recovered by the department shall be paid to the state treasurer. Penalties recovered by the city shall be paid to the local government treasury. Penalties recovered jointly by the department and the city shall be divided equally between the department and the city unless otherwise stipulated in the order.

F. Criminal penalty.

The procedures for criminal penalties shall be governed by RCW [90.58.220](#).

- 1. Prosecution:** Every person violating any of the provisions of this Chapter or the Shoreline Management Act of 1971 shall be punishable under conviction by a fine not exceeding one thousand dollars (\$1,000.00), or by imprisonment not exceeding 90 days, or by both such fine and imprisonment, and each day's violation shall constitute a separate punishable offense.
- 2. Injunction:** The City Attorney may bring such injunctive, declaratory or other actions as are necessary to insure that no uses are made of the shorelines of the State within the City's jurisdiction which are in conflict with the provisions and programs of this Chapter or the Shoreline Management Act of 1971, and to otherwise enforce provisions of this Section and the Shoreline Management Act of 1971.
- 3. Violators Liable for Damages:** Any person subject to the regulatory program of this Chapter who violates any provision of this Chapter or the provisions of a permit issued pursuant thereto shall be liable for all damages to public or private property arising from such violation, including the cost of restoring the affected area to its condition prior to such violation. The City Attorney may bring suit for damages under this subsection on behalf of the City. Private persons shall have the right to bring suit for damages under this subsection on their own behalf and on behalf of all persons similarly situated. If liability has been established for the cost of restoring an area affected by violation, the Court shall make provision to assure that restoration will be accomplished within a reasonable time at the expense of the violator. In addition to such relief, including monetary damages, the Court in its discretion may award attorney's fees and costs of the suit to the prevailing party.

17.46.120 Unauthorized Wetlands Alterations and Enforcement.

A. When a wetland or its buffer has been altered in violation of this chapter, all ongoing development work shall stop and the wetland and/or buffer shall be restored. The City shall have the authority to issue a "stop-work" order to cease all ongoing development work and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of provisions of this Section.

B. Requirement for Restoration Plan. All development work shall remain stopped until a restoration plan is prepared and approved by City. Such a plan shall be prepared by a qualified professional using the currently accepted scientific principles and shall describe how the actions proposed meet the minimum requirements described in Chapter 19.02.025 BMC. The Administrator shall, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. Minimum Performance Standards for Restoration. The following minimum performance standards shall be met for the restoration of a wetland, provided that if the violator can

demonstrate that greater functions and habitat values can be obtained, these standards may be modified:

1. The historic structure, functions, and values of the affected wetland shall be restored, including water quality and habitat functions.
2. The historic soil types and configuration shall be restored to the extent practicable.
3. The wetland and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration.
4. Information demonstrating compliance with other applicable provisions of this Chapter shall be submitted to the Administrator.

D. Site Investigations. The Administrator is authorized to make site inspections and take such actions as are necessary to enforce this Chapter. The Administrator shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

E. Penalties. Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this Chapter shall be guilty of a misdemeanor.

a. Each day or portion of a day during which a violation of this Chapter is committed or continued shall constitute a separate offense. Any development carried out contrary to the provisions of this Chapter shall constitute a public nuisance and may be enjoined as provided by the statutes of the state of Washington. The City may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this Chapter. The civil penalty shall be assessed at a maximum rate of \$100 per day per violation.

b. If the wetland affected cannot be restored, monies collected as penalties shall be deposited in a dedicated account for the preservation or restoration of landscape processes and functions in the watershed in which the affected wetland is located. The City may coordinate its preservation or restoration activities with other cities in the watershed to optimize the effectiveness of the restoration action.

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Title 19 ADMINISTRATION OF DEVELOPMENT REGULATIONS

Chapters:

- 19.01 Types of Project Permit Applications**
- 19.02 Processing of Project Permit Applications**
- 19.03 Public Notice**
- 19.04 SEPA Analysis**
- 19.05 Open Record Public Hearings**
- 19.06 Closed Record Decisions and Appeals**

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Chapter 19.01 TYPES OF PROJECT PERMIT APPLICATIONS

Sections:

- 19.01.001 Conflicts.**
- 19.01.005 Definitions.**
- 19.01.010 Procedures for processing project permits.**
- 19.01.020 Determination of proper procedure type.**
- 19.01.030 Project permit application framework.**
- 19.01.040 Joint public hearings.**
- 19.01.050 Legislative decisions.**
- 19.01.060 Legislative enactments not restricted.**
- 19.01.070 Exemptions from project permit application process.**
- 19.01.080 Administrative interpretations.**

19.01.001 Conflicts.

Unless otherwise specified by Washington State statute, in the event provisions of any other title of the Brewster Municipal Code, or other regulations adopted by the city of Brewster, including but not limited to, Title 12, Title 15, Title 16, Sections 16.12.140, 16.12.150, 16.20.060, 16.20.110, 16.20.120, Title 17, Sections 17.25.020, 17.25.050, 17.25.065, 17.38.040, 17.38.070, Chapters 17.30, 17.40, and 17.46, Title 18, ~~Sections 7.09 and 7.11 of the City of Brewster Shoreline Master Program~~, procedures for open record hearings, closed record appeals and judicial appeals, conflict with any provisions of this title, this title's provisions shall supersede and control. (Ord. 704 § 1, 2000: Ord. 639 § 1 (part), 1996)

19.01.005 Definitions.

The definitions in this section apply throughout this title.

"Building permits" means those permits issued pursuant to the following chapters of this code as now exist or as may be hereafter amended:

1. Chapter 15.04, Building Code;
2. Chapter 15.08, Plumbing Code;
3. Chapter 15.12, Electrical Code;
4. Chapter 15.14, Fire Code;
5. Sections 15.20.040 through 15.20.160, Trailer Camp Permits;
6. Chapter 15.28, Mechanical Code.

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“Closed record appeal” means an administrative appeal on the record to a local government body or officer, including but not limited to, the planning commission or the city council, following an open record hearing on a project permit application when the appeal is on the record with no or limited new evidence or information allowed to be submitted and only appeal argument allowed.

“Critical Areas Report” is a report prepared by a qualified professional required by the City that inventories and analyzes the development impacts of a proposed action on a critical area. Critical Area report requirements are found in 19.02.020 C. 1.

“Excavation permits” mean those permits issued pursuant to the following chapters of the BMC as now exist or as may be hereafter amended:

1. Chapter [12.06](#).

“Local government” means the city of Brewster.

“Open record hearing” means a hearing, conducted by a single hearing body or officer, including but not limited to the planning commission or the city council, authorized by the city council to conduct such hearings, that creates the city’s record through testimony and submission of evidence and information, under procedures prescribed under Chapter 19.05. An open record hearing may be held prior to the city’s decision on a project permit to be known as a “open record predecision hearing.” An open record hearing may be held on an appeal, to be known as an “open record appeal hearing,” if no open record predecision hearing has been held on the project permit.

“Parties of record” means:

1. The applicant;
2. Any person who testified at the open record public hearing on the project permit application; and/or
3. Any person who submitted written comments concerning the project permit application at the open record public hearing (excluding persons who have only signed petitions or mechanically produced form letters).

“Project permit” or “project permit application” means any land use or environmental permit or license required from the city for a project action, including but not limited to building permits, subdivisions, binding site plans, planned unit developments, conditional uses, [variances](#), shoreline substantial development permits, site plan review, permits or approvals required by critical area ordinances, site-specific rezones authorized by a comprehensive plan or subarea plan, but excluding the adoption or amendment of a comprehensive plan, subarea plan or development regulations except as otherwise specifically included in this subsection.

“Public meeting” means an informal meeting, hearing, workshop or other public gathering of people to obtain comments from the public or other agencies on a proposed project permit prior to the city’s decision. A public meeting may include, but is not limited to, a design review or architectural control board meeting, a special review district or city council meeting, or a scoping meeting on a draft environmental impact statement. A public meeting does not include an open record hearing. The proceedings at a public

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meeting may be recorded and a report or recommendation may be included in the city's project permit application file. (Ord. 639 § 1 (part), 1996)

19.01.010 Procedures for processing project permits.

A. Classification. For the purpose of project permit processing, all development permit applications shall be classified as one of the following: Type I, Type II, Type III or Type IV (A and B). Legislative decisions are Type V actions, and are addressed in Section 19.01.050.

B. Omission or Subsequent Enactment. In the event a development permit required by the city has been omitted or has been adopted by the city council after the effective date of the ordinance codified in this title, and another specific procedure is not required by law, the administrator shall classify the application as one of the four procedure types, Type I, Type II, Type III or Type IV (A and B) as set forth in Section 19.01.030(B) and (C). (Ord. 639 § 1 (part), 1996)

19.01.020 Determination of proper procedure type.

A. Determination by ~~Director~~Administrator. The ~~city clerk/finance director or his/her designee (hereinafter the "director")~~Administrator (see 17.08.020), shall determine the proper procedure type for all project permit applications. If there is a question as to the appropriate procedure type, the ~~director~~administrator shall resolve it in favor of the higher procedure type number. The act of classifying an application for procedure type shall be a Type I action; and subject to reconsideration and appeal at the same time and in the same way as the merits of the project permit application in question.

B. Optional Consolidated Permit Processing.

1. Unless otherwise required, where the city must approve more than one project permit application for a given development, two or more project permit applications required for the development may be simultaneously submitted by the applicant for review at one time under a single permit processing review procedure ("consolidated permit review"). If an applicant elects the consolidated permit review process by the simultaneous submission of two or more applications, the applications shall be reviewed and processed under the highest numbered procedure type that applies to any of the applications. If project permit applications for any such development are not submitted under this optional consolidated permit review process, the highest numbered type procedure must be processed prior to the subsequent lower numbered procedure type.

2. Applications processed in accordance with subsection (B) of this section which have the same highest numbered procedure but are assigned different hearing bodies shall be heard collectively by the highest decision-maker(s) applicable to such applications. Decision bodies in order of ranking are as follows: The city council is the highest, followed by the planning commission or shoreline hearings board, as applicable, and then the ~~director~~administrator. Joint public hearings with other agencies shall be processed according to Section 19.01.040. (Ord. 639 § 1 (part), 1996)

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C. Where other approvals or permits are required for a use or development that does not require an open record hearing, such approvals or permits shall not be granted until a critical area or shoreline approval or permit is granted. All critical area and shoreline approvals and permits shall include written findings prepared by the Administrator documenting compliance with bulk and dimensional standards and other policies and regulations of Chapters 17.30 and 17.46.

C. Where other approvals or permits are required for a use or development that does not require an open record hearing, such approvals or permits shall not be granted until a shoreline approval or permit is granted. All shoreline approvals and permits shall include written findings prepared by the Administrator documenting compliance with bulk and dimensional standards and other policies and regulations contain in Chapters 17.30 and 17.46 BMC.

19.01.030 Project permit application framework.

A. Definitions. For purposes of this section:

1. ~~“Director~~Administrator” means the city of Brewster Public Works Director or other individual duly appointed by the Mayor~~means either the city clerk-treasurer, city superintendent, or other code official as designated by the Brewster Municipal Code, or their respective authorized designees, as set forth in the applicable development regulations of the specific permit sought.~~
2. “Hearing body” means the city council, planning commission, shoreline hearings board, or board of appeals created pursuant to Section [15.04.065](#), as now exists or as may be hereafter amended.

B. Action Type.

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CLASSIFICATION FOR PROJECT PERMIT APPLICATIONS (TYPES I-IV) **LEGISLATIVE**

TYPE I	TYPE II	TYPE III	TYPE IVA	TYPE IVB	TYPE V
Excavation permits	Building permits	Variances	Subdivision preliminary plat Plat vacations and alterations	Final plat	Comp. plan amendments
Boundary line adjustment	Short subdivision	Conditional use permit	Site rezone		Development regulations and amendments thereto
<u>Shoreline exemptions</u>	Minor alteration to subdivision	Shoreline substantial development permit where impact of public significance and/or significant impact	Planned development		Area wide rezone
	Minor modification to residential planned developments	Shoreline conditional use permit shoreline variance			Annexations
	Shoreline substantial development permits where no impact of public significance and/or no significant impact	Flood hazard variance			
	Flood hazard development permit				
	Administrative interpretations				

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C. Decisions.

PROCEDURE FOR PROJECT PERMIT APPLICATIONS (TYPE I-IV) LEGISLATIVE

	TYPE I	TYPE II	TYPE III	TYPE IVA	TYPE IVB	TYPE V
Recommendation made by:	N/A	N/A	Director <u>Administrator</u> where shoreline substantial development permit	Hearing body	Director <u>Administrator</u>	Planning commission
Final decision made by:	Director <u>Administrator</u>	Director <u>Administrator</u>	City council	City council	City council	City council
Open record public hearing:	No	Only if appealed, open record hearing before hearing body	Yes, before city council to render final decision	Yes, before hearing body to make recommendation to city council	No	Yes, except for annexations, before planning commission to make recommendation to city council
Closed record appeal/final decision:	No	No	Only for shoreline permits before Shoreline Hearings Board	Yes, before city council to render final decision	Yes, before city council to render final decision	Yes, a city council could decide to hold its own open record hearing
Judicial appeal:	Yes	Yes	Yes	Yes	Yes	Yes

(Ord. 704 § 2, 2000; Ord. 639 § 1 (part), 1996)

19.01.040 Joint public hearings.

A. At the request of the applicant, the ~~director~~administrator may combine any hearing on a project permit application with any hearing that may be held by another local, state, regional, federal, or other agency on the proposed action if:

1. The hearing is held within city limits; and
2. The requirements of subsection (B) of this section are met.

B. Prerequisites to Joint Public Hearing. A joint public hearing may be held with another local, state, regional, federal or other agency and the city, as long as:

1. The joint hearing can be held within the time period specified in RCW [36.70B.090](#) or the applicant agrees to the schedule in the event that additional time is needed in order to combine the hearings;

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2. The other agency is not expressly prohibited by statute from doing so;
3. Sufficient notice of the hearing is given to meet each of the agencies' adopted notice requirements as set forth in statute, ordinance or rule; and
4. The agency has received the necessary information about the proposed project from the applicant in enough time to hold its hearing at the same time as the local government hearing. (Ord. 704 § 3, 2000: Ord. 639 § 1 (part), 1996)

19.01.050 Legislative decisions.

A. Decisions. The following decisions are legislative, and are not subject to the procedures in this chapter, unless otherwise specified:

1. Zoning code and development regulations and amendments to development regulations (for the purposes of this section, "development regulations" are as defined in RCW [36.70A.030\(7\)](#), as now exists or as may be hereafter amended);
2. Area-wide rezones to implement new city policies;
3. Adoption of the comprehensive plan and any plan amendments; and
4. Annexations.

B. Planning Commission. The planning commission shall hold a public hearing and make recommendations to the city council on the decisions in this section. The public hearing shall be held in accordance with the requirements of Chapter 19.05.

C. City Council. The city council may consider the planning commission's recommendation in a public hearing held in accordance with the requirements of Chapter 19.05.

D. Public Notice. Notice of the public hearing or public meeting shall be provided to the public as set forth in Section 19.03.030(B)(2).

E. Implementation. The city council's decision shall become effective by passage of an ordinance or resolution. (Ord. 639 § 1 (part), 1996)

19.01.060 Legislative enactments not restricted.

Nothing in this chapter or the project permit processing procedures shall limit the authority of the city council to make changes to the city's comprehensive plan or to make changes to the city's development regulations. (Ord. 639 § 1 (part), 1996)

19.01.070 Exemptions from project permit application process.

Whenever a permit or approval in this code has been designated as a Type I, II, III or IV permit, the procedures in this title shall be followed in project permit processing. The following permits or approvals are specifically excluded from the procedures set forth in this title:

- A. Landmark designations;
- B. Street vacations under RCW [35.79](#);
- C. Those listed in 17.30.030, 040 and 050 BMC;

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D. Those listed in 17.46.050 BMC;

~~B-E.~~ _____ Other approvals relating to the use of public areas; and

~~G-F.~~ _____ Other project permits, whether administrative or quasi-judicial that the city council has determined by resolution present special circumstances that warrant a different review process. (Ord. 639 § 1 (part), 1996)

19.01.080 Administrative interpretations.

A decision as to the meaning, application or intent of any development regulation, as it relates to a specific piece of property, may be requested by an applicant, staff or a citizen at any time prior to a final decision on a project permit application to which the development regulation may be applied. The request shall be on a form provided by the ~~responsible official~~ administrator and include identification of the regulation in question, a description of the property and a clear statement of the issue or question to be decided. The ~~responsible official~~ administrator shall issue a written interpretation within a reasonable time, but no more than fourteen working days after receipt of the completed form, and file a copy in a book or binder for such interpretations readily available to the public at the appropriate department's service counter. ~~The responsible official shall be designated by the mayor.~~ Administrative interpretations may be appeals to the city council for final decision as provided in Section 19.01.030. (Ord. 704 § 4, 2000; Ord. 639 § 1 (part), 1996)

Chapter 19.02 PROCESSING OF PROJECT PERMIT APPLICATIONS

Sections:

19.02.010 Preapplication conference.

19.02.020 Project permit applications.

19.02.021 Shoreline permits.

19.02.022 Critical areas review.

19.02.025 Mitigation.

19.02.026 Plan review.

19.02.027 Application vesting, extensions, modifications.

19.02.030 SEPA—Integration with permit procedures.

19.02.040 Referral and review of project permit applications.

19.02.010 Preapplication conference.

A. Applications for project permits involving Type III and Type IVA actions or are within shoreline jurisdiction and/or designated critical areas shall not be accepted by the ~~director~~ administrator unless

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the applicant has requested and attended a preapplication conference. The purpose of the preapplication conference is to acquaint the applicant with the requirements of this code and project review procedures and, for city staff to be acquainted with the proposed application for purposes of determining appropriate review procedures and facilitating the application and project review process. In order to ensure that the preapplication conference is meaningful, the applicant must provide all information requested on the form required by the ~~director~~ administrator.

B. The conference shall be held no more than fifteen calendar days following the filing of a written request for a preapplication conference with the ~~director~~ administrator, on the form provided by the ~~director~~ administrator. Pre-application meetings may take place via telephone or through email contact. If either of the later methods are used, the administrator shall print the correspondences and/or document the meeting in a memo or staff report to be place in the project file

C. At the conference or within five working days of the conference, the applicant may request that the ~~director~~ administrator provide the applicant with the following information:

1. A form which lists the requirements for a completed application;
2. A general summary of the procedures and timelines to be used to process the application;
3. The references to the relevant code provisions or development standards which may apply to the approval of the application, as preliminarily identified at the preapplication conference;
4. The city's design guidelines.

D. Information presented at or required as a result of the pre-application conference shall be valid for a period of one-hundred-eighty (180) days following the pre-application conference. An applicant wishing to submit a permit application more than one-hundred-eighty (180) days following a pre-application for the same permit application may be required to schedule another pre-application conference at the discretion of the administrator. If changes in physical or biological conditions or regulatory environment changes have been implemented, another pre-application meeting should be requested by the administrator.

E. It is impossible for the conference to be an exhaustive review of all potential issues. The discussions at the conference or the information sent by the city to the applicant under subsection (C) of this section shall not bind or prohibit the city's future application or enforcement of all applicable laws.

F. At or subsequent to a pre-application conference, the jurisdiction may issue a preliminary determination that a proposed development is not permissible under applicable policies or regulatory enactments. In that event, the applicant shall have the option to appeal the preliminary determination to the appropriate hearing body as provided for in the administrative procedures code for the City.

G. Preapplication conferences for all other types of applications are optional, and requests for conferences will be considered on a time-available basis by the ~~director~~ administrator. (Ord. 639 § 1 (part), 1996)

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19.02.020 Project permit applications.

Applications for project permits shall be submitted to the city upon forms provided by the ~~director~~ administrator. An application shall consist of all materials required by the applicable development regulations or the regulations herein for the specific permit(s) sought and the applicable fee as established by city council ordinance or resolution. (Ord. 639 § 1 (part), 1996)

A. Shoreline Permits. A complete application for a shoreline exemption, substantial development, conditional use, or variance permit shall contain, at a minimum, the following information; provided that the Administrator may vary or waive these requirements on a case-by-case basis. The 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 city requirements.

1. Applicant/Proponent Information:

- a. The name, address and phone number of the applicant/proponent, applicant's representative, and /or property owner if different from the applicant/proponent.
- b. The applicant/proponent should be the owner of the property or the primary proponent of the project and not the representative of the owner or primary proponent.

2. Property Information:

- a. The property's physical address and identification of the section, township and range to the nearest quarter, quarter section or latitude and longitude to the nearest minute. All applications for projects located in open water areas away from land shall provide a longitude and latitude location.
- b. Identification of the name of the shoreline (waterbody) that the site of the proposal is associated with.
- c. A general description of the property as now exists including its size, dimensions, land use, vegetation, landforms, other physical and ecological characteristics, existing improvements and existing structures.
- d. A general description of the vicinity of the proposed project including identification of the surrounding land uses, structures and improvements, intensity of development and physical characteristics.
- e. A vicinity map showing the relationship of the property and proposed development or use to roads, utilities, water and sewer, existing developments and uses on adjacent properties.

3. Site Plans

Site plan(s) identifying existing conditions and proposed developments consisting of photographs, text, maps and elevation drawings, drawn to an appropriate scale to clearly depict all relevant information that may include the following: The Administrator may require more specific detailed information prepared by a qualified professional, if additional information is required to confirm or add detail to the application.

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a. Parcel Boundary and Dimensions. The boundary of the parcel(s) of land upon which the development is proposed. A survey may be required where substantial questions exist regarding the location of property lines or other important features.

b. OHWM. The ordinary high water mark of all water bodies located adjacent to or within the boundary of the project. For any development where a determination of consistency with the applicable regulations requires a precise location of the ordinary high water mark (e.g. structure setback), the mark shall be located precisely on the ground and the biological and hydrological basis for the location as indicated on the plans shall be noted in the development plan. Where the ordinary high water mark is neither adjacent to or within the boundary of the project, the plan shall indicate the distance and direction to the nearest ordinary high water mark of a shoreline.

c. Topography. Existing and proposed land contours. The contours shall be at intervals sufficient to accurately determine the existing character of the property and the extent of proposed change to the land that is necessary for the development. Areas within the boundary that will not be altered by the development may be indicated as such and contours approximated for that area. The use of cross-sectional drawing and 3-Dimensional drawings or imagery may also be used to provide elevation information.

d. Vegetation. A general representation of the width, location, and character of vegetation found on the site

e. Structures. The dimensions and locations of all *existing* and *proposed* structures and improvements including but not limited to; buildings, paved or graveled areas, roads, utilities, septic tanks and drainfields, material stockpiles or surcharge, and stormwater management facilities.

f. Landscaping plans. Where applicable, a landscaping plan for the project.

4. Plan review. A plan review shall be conducted to determine if the application is complete. Plan review shall determine if adequate information is provided in or with the application in order to begin processing the application and that all required information and materials have been supplied in sufficient detail to begin the application review process. All information and materials required by the application form must be submitted. All studies supporting the application or information that addresses anticipated impacts of the proposed development must be submitted. A notice of completion or incompleteness shall be prepared and submitted to applicant within 28 days of receipt of materials.

The purpose of the plan review is to ensure adequate information is contained in the application materials to demonstrate consistency with this Program, applicable comprehensive plans, development regulations and other applicable regulations. City staff will coordinate the involvement of agencies responsible for the review of the proposed development.

B. Critical Areas. All land use and development applications are required to disclose the location of all critical areas, including shoreline buffers, within one hundred feet of the proposed activity, development or proposed use. The provisions of Chapters 17.30 (outside of shoreline jurisdiction)

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and 17.46 BMC (within shoreline jurisdiction) shall be applied to any such proposals. Existing designated critical areas and areas within shoreline jurisdiction (see Maps VII-1 through VII-6 and Map [redacted] in the City of Brewster Comprehensive Plan Map Appendix) together with any supporting information consistent with the requirements found below.

1. Preapplication Meeting/Site Visit. Upon receiving a land use or development proposal, the administrator shall schedule a preapplication meeting and/or site visit with the proponent for purposes of a preliminary determination whether the proposal is likely to result in impacts to the functions and values of critical areas or pose health and safety hazards. At this meeting, the administrator shall discuss the requirements of this chapter and other applicable regulations; provide critical areas maps and other available reference materials; outline the review and permitting processes; and work with the proponent to identify any potential concerns with regards to critical areas.

2. Application and SEPA Checklist. For all nonexempt proposals, the proponent shall submit all relevant land use/development/shoreline applications, together with a SEPA checklist. The administrator may waive the requirement for a SEPA checklist if the proposal is exempt under SEPA regulations and is unlikely to yield information useful in the review process.

3. Determination of Need for Critical Areas Report. Based upon the preapplication meeting, application materials, and the SEPA checklist (unless waived), the administrator shall determine if there is cause to require a critical areas report. In addition, the administrator may use critical areas maps and reference materials, information and scientific opinions from appropriate agencies, or any reasonable evidence regarding the existence of critical area(s) on or adjacent to the site of the proposed activity.

4. Documentation and Notification. The administrator shall document the preapplication meeting and/or site visit, application and SEPA threshold determination, and any other steps or findings that inform the determination whether a critical areas report shall be required. The applicant shall receive notice of the determination and any findings that support it. (Ord. 761 § 1 (part), 2004)

C. Critical Areas Report.

If the administrator determines that the site of a proposed development potentially includes, or is adjacent to, critical area(s) other than wetlands, a critical areas report shall be required if impacts are anticipated to occur, including intrusions into required buffer and setback areas. If the critical area is a wetland, a wetland critical areas report is required (See Section 19.02.020 C. 2.). When required, the expense of preparing the critical areas report shall be borne by the applicant.

a. The requirement for critical areas reports may be waived by the administrator if there is substantial evidence that:

- i. There will be no alteration of the critical area(s) and/or the required buffer(s);
- ii. The proposal will not impact the critical area(s) in a manner contrary to the purpose, intent and requirements of this master program and the comprehensive plan; and,
- iii. The minimum standards for protection of the specific critical area as provided in Chapter 17.30 BMC will be met.

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iv. The proposal is exempt from the provisions of this chapter as set forth in Section 19.01.070 herein.

b. Critical area reports shall be completed by a qualified professional who is knowledgeable about the specific critical area(s) in question.

c. At a minimum, a required critical areas report shall contain the following information:

i. Applicant's name and contact information; permits being sought, and description of the proposal;

ii. A copy of the site plan for the development proposal, drawn to scale no smaller than one inch equals two hundred (200) feet and showing:

(1) existing features on the site, such as topography, vegetation, etc.;

(2) Identified critical areas, buffers, and the development proposal with dimensions;

(3) Limits of any areas to be cleared; and

(4) A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;

iii. The names and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;

iv. Identification and characterization of all critical areas, wetlands, water bodies, and buffers adjacent to the proposed project area;

v. An assessment of the probable cumulative impacts to critical areas resulting from the proposed development of the site;

vi. An analysis of site development alternatives;

vii. A description of the application of mitigation sequencing to avoid, minimize, and mitigate impacts to critical areas;

viii. A mitigation plan (19.02.025 B.), as needed, in accordance with the mitigation requirements of this chapter, including, but not limited to:

(1) The impacts of any proposed development within or adjacent to a critical area or buffer on the critical area; and

(2) The impacts of any proposed alteration of a critical area or buffer on the development proposal, other properties and the environment;

ix. A discussion of the performance standards applicable to the critical area and proposed activity;

x. Financial guarantees to ensure compliance; and

xi. Any additional information required for specific critical areas as listed in subsequent sections of this chapter.

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g. The administrator may request any other information reasonably deemed necessary to understand impacts to critical areas.

1. Critical Area Report for Wetlands

a. If the Administrator determines that the site of a proposed development includes, is likely to include, or is adjacent to a wetland, a wetland report, prepared by a qualified professional, shall be required. The expense of preparing the wetland report shall be borne by the applicant.

b. Minimum Standards for Wetland Reports. The written report and the accompanying plan sheets shall contain the following information, at a minimum:

i. The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the wetland critical area report; a description of the proposal; identification of all the local, state, and/or federal wetland-related permit(s) required for the project; and a vicinity map for the project.

ii. A statement specifying the accuracy of the report and all assumptions made and relied upon.

iii. Documentation of any fieldwork performed on the site, including field data sheets for delineations, function assessments, baseline hydrologic data, etc.

iv. A description of the methodologies used to conduct the wetland delineations, function assessments, or impact analyses including references.

v. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, floodplains, and buffers on or adjacent to the proposed project area. For areas off site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information.

vi. For each wetland identified on-site and within 300 feet of the project site provide: the wetland rating per Wetland Ratings (17.30.160 BMC); required buffers; hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acres for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlet/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site.

vii. A description of the proposed actions including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives including a no-development alternative.

viii. An assessment of the probable cumulative impacts to the wetlands and buffers resulting from the proposed development.

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ix. A description of reasonable efforts made to apply mitigation sequencing pursuant to Mitigation Sequencing (Section 19.02.025) to avoid, minimize, and mitigate impacts to wetlands.

x. A discussion of measures, including avoidance, minimization, and compensation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land-use activity.

xi. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions.

xii. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.

xiii. Maps (to scale) depicting delineated and surveyed wetland and required buffers on-site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical areas; grading and clearing limits; areas of proposed impacts to wetlands and/or buffers (include square footage estimates);

xiv. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas. The written report shall contain a discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project.

19.02.025 Mitigation.

Mitigation. Where applicable, plans for development of areas on or off the site as mitigation for impacts associated with the proposed project shall be included and contain information consistent with the requirements as follows.

A. Mitigation Requirements. The applicant shall avoid all impacts that degrade the functions and values of shoreline and critical areas. If alteration is unavoidable, all adverse impacts to shoreline and critical areas and buffers resulting from the proposal shall be mitigated in accordance with an approved critical areas report and SEPA documents. Mitigation shall be on-site, when possible, and sufficient to maintain the functions and values of the shoreline and/or critical area, and to prevent risk from a hazard posed by a critical area.

1. Mitigation sequencing. Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to shoreline and/or critical areas. Proposed individual uses and developments shall analyze environmental impacts of the proposal and include measures to mitigate environmental impacts. When shorelines and/or critical areas are identified, alteration to these areas shall be avoided, minimized, or compensated for in the following order of preference:

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;

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- b. A review of the best available science supporting the proposed mitigation and a description of the report authors experience to date in critical areas mitigation; and
 - c. An analysis of the likelihood of success of the compensation project.
2. Measurable criteria for evaluating whether or not the objectives of the mitigation plan have been successfully attained and whether or not the requirements of this chapter have been met.
3. Written specifications and descriptions of the mitigation proposed, including, but not limited to:
 - a. The proposed construction sequence, timing, and duration;
 - b. Grading and excavation details;
 - c. Erosion and sediment control features;
 - d. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and
 - e. Measures to protect and maintain plants until established.
4. A program for monitoring construction of the compensation project, and for assessing the completed project and its effectiveness over time. The program shall include a schedule for site monitoring and methods to be used in evaluating whether performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. The compensation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five (5) years.
5. Identify potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.
6. The following performance standards shall apply to compensatory mitigation projects:
 - a. Mitigation planting survival will be 100% for the first year, and 80% for each of the 4 years following.
 - b. Mitigation must be installed no later than the next growing season after completion of site improvements, unless otherwise approved by the Administrator.
 - c. Where necessary, a permanent means of irrigation shall be installed for the mitigation plantings that are designed by a landscape architect or equivalent professional, as approved by the Administrator. The design shall meet the specific needs of riparian and shrub steppe vegetation.
 - d. Monitoring reports by the biologist must include verification that the planting areas have less than 20% total non-native /invasive plant cover consisting of exotic and/or invasive species. Exotic and invasive species may include any species on the state noxious weed list, or considered a noxious or problem weed by the Natural Conservation Services Department or local conservation districts.

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e. Onsite monitoring and monitoring reports shall be submitted to the Town 1 year after mitigation installation; 3 years time involved in monitoring and monitoring reports may be increased by the Administrator for a development project on a case-by-case basis when longer monitoring time is necessary to establish or re-establish functions and values of the mitigation site. Monitoring reports shall be submitted by a qualified professional biologist. The biologist must verify that the conditions of approval and provisions in the fish and wildlife management and mitigation plan have been satisfied.

f. Mitigation sites shall be maintained to ensure that the mitigation and management plan objectives are successful. Maintenance shall include corrective actions to rectify problems, include rigorous, as-needed elimination of undesirable plants; protection of shrubs and small trees from competition by grasses and herbaceous plants, and repair and replacement of any dead plants.

g. Prior to site development and or building permit issuance, a performance surety agreement in conformance with Chapter 7, must be entered into by the property owner and the City. The surety agreement must include the complete costs for the mitigation and monitoring which may include but not be limited to: the cost of installation, delivery, plant material, soil amendments, permanent irrigation, seed mix, and 3 monitoring visits and reports by a qualified professional biologist, including Washington State Sales Tax. The Administrator must approve the quote for said improvements.

h. Sequential release of funds associated with the surety agreement shall be reviewed for conformance with the conditions of approval and the mitigation and management plan. Release of funds may occur in increments of 1/3 for substantial conformance with the plan and conditions of approval. Verification of conformance with the provisions of the mitigation and management plan and conditions of approval after 1 year of mitigation installation shall also allow for the full release of funds associated with irrigation systems, clearing and grubbing and any soil amendments. If the standards that are not met are only minimally out of compliance and contingency actions are actively being pursued by the property owner to bring the project into compliance, the City may choose to consider a partial release of the scheduled increment. Non-compliance can result in one or more of the following actions: carryover of the surety amount to the next review period; use of funds to remedy the nonconformance; scheduling a hearing with the City's Hearing Examiner to review conformance with the conditions of approval and to determine what actions may be appropriate.

C. Mitigation Ratios. Mitigation ratios shall be used when impacts to riparian and upland habitat conservation areas, are unavoidable. Compensatory mitigation shall restore, create, rehabilitate or enhance equivalent or greater ecological functions. Mitigation shall be located onsite unless the biologist can demonstrate, and the City approves, that onsite mitigation will result in a net loss of ecological functions. If offsite mitigation measures are determined to be appropriate, offsite mitigation shall be located within Okanogan County in the same watershed as the development.

The onsite mitigation ratio, (mitigation amount:disturbed area), shall be at a minimum ratio of 1:1 for development within aquatic habitat and terrestrial buffers. A ratio of 2:1 shall apply to native

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vegetation removal within these areas. Mitigation for diverse, high quality habitat or offsite mitigation may require a higher level of mitigation. Mitigation and management plans shall evaluate the need for a higher mitigation ratio on a site by site basis, dependent upon the ecological functions and values provided by the habitat. Recommendations by resource agencies in evaluating appropriate mitigation shall be encouraged.

19.02.026 Plan Review.

A. A plan review shall be conducted to determine if an application is complete. Plan review shall determine if adequate information is provided in or with the application in order to begin processing the application and that all required information and materials have been supplied in sufficient detail to begin the application review process. All information and materials required by the application form must be submitted. All studies supporting the application or information that addresses anticipated impacts of the proposed development must be submitted. A notice of completion or incompleteness shall be prepared and submitted to applicant within 28 days of receipt of materials.

B. The purpose of the plan review is to ensure adequate information is contained in the application materials to demonstrate consistency with the requirements of Title 17, applicable comprehensive plans, other development and applicable regulations. City staff will coordinate the involvement of agencies responsible for the review of the proposed development.

19.02.027 Application Vesting, Extensions, Modifications.

A. An application shall become vested on the date a determination of completeness is made and all fees have been paid. Thereafter the application shall be reviewed under the codes, regulations and other laws in effect on the date of vesting; provided, in the event an applicant substantially changes his/her proposed development after a determination of completeness, as determined by the administrator, the application shall not be considered vested until a new determination of completeness on the changes is made. An application shall only be considered vested for a period of 180 days unless such application has been pursued in good faith or a permit has been issued; except the administrator is authorized to grant one or more extensions for additional time periods not exceeding 180 days each. The extension shall be requested in writing and a justifiable cause demonstrated.

B. 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 the permit or approval of a conditional use permit or variance. However, the City 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. In the case of a shoreline permit, conditional use or variance, notice shall also be provided to the Department of Ecology.

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C. Authorization to conduct development activities shall terminate five years after the effective date of a permit or any development authorized pursuant to a variance or conditional use permit. However, the City 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 and to the department.

D. The effective date of a permit or any development authorized pursuant to a variance or conditional use permit authorized by the City shall be the date of filing as provided in RCW 90.58.140(6). The permit time periods in subsections (2) and (3) of this section do not include the time during which a use or activity was not actually pursued due to the pendency of 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.

E. Revisions to permits, including under WAC 173-27-100, 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 development after the time limits of the original permit.

F. The city of Brewster shall notify the Department of Ecology in writing of any change to the effective date of a shoreline permit, conditional use or variance 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.

19.02.030 SEPA—Integration with permit procedures.

Environmental review under RCW Chapter [43.21C](#) and Title [14](#) of this code shall be integrated with the procedures described in this section as follows:

- A. If an open record predecision hearing is required and the city's threshold determination requires public notice under RCW Chapter [43.21C](#) and Title [14](#) of this code, the city shall issue its threshold determination at least fifteen calendar days prior to the open record predecision hearing.
- B. Comments shall be as specific as possible. (Ord. 639 § 1 (part), 1996)

19.02.040 Referral and review of project permit applications.

- A. Upon accepting a complete application, the ~~director~~[administrator](#) shall do the following:
- B. Transmit a copy of the application, or appropriate parts of the application, to each affected agency and city department for review and comment, including those responsible for determining compliance with state and federal requirements. The affected agencies and city departments shall have fifteen calendar days to comment. The referral agency or city department is presumed to have no comments if comments are not received within the specified time period. The ~~director~~[administrator](#) shall grant an extension of time for comment only if the application involves unusual circumstances. Any extension shall only be for a maximum of ten additional calendar days;

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C. In addition to the procedure set forth in subsection (A) of this section, the ~~director~~ administrator may schedule a meeting of the project permit processing committee, which committee shall be comprised of at least one city staff member from each of the following departments: (1) planning, (2) public works, (3) building. Each department head shall designate the staff member who will participate in the project permit processing committee. The committee shall meet in order to provide joint review and comment on any project permit application. (Ord. 639 § 1 (part), 1996)

Chapter 19.03 PUBLIC NOTICE

Sections:

19.03.010 Public notice of project permit application.

19.03.020 Optional public notice.

19.03.030 Notice of public hearing.

19.03.010 Public notice of project permit application.

A. Within fourteen days after issuing a determination of completeness, the administrator shall issue a notice of application. The notice shall include, but not be limited to the following:

~~A. Except as provided herein, public notice required for project permit applications if any, shall be provided as required by the applicable development regulations for the specific permit sought.~~

1. A description of the proposed project action, a list of permits required for the application, and if applicable, a list of any studies requested;

2. The identification of other required permits not included in the application, to the extent known by the Administrator;

3. The identification of existing environmental documents which evaluate the proposed development and the location where the application and any studies can be reviewed;

4. A statement of the public comment period, which shall be thirty days following the date of the notice of application, and a statement of the right of any person to comment on the application, receive notice of and participate in any hearings, and request a copy of the decision once made, and a statement of any appeal rights;

5. The date, time, location and type of hearing, if applicable and scheduled at the date of the notice of application;

6. Any other information determined by the administrator to be appropriate.

B. Informing the public

1. The notice of application shall be mailed to the latest recorded real property owners as shown by the records of the county assessor within at least three hundred feet of the boundary of the property upon which the development is proposed;

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2. In addition to mailing the notice of application, the Administrator may require the notice to be posted on the subject property for the duration of the public comment period, where the Administrator finds that such additional notice may be of benefit for the public. The applicant shall be responsible for posting and maintaining the posting throughout the entire public comment period. The applicant shall obtain the notice of application sign(s) from the Administrator upon payment of all applicable fees. The sign location and condition shall be the responsibility of the applicant until the sign(s) are returned to the Administrator. After the public comment period, the applicant shall sign an affidavit of posting before a notary public, using the form adopted by the city or town, and file the affidavit of posting with the Administrator, together with a photograph of the notice of application sign(s) posted at the site. Any necessary replacement of the notice of application sign(s) and post(s) shall be the sole responsibility of the applicant. At the discretion of the Administrator, said postings may be performed by the City.

C. The notice of application is not a substitute for any required notice of a public hearing.

D. A State Environmental Policy Act (SEPA) threshold determination may be issued for a proposal concurrent with the notice of application.

E. Notice of application and SEPA determination will be published in the local official newspaper of record.

~~B.—If public notice is required by publication, published notice shall include at least the project location, description, type of permit(s) required, comment period dates, and location where the application may be reviewed, in the city's official newspaper of general circulation in the general area where the proposal is located.~~

~~C.—Shoreline Master Program Permits.~~

~~1.—Methods of Providing SMP Notice. Notice of the application for a permit under the purview of the city's shoreline master program (SMP) shall be given by at least one of the following methods:~~

~~a.—Mailing of the notice to the occupants and the latest recorded real property owners as shown by the records of the county assessor within at least three hundred feet of the boundary of the property upon which the substantial development is proposed; provided, that if condominiums are located within the area or within three hundred feet of the boundaries of the area, notice shall be mailed to the condominium association, if one exists or, alternatively, to the manager of each condominium building;~~

~~b.—Posting of the notice in a conspicuous manner on the property upon which the project is to be constructed; or~~

~~c.—Any other manner deemed appropriate by the city to accomplish the objectives of reasonable notice to adjacent landowners and the public.~~

~~2.—Content of Shoreline Master Program Notice. The notices shall include:~~

~~a.—A statement that any person desiring to submit written comments concerning an application, or desiring to receive notification of the final decision concerning an application as expeditiously as possible after issuance of the decision, may submit the comments or requests for decisions to the city within thirty calendar days of the last date the notice is to be~~

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~~published pursuant to this subsection. The city shall forward, within two working days following issuance of the decision, a copy of the decision to each person who submits a request for the decision;~~

~~b.—Notice of the hearing shall include a statement that any person may submit oral or written comments on an application at the hearing;~~

~~c.—The public comment period shall be thirty days. The notice shall state the manner in which the public may obtain a copy of the city's decision on the application no later than two days following its issuance. (Ord. 704 § 5, 2000; Ord. 639 § 1 (part), 1996)~~

19.03.020 Optional public notice.

- A. In addition to the required methods of notice, and as optional methods of providing public notice of any project permits, the city may:
- B. Notify the public or private groups with known interest in a certain proposal or in the type of proposal being considered;
- C. Notify the news media;
- D. Place notices in appropriate regional or neighborhood newspapers or trade journals;
- E. Publish notice in agency newsletters or send notice to agency mailing lists, either general lists or lists for specific proposals or subject areas;
- F. Mail to neighboring property owners; and
- G. Post the property for site-specific proposals as follows:
 1. Posting shall consist of one or more notice boards as follows:
 - a. A single notice board shall be placed by the applicant:
 - i. At the midpoint of the site street frontage or as otherwise directed by the city for maximum visibility,
 - ii. Five feet inside the street property line, except when the board is structurally attached to an existing building, provided that no notice board shall be placed more than five feet from the street property without approval of the ~~director~~administrator,
 - iii. So that the top of the notice board is between seven to nine feet above grade, and
 - iv. Where it is completely visible to pedestrians;
 - b. Additional notice boards may be required when:
 - i. The site does not abut a public road,
 - ii. A large site abuts more than one public road, or
 - iii. The ~~director~~administrator determines that additional notice boards are necessary to provide adequate public notice;
 - c. Notice boards shall be:
 - i. Maintained in good condition by the applicant during the notice period,

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- ii. In place at least thirty calendar days prior to the date of hearing, or at least fifteen calendar days prior to the end of any required comment period,
- iii. Removed within fifteen calendar days after the end of the notice period;
- d. Removal of the notice board prior to the end of the notice period may be cause for discontinuance of the ~~director~~ administrator's review until the notice board is replaced and remains in place for the specified time period;
- e. An affidavit of posting shall be submitted to the ~~director~~ administrator by the applicant prior to the hearing or final comment date. If the affidavits are not filed as required, any scheduled hearing or date by which the public may comment on the application, will be postponed in order to allow compliance with this notice requirement;
- f. Notice boards shall be constructed and installed in accordance with specifications promulgated by the city superintendent.

The city's failure to provide the optional notice as described in this section shall not be grounds for invalidation of any permit decision. (Ord. 639 § 1 (part), 1996)

19.03.030 Notice of public hearing.

A. Content of Notice of Public Hearing for all Types of Applications. The notice given of a public hearing required in this chapter shall contain:

- 1. The name and address of the applicant or the applicant's representative;
- 2. Description of the affected property, which may be in the form of either a vicinity location or written description, other than a legal description;
- 3. The date, time and place of the hearing;
- 4. A description of the subject property reasonably sufficient to inform the public of its location, including but not limited to the use of a map or postal address and a subdivision lot and block designation;
- 5. The nature of the proposed use or development;
- 6. A statement that all interested persons may appear and provide testimony;
- 7. The sections of the code that are pertinent to the hearing procedure;
- 8. When information may be examined, and when and how written comments addressing findings required for a decision by the hearing body may be admitted;
- 9. The name of the city representative to contact and the telephone number where additional information may be obtained;
- 10. That a copy of the application, all documents and evidence relied upon by the applicant are available for inspection at no cost and will be provided at the requester's cost;
- 11. That a copy of the staff report will be available for inspection at no cost at least ten calendar days prior to the hearing and copies will be provided at the requester's cost.

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- B. Mailed Notice. Mailed notice of the public hearing shall be provided as follows:
1. Type I and Type II Actions. No public notice is required because no public hearing is held, except on an appeal of a Type II action which notice shall be mailed as described in subsection (B)(2) of this section.
 2. Type III Actions. The notice of public hearing shall be mailed to:
 - a. The applicant;
 - b. All owners of property according to the records of the county assessor within the area of the proposed action and within three hundred feet of the boundary of the subject property; provided, that if condominiums are located within the area or within three hundred feet of the boundary of the area, notice shall be mailed to the condominium association, if it exists or, alternatively, the condominium building manager of each building;
 - c. Any person who submits written or oral comments on an application.
 3. Type IV Actions. The notice of public hearing shall be mailed to all of the persons entitled to notice as described in subsection (B)(2) of this section, and for preliminary plats and proposed subdivisions, additional notice shall be provided as follows:
 - a. Notice of the filing of a preliminary plat adjacent to or within one mile of the municipal boundaries of a city or town, or which contemplates the use of any city or town utilities shall be given to the appropriate city or town authorities.
 - b. Notice of the filing of a preliminary plat of a proposed subdivision located in a city or town and adjoining the municipal boundaries thereof shall be given to the appropriate county officials.
 - c. Notice of the filing of a preliminary plat of a proposed subdivision located adjacent to the right-of-way of a state highway or within two miles of the boundary of a state or municipal airport shall be given to the Washington State Secretary of Transportation, who must respond within fifteen calendar days of such notice.
 - d. Special notice of the hearing shall be given to adjacent landowners by any other reasonable method the city deems necessary. Adjacent landowners are the owners of real property, as shown by the records of the county assessor, located within three hundred feet of any portion of the boundary of the proposed subdivision. If the owner of the real property which is proposed to be subdivided owns another parcel or parcels of real property which lie adjacent to the real property proposed to be subdivided, notice under subsection RCW [58.17.090\(2\)](#) shall be given to owners of real property located within three hundred feet of any portion of the exterior boundaries of such adjacently located parcels of real property owned by the owner of the real property proposed to be subdivided.
 4. General Procedure for Mailed Notice of Public Hearing.
 - a. The records of the Okanogan County assessor's office shall be used for determining the property owner of record. Addresses for a mailed notice required by this code shall be obtained from the applicable county's real property tax records. The ~~director~~[administrator](#) or his/her designee shall issue a sworn certificate of mailing to all persons entitled to notice

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under this chapter. The ~~director~~administrator may provide notice to other persons other than those required to receive notice under the code.

b. All public notices shall be deemed to have been provided or received on the date the notice is deposited in the mail or personally delivered, whichever occurs first.

C. Published Notice of Public Hearing.

1. Published notice of public hearing is required for all Type III, IV and V procedures. The published notice shall be published in the city's official newspaper.

2. For Type V Legislative actions, the city shall publish notice as described in subsection (C)(1) of this section and provide any other notice required by RCW [35A.12.160](#) as now exists or as may be hereafter amended.

D. Time and Cost of Notice of Public Hearing.

1. Notice shall be mailed and first published not less than ten nor more than thirty calendar days prior to the hearing date. Any posted notice shall be removed by the applicant within fifteen calendar days following the public hearing.

2. All costs associated with the public notice shall be borne by the applicant. (Ord. 704 § 6, 2000; Ord. 639 § 1 (part), 1996)

Chapter 19.04 SEPA ANALYSIS

Sections:

19.04.010 SEPA analysis.

19.04.020 Categorically exempt.

19.04.010 SEPA analysis.

A. The city shall review the project permit application under the requirements of the State Environmental Policy Act ("SEPA"), RCW Chapter [43.21C](#), the SEPA Rules, Chapter [197-11](#) WAC, and the city environmental policy ordinance, Chapter [14.02](#) of this code, and shall:

1. Determine whether the applicable regulations require studies that adequately analyze all of the project permit application's specific probable adverse environmental impacts (see subsection (D) of this section for how determination is made);
2. Determine if the applicable regulations require measures that adequately address such environmental impacts;
3. Determine whether additional studies are required and/or whether the project permit application should be conditioned with additional mitigation measures;
4. Provide for prompt and coordinated review by government agencies and the public on compliance with applicable environmental laws and plans, including mitigation for specific project

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impacts that have not been considered and addressed at the plan or development regulation level.

B. In its review of a project permit application, the city may determine that the requirements for environmental analysis, protection and mitigation measures in the applicable development regulations, comprehensive plan and/or in other applicable local, state or federal laws provide adequate analysis of and mitigation for the specific adverse environmental impacts of the application.

C. If the city's comprehensive plans, subarea plans and development regulations adequately address a project's specific adverse environmental impacts, as determined under subsections (A) and (B) of this section, it shall not impose additional mitigation under SEPA during project review.

D. A comprehensive plan, subarea plan, development regulation or other applicable local, state or federal law permits adequate analysis of and mitigation for the specific adverse environmental impacts of an application when:

1. The impacts have been avoided or otherwise mitigated.

E. In its decision whether a specific adverse environmental impact has been addressed by an existing rule or law of another agency with jurisdiction and with environmental expertise with regard to a specific environmental impact, the city shall consult orally or in writing with that agency and may expressly defer to that agency. Any oral consultation shall be documented in the project permit file. In making this deferral, the city shall base or condition its project approval on compliance with these other existing rules or laws.

F. Nothing in this section limits the authority of the city in its review or mitigation of a project to adopt or otherwise rely on environmental analyses and requirements under other laws, as provided by RCW Chapter [43.21C](#). (Ord. 639 § 1 (part), 1996)

19.04.020 Categorically exempt.

Actions categorically exempt under RCW [43.21C.110](#)(1)(a) do not require environmental review or the preparation of an environmental impact statement. An action that is categorically exempt under the rules adopted by the Department of Ecology (Chapter [197-11](#) WAC) may not be conditioned or denied under SEPA. (Ord. 639 § 1 (part), 1996)

Chapter 19.05 OPEN RECORD PUBLIC HEARINGS

Sections:

19.05.010 General.

19.05.020 Responsibility of ~~director~~administrator for hearing.

19.05.030 Conflict of interest.

19.05.040 Ex parte communications.

19.05.050 Burden and nature of proof.

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19.05.060 Order of proceedings.

19.05.070 Findings and notice of decision.

19.05.010 General.

Open record public hearings on all Type II, III and IV project permit applications, shall be conducted as provided in the framework Section 19.01.030 and in accordance with this chapter. (Ord. 639 § 1 (part), 1996)

19.05.020 Responsibility of ~~director~~administrator for hearing.

The ~~director~~administrator shall:

- A. Schedule an application for review and public hearing;
- B. Give notice;
- C. Prepare the staff report on the application, which shall be a single report stating all of the decisions made as of the date of the report, including recommendations on project permits in the consolidated permit process that do not require an open record predecision hearing. The report shall state any mitigation required or proposed under the development regulations or the city's authority under SEPA. If the threshold determination other than a determination of significance has not been issued previously by the city, the report shall include or append this determination. In the case of a Type I or II project permit application, this report may be the permit. (Ord. 639 § 1 (part), 1996)

19.05.030 Conflict of interest.

The hearing body shall be subject to the code of ethics and prohibitions on conflict of interest as set forth in RCW [35A.42.020](#) and RCW Chapter [42.23](#), as the same now exist or as may be hereafter amended. (Ord. 639 § 1 (part), 1996)

19.05.040 Ex parte communications.

- A. Quasi-judicial land use decisions of the hearing body shall be subject to RCW Chapter [42.36](#), Appearance of Fairness, as the same now exists or as may be hereafter amended.
- B. No member of the hearing body may be disqualified by the appearance of fairness doctrine for conducting the business of his or her office with any constituent on any matter other than a quasi-judicial action then pending before the hearing body.
- C. Prior to declaring as a candidate for public office or while campaigning for public office as defined by RCW [42.17.020](#)(5) and (25), as now exist or as may be hereafter amended, no public discussion or expression of an opinion by a person subsequently elected to a public office, on any pending or proposed quasi-judicial actions, shall be a violation of the appearance of fairness doctrine.

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D. During the pendency of any quasi-judicial proceeding, no member of a decision making body may engage in ex parte communications with opponents or proponents with respect to the proposal which is the subject of the proceeding unless that person;

1. Places on the record the substance of any written or oral ex parte communications concerning the decision or action;
2. Provides that a public announcement of the content of the communication and of the parties' rights to rebut the substance of the communication shall be made at each hearing where action is considered or taken on the subject to which the communication related. This prohibition does not preclude a member of a decision-making body from seeking in a public hearing specific information or data from such parties relative to the decision if both the request and the results are a part of the record. Nor does such prohibition preclude correspondence between a citizen and his or her elected official if any such correspondence is made a part of the record when it pertains to the subject matter of a quasi-judicial proceeding.

E. Anyone seeking to rely on the appearance of fairness doctrine to disqualify a member of a decision-making body from participating in a decision must raise the challenge as soon as the basis for disqualification is made known to the individual. Where the basis is known or should reasonably have been known prior to the issuance of a decision and is not raised, it may not be relied on to invalidate the decision.

F. In the event of a challenge to a member or members of the hearing body which would cause a lack of a quorum or would result in a failure to obtain a majority vote as required by law, any such challenged member(s) shall be permitted to fully participate in the proceeding and vote as though the challenge had not occurred, if the member or members publicly disclose the basis for disqualification prior to rendering a decision. Such participation shall not subject the decision to a challenge by reason of violation of the appearance of fairness doctrine.

G. Except for Type V actions, a member absent during the presentation of evidence in a hearing may not participate in the deliberations or decision unless the member has reviewed the evidence received. (Ord. 639 § 1 (part), 1996)

19.05.050 Burden and nature of proof.

Except for Type V actions, the burden of proof for demonstrating compliance with development regulations and consistency with SEPA is on the applicant. The project permit application must be supported by proof that it conforms to the applicable elements of the city's development regulations, comprehensive plan and that any significant adverse environmental impacts have been adequately addressed. (Ord. 639 § 1 (part), 1996)

19.05.060 Order of proceedings.

The order of proceedings for a hearing will depend in part on the nature of the hearing. The following shall be supplemented by administrative procedures or those procedures set out in other sections of this code as applicable.

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- A. Before receiving information on the issue, the following shall be determined:
 - 1. Any objections on jurisdictional grounds shall be noted on the record and if there is objection, the hearing body has the discretion to proceed or terminate;
 - 2. Any abstentions or disqualifications shall be determined.
- B. The presiding officer may take official notice of known information related to the issue, such as:
 - 1. A provision of any ordinance, resolution, rule, officially adopted development standard or state law;
 - 2. Other public records and facts judicially noticeable by law.
- C. Matters officially noticed need not be established by evidence and may be considered by the hearing body in its determination. Parties requesting notice shall do so on the record. However, the hearing body may take notice of matters listed in subsection B(2) of this section if stated for the record. Any matter given official notice may be rebutted.
- D. The hearing body may view the area in dispute with or without notification to the parties, but shall place the time, manner and circumstances of such view on the record.
- E. Information shall be received from the staff and from proponents and opponents. The presiding officer may approve or deny a request from a person attending the hearing to ask a question. Unless the presiding officer specifies otherwise, if the request to ask a question is approved, the presiding officer will direct the question to the person submitting testimony.
- F. When the presiding officer has closed the public hearing portion of the hearing, the hearing body shall openly discuss the issue and may further question a person submitting information or the staff if opportunity for rebuttal is provided. (Ord. 639 § 1 (part), 1996)

19.05.070 Findings and notice of decision.

A. A notice of final decision on an application shall be issued within one hundred twenty days after the date of the declaration of completeness, unless additional time is required due to environmental review, agency consultations or is needed to complete required studies or reports. In determining the number of days that have elapsed, the following periods shall be excluded:

- 1. Any period during which the applicant has been requested by the Administrator to correct plans, perform required studies, or provide additional information or materials. The period shall be calculated from the date the Administrator issues the request to the applicant to, the earlier of, the date the Administrator determines whether the additional information satisfies its request or fourteen days after the date the information has been received by the city;
- 2. If the Administrator determines the information submitted by the applicant under 11.01 of this Section is insufficient, it shall again notify the applicant of deficiencies, and the procedures of this Section shall apply to the request for information;
- 3. Any period during which an environmental impact statement (EIS) is being prepared following a determination of significance pursuant to RCW 43.21C;

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4. Any period for administrative appeals.
5. Any extension of time mutually agreed upon by the applicant and the Administrator.
- B. The time limit by which the jurisdiction must issue a notice of final decision does not apply if an application:
 1. Requires an amendment to a comprehensive plan or development regulation;
 2. Is substantially revised by the applicant after a determination of completeness has been issued, in which case the time period shall start from the date on which the revised project application is determined to be complete.
- C. If the Administrator is unable to issue its final decision within the time limits provided for in this Chapter, it shall provide written notice of this fact to the applicant. The notice shall include a statement of reasons why the time limits have not been met and an estimated date for issuance of the notice of final decision.
- D. In accordance with state law, the local jurisdiction is not liable for damages which may result from the failure to issue a timely notice of final decision.
- E. The local jurisdiction shall file the final decision on shoreline permits with the Department of Ecology in accordance with WAC 173-27-130, as amended.
- ~~A. Following the hearing procedure described in this chapter, the hearing body shall approve, conditionally approve or deny the application. If the hearing is an appeal, the hearing body shall affirm, reverse or remand the decision that is on appeal.~~
- ~~B. The hearing body's written decision shall issue within those time periods as set forth in the applicable code section pertaining to the project permit application. (Ord. 639 § 1 (part), 1996)~~

Chapter 19.06 CLOSED RECORD DECISIONS AND APPEALS

Sections:

- 19.06.010 Appeals of decisions.**
- 19.06.020 Consolidated appeals.**
- 19.06.030 Standing to initiate administrative appeal.**
- 19.06.040 Type I, II, III or IV project permit decisions or recommendations and administrative interpretations.**
- 19.06.050 Procedure for closed record decision/appeal.**
- 19.06.060 Judicial appeals.**
- 19.06.070 Appeals to the shorelines hearing board.**

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19.06.010 Appeals of decisions.

Project permit application decisions and administrative interpretations may be appealable as provided in the framework in Section 19.01.030. (Ord. 704 § 7, 2000: Ord. 639 § 1 (part), 1996)

19.06.020 Consolidated appeals.

- A. All appeals of project permit application decisions shall be considered together in a consolidated appeal.
- B. Appeals of environmental determinations under SEPA and Chapter [14.02](#) of this code are subject to the provisions of Chapter [14.02](#) of this code, as now exists or as may be hereafter amended. (Ord. 704 § 8, 2000: Ord. 639 § 1 (part), 1996)

19.06.030 Standing to initiate administrative appeal.

- A. Limited to Parties of Record. Only parties of record may initiate an administrative appeal of a Type II, Type III decision or a Type IV recommendation on a project permit application.
- B. Definition. The term “parties of record” for the purposes of this chapter, shall be as defined in Section 19.01.005. (Ord. 639 § 1 (part), 1996)

19.06.040 Type I, II, III or IV project permit decisions or recommendations and administrative interpretations.

- A. Appeals of the decisions or recommendation on a Type I, II, III or IV project permit application and appeals of administrative interpretations shall be governed by the following:
- B. Standing. Only parties of record have standing to appeal.
- C. Time to File. An appeal must be filed within ~~fourteen-twenty-one calendar~~ days following issuance of the written decision. Appeals may be delivered to the ~~planning department~~City by mail, personal delivery or by fax before ~~five-four~~ p.m. on the last business day of the appeal period.
- D. Computation of Time. For the purposes of computing the time for filing an appeal, the day the decision is rendered shall not be included. The last day of the appeal period shall be included unless it is a Saturday, Sunday, a day designated by RCW [1.16.050](#) or by the city’s ordinances as a legal holiday, then it also is excluded and the filing must be completed on the next city business day.
- E. Content of Appeal. Appeals shall be in writing, be accompanied by an appeal fee as set by council ordinance or resolution, and contain the following information:
 - 1. Appellant’s name, address and phone number;
 - 2. Appellant’s statement describing his or her standing to appeal;
 - 3. Identification of the application which is the subject of the appeal;
 - 4. Appellant’s statement of grounds for appeal and the facts upon which the appeal is based;

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5. The relief sought, including the specific nature and extent;
6. A statement that the appellant has read the appeal and believes the contents to be true, followed by the appellant's signature.

F. Effect. The timely filing of an appeal shall stay the effective date of the decision until such time as the appeal is adjudicated by the appropriate hearing body, as set forth in Section 19.01.030, or withdrawn.

G. Notice of Appeal. The ~~director~~ administrator shall provide public notice of the appeal as provided in Section 19.03.030(B)(2). (Ord. 704 § 9, 2000; Ord. 639 § 1 (part), 1996)

19.06.050 Procedure for closed record decision/appeal.

A. The following subsections of this title shall apply to a closed record decision/appeal hearing: Sections 19.05.030; 19.05.040; 19.05.050; 19.05.060(A) through (D); 19.05.070(A).

B. The closed record appeal/decision hearing shall be on the record before the hearing body, and no new evidence may be presented. (Ord. 639 § 1 (part), 1996)

19.06.060 Judicial appeals.

Except for appeals involving shoreline development permits which must be appealed pursuant to [19.06.070 in conformance](#) RCW Chapter [90.58](#) and RCW Chapter [34.05](#), as now exist or as may be hereafter amended, the city's final decision on a project permit application may be appealed by a party of record with standing to file a land use petition in Okanogan County superior court. Such petition must be filed within twenty-one days of issuance of the decision, as provided in RCW Chapter [36.70C](#) as it now exists or as may be hereafter amended. (Ord. 639 § 1 (part), 1996)

[19.06.070 Appeals to the shorelines hearing board.](#)

[Appeals to the Shoreline Hearings Board of a decision on a Shoreline Substantial Development Permit, Shoreline Variance, Shoreline Conditional Use Permit, 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 twenty-one \(21\) days of filing the final decision by the responsible local government with Ecology.](#)

Definitions Referenced in SMP

“Accessory building or use” means a subordinate use, structure, building or portion of a building located on the same parcel of land as the main use or building to which it is accessory. Accessory buildings shall contain no habitable space, nor shall they exceed twenty feet in height, unless otherwise specifically provided by other provisions of this title.

“Administrator” means the city of Brewster Public Works Director or other individual duly appointed by the Mayor.

“Advertising device” means any board, fence, vehicle, structure or other object that is visible from a public right-of-way or surrounding properties whose primary purpose is that of advertising or identifying any establishment, product, goods or services. These include, but are not limited to, signs, billboards, lights, balloons, flags and audible messages (except for signs identifying the occupant or premises in a residential zone district).

“Agriculture” and “Agricultural Activities” means 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, provided that the replacement facility is no closer to the OHWM than the original facility; and maintaining agricultural lands under production or cultivation. Vegetable gardens occupying less than five thousand square feet and up to ten fruit trees on a lot are exempt from this definition.

“Agricultural Equipment” and “Agricultural Facilities” includes, but is not limited to: (i) The following used in agricultural operations: Equipment; machinery; constructed shelters, buildings, and ponds; fences; upland finfish rearing facilities; water diversion, withdrawal, conveyance, and use equipment and facilities including, but not limited to, pumps, pipes, tapes, canals, ditches, and drains; (ii) Corridors and facilities for transporting personnel, livestock, and equipment to, from, and within agricultural lands; (iii) Farm residences and associated equipment, lands, and facilities; and (iv) Roadside stands and on-farm markets for marketing fruit or vegetables.

“Agricultural Land” means those specific land areas on which agriculture activities are conducted as of the date of adoption of a local master program pursuant to these guidelines as evidenced by aerial photography or other documentation.

“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 years of planting; and livestock including both the animals themselves and animal products including, but not limited to, meat, upland finfish, poultry and poultry products, and dairy products.

“Animal feeding operation” or “AFO” means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

- A. Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and Crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

“Appeal” means a request for a review of the interpretation of any provision of this title, see also 19.01.005 BMC.

“Aquifer Recharge Area” means an area with a critical recharging effect on aquifers used for potable water where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water.

“Area of shallow flooding” is designated as AO, or AH Zone on the flood insurance rate map (FIRM). AO Zones have base flood depths that range from one to three feet above the natural ground; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow; AH indicates ponding, and is shown with standard base flood elevations. “Area of special flood hazard” is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

“Bed and breakfast” means an owner-occupied single-family dwelling in which not more than two bedrooms for not more than six guests total are rented to the traveling public. Only one meal, breakfast, may be served at a bed and breakfast. For the purposes of this title, this use is not considered a commercial use. This use shall have the outward appearance of a single family residence and food service in accordance with WAC 246.215.180.

“Best Available Science” The current scientific information used in the process to designate, protect, or restore critical areas, that is derived from a valid scientific process as defined by WAC 365-195-900 through 925, for when used for the protection of critical areas and shorelines, the most current, accurate, and complete scientific and technical information available WAC 173-26-201(2)(a).

“Best management practices” means (BMP’s) means conservation practices or systems of practices and management measures 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 pattern, and to the chemical, physical, and biological characteristics of waters, wetlands, and other fish and wildlife habitats.

Control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw material.

“Breakaway wall” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

“Building or Structure” means that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built upon or composed of parts joined together in some definite manner but not including fences or standard roof mounted antennas.

“Buffer, Wetland” means the vegetation area adjacent to a wetland that separates and protects the wetland aquatic area from adverse impacts associated with adjacent land uses.

“CAFO” Concentrated Agricultural Feeding Operation, as defined by the Code of Federal Regulations 122.23.

“Campground/RV Park” means a development providing facilities for outdoor recreational activities, including structural improvements such as covered cooking areas, group facilities, self-contained travel trailer/motor home sites, tent sites, restroom and shower facilities, and laundry facilities for the convenience of temporary occupants. This definition includes camping clubs when developed in accordance with applicable state laws.

“Critical aquifer recharge areas (CARA)” means areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.

“Conditional use” means a use, development, or substantial development which is classified as a conditional use or is not classified within this Title.

“Critical areas” means the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas, as defined by RCW 36.70A.030(5) and as identified in the city of Brewster’s comprehensive plan.

“Critical Areas Report” is a report prepared by a qualified professional required by the City that inventories and analyzes the development impacts of a proposed action on a critical area. Critical Area report requirements are found in 19.02.020 C. 1.

“Density” means the average number of dwelling units per acre for residential development and the maximum amount of use and/or square footage expressed as a percentage or fraction of the size of the lot.

“Development regulations” means the controls placed on development or land uses by the City, 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.

“Dwelling, Multi-Unit” means a building containing more than two dwelling units, or two dwelling units if a total of two or more multi-unit dwellings are located on the same lot.

“Dwelling, One-Family” means a detached building containing one dwelling unit that meets the minimum design standards found in Section 17.10.100 of this title.

“Dwelling unit” means a building or portion thereof providing complete housekeeping facilities for one

family as defined in this title. No motor home, travel trailer, tent trailer or other recreational vehicle shall be considered a dwelling unit.

“Feedlot” means an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage, or other livestock feed, 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.

“Fish and Wildlife Habitat Conservation Areas” habitats of priority species, priority habitats, and habitats of local importance for fish and wildlife that include a seasonal range or habitat element with which a given species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long-term. These might include areas of high relative density or species richness, breeding habitat, winter range, movement corridors, and areas of limited availability or high vulnerability to alteration, such as cliffs, talis, and wetlands.

“Floodplain” is 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 the flood ordinance regulation maps of the city of Brewster and/or Okanogan County.

“Frequently Flooded Area” means the floodplain, the future-flow floodplain, and those lands that provide important flood storage, conveyance and attenuation functions.

“Future Service Area” means a regional boundary, set in an attempt to control urban sprawl by encouraging that the area inside the boundary be used for higher density urban development and the area outside is used for lower density development. “Use” means the purpose for which land or a structure is primarily designed, arranged or intended, or for which it is primarily occupied or maintained.

“Geologically hazardous areas” means:

- A. Any area designated as a Geologically Hazardous Area by the local government with jurisdiction;
or
- B. Any other area that is not suited to siting commercial, residential, or industrial development consistent with public health or safety concerns, because of the area’s susceptibility to erosion, sliding, earthquake, or other geological events, including but not limited to:
 - 1. Channel migration zones;
 - 2. Erosion hazard areas: areas that contain soil types, according to Soil Conservation Service's Soil Classification System, that may experience severe to very severe erosion;
 - 3. Landslide hazard areas: areas that have the potential of risk of mass movement resulting from a combination of geologic, topographic, and hydrologic factors;
 - 4. Seismic hazard areas: areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction;
 - 5. Mine hazard areas: areas that are directly underlain by, adjacent to, or affected by mine

workings such as adits, tunnels, drifts, or air shafts;

6. Volcanic hazard areas: areas subject to pyroclastic flows, lava flows, and inundation by debris flows, mud flows, or related flooding resulting from volcanic activity.

“Geotechnical report” or “geotechnical analysis” means 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 geological and hydrological 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 professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.

“Grade” (adjacent ground elevation) is the lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the building and the property line or, when the property line is more than five feet from the building, between the building and a line five feet from the building (per International Building Code).

“Grading” means 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.

“Habitat” means the specific area or environment in which a particular type of plant or animal lives.

“Historic Site” means those sites that are eligible to be listed or are listed on the Washington Heritage Register, National Register of Historic Places, or any locally developed historic registry formally adopted by the City of Brewster.

“Hotels and motels” means establishments for housing the traveling public on an overnight or short term basis. Accessory restaurant and recreational facilities are usually available to non-guests as well as guests.

“Local government” means the city of Brewster.

“Manure lagoon” means a waste treatment impoundment, in which manure is mixed with sufficient water to provide a high degree of dilution for the primary purpose of reducing pollution potential through biological activity.

“Manufacturing, Heavy” Industrial enterprises and activities which possess potential nuisance or hazard components or place exceptional demands upon public facilities and services. Such facilities generally involve the manufacturing, assembly, fabrication and processing, bulk handling, storage, warehousing, and heavy trucking activity and normally require sites of larger size to accommodate these uses.

“Manufacturing, Light” A manufacturing use, in which goods are produced without using heavy machinery such as, machine loaders, foundry machinery, metal, presses, etc., and without chemically processing materials. Light manufacturing activities include but are not limited to the following

activities:

- A.** Manufacture, assembly, finishing, and/or packaging of small items from component parts. Examples include but are not limited to pottery, clothing, assembly of clocks, electrical appliances, or medical equipment.
- B.** Production of items made from materials derived from plants or animals, including but not limited to leather, pre-milled wood, paper, wool or cork; or from textiles, semi-precious or precious metals or stones, or plastics.
- C.** Production or bottling of beverages for human consumption, including but not limited to beer, wine and soft drinks.

“Mineral Resource Lands” means lands designated as mineral resource lands, as required by the Growth Management Act, RCW 36.70A.170.

“Mineral prospecting” means to excavate, process, or classify aggregate using hand-held mineral prospecting tools and mineral prospecting equipment.

“Mining” The act of extracting from the earth minerals and/or ores via open pit, shaft, leaching, hydraulic, sand and gravel removal or other methods, except dredging. Note that mining activities are subject to zoning regulation and approval processes; however, prospecting and exploration activities that are conducted with minimal disturbance of the subject property are not considered mining and are not restricted by zoning. Surface mining operations are also regulated by Department of Natural Resources.

“Mitigation plan” shall include a written report or authorization (by a state or federal agency) prepared by a qualified professional identifying environmental goals and objectives of the compensation proposed and including:

- A.** A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the mitigation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site mitigation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area;
- B.** A review of the most current, accurate, and complete scientific and technical information supporting the proposed mitigation and a description of the report author’s experience to date in restoring or creating the type of critical area proposed; and
- C.** An analysis of the likelihood of success of the compensation project.
- D.** The mitigation plan shall include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained and whether or not the requirements of Titles 17 and 18 BMC have been met.

The mitigation plan shall include written specifications and descriptions of the mitigation proposed, such as: The proposed construction sequence, timing, and duration; Grading and excavation details; Erosion and sediment control features; A planting plan specifying plant species, quantities, locations, size, spacing, and density; and Measures to protect and maintain plants until established. These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

“Multi-family dwelling (residence)” means a single building, or portion thereof, designed for or occupied by three (3) or more families living independently of each other in separate dwelling units on one lot of record and, for the purpose of this code, includes triplexes, fourplexes, apartment buildings, and residential condominiums.

“Natural Resource Lands” means lands designated as agricultural lands, forest lands, or mineral resource lands, as required by the Growth Management Act, RCW 36.70A.170.

“Nonconforming use” means a use of land or a structure which was lawful when established and which does not now conform to the permitted uses and regulations of the zone and/or shoreline designation in which it is located.

“Open space, common ” means any parcel, tract of land or water feature that is essentially unimproved or improved with low intensity agricultural, garden uses, parks or playgrounds that has been set aside, dedicated, designated or reserved for the use or enjoyment of the owners within a development.

“Open Space, Conservation” means land retained in an open or unimproved condition, which has been set aside, dedicated, designated, or reserved for fish and wildlife preservation or enhancement purposes. Mechanisms for preservation of Conservation Open Space include but are not limited to: Subdivision, Planned Development (PD), or Planned Destination Resort (PDR) process. Lands within this type of an open space dedication may include portions and combinations of forest, agricultural and grazing lands, priority fish and wildlife habitats, on-site watersheds, 100 year floodplains, county shorelines or shorelines of state-wide significance and riparian areas and wetlands. Land so designated shall not include areas of human impact and shall contain no structures or impervious surfaces other than those which are approved by the Administrator e.g., part of an organized trail system, structure approved by the Dept. of Fish and Wildlife, and structures of historical/architectural preservation significance or used as designated Conservation open space.

“Open space, Individual Ownership” Land within or related to a development owned individually, which remains undeveloped (except for trails) and that is dedicated for use in the development and is retained or restored to its native state or used for agricultural or recreational purposes, e.g., part of an organized trail system, structure approved by the Dept. of Fish and Wildlife, and structures of historical/architectural preservation significance or used as designated wildlife open space.

“Open space, public” means any parcel, tract of land or water feature that is essentially unimproved or improved with low intensity agricultural, garden uses, parks or playgrounds which has been set aside, dedicated, designated or reserved for use by the general public.

“Project permit” or “project permit application” means any land use or environmental permit or license required from the city for a project action, including but not limited to building permits, subdivisions, binding site plans, planned unit developments, conditional uses, variances, shoreline substantial development permits, site plan review, permits or approvals required by critical area ordinances, site-specific rezones authorized by a comprehensive plan or subarea plan, but excluding the adoption or amendment of a comprehensive plan, subarea plan or development regulations except as otherwise specifically included in this subsection.

“Person” means an individual, partnership, corporation, association, organization, cooperative, public or

Municipal Corporation, or agency of the state or local governmental unit however designated.

“Placer mining” means the mining (by panning or dredging) of alluvial (waterborne) or glacial deposits of precious metals or minerals, usually in stream beds or valleys adjacent to uplands rich in these minerals.

“Priority habitat” means 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:

- A. Comparatively high fish or wildlife density;
- B. Comparatively high fish or wildlife species diversity;
- C. Fish spawning habitat;
- D. Important wildlife habitat;
- E. Important fish or wildlife seasonal range;
- F. Important fish or wildlife movement corridor;
- G. Rearing and foraging habitat;
- H. Important marine mammal haul-out;
- I. Refugia habitat;
- J. Limited availability;
- K. High vulnerability to habitat alteration;
- L. Unique or dependent species; or
- M. 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 (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as, old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife.

“Qualified professional” means a person with experience and training in the pertinent scientific discipline with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905(4). A qualified professional will have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology or related field, and have at least two years of related work experience. A geologist must have a state license.

“Recreational development” means the modification of the natural or existing environment to accommodate recreation. This includes clearing land, earth modifications, structures and other facilities such as parks, camps, camping clubs, launch ramps, golf courses, viewpoints, trails, public access facilities, public parks and athletic fields, hunting blinds, wildlife enhancement (wildlife ponds are considered excavation), and other low intensity use outdoor recreation areas.

“Sanitary landfill” means a disposal facility or part of a facility at which solid waste is permanently placed in or on land and which is not a landspreading disposal facility.

“Seasonal” A temporary use the duration of which is related to an identifiable climatic, cultural, or recreational period. (i.e., summer, winter, fall, spring, Christmas, ski season).

“Solid Waste” means all putrescible and nonputrescible solid and semisolid wastes, including but not limited to garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes,

abandoned vehicles or parts thereof, and discarded commodities. This includes all liquid, solid and semisolid, materials which are not the primary products of public, private, industrial, commercial, mining, and agricultural operations. Solid waste includes but is not limited to sludge from wastewater treatment plants and septage, from septic tanks, woodwaste, dangerous waste, and problem wastes.

“Special Event” Any event (excluding those events allowed through the festival permitting process) that happens for more than three (3) consecutive days per event and no more than twice (2) a year.

“Special Event Camping” Any ten (10) or more recreational vehicles, tents, or temporary structures designed for temporary habitation, or any combination thereof, limited to the duration of the special event (whether related to a special event or not) and one (1) week before and one (1) week after.

“Start of construction” includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

“Subdivision, Long” is the division and redivision of land into five (5) or more lots, tracts, parcels, sites or divisions for the purpose of sale, lease, or transfer of ownership, as further defined by the municipal or tribal government with jurisdiction.

“Substantial improvement” means:

- A.** Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure either:
 - 1.** Before the improvement or repair is started; or
 - 2.** If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.
- B.** The term can exclude:
 - 1.** Any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

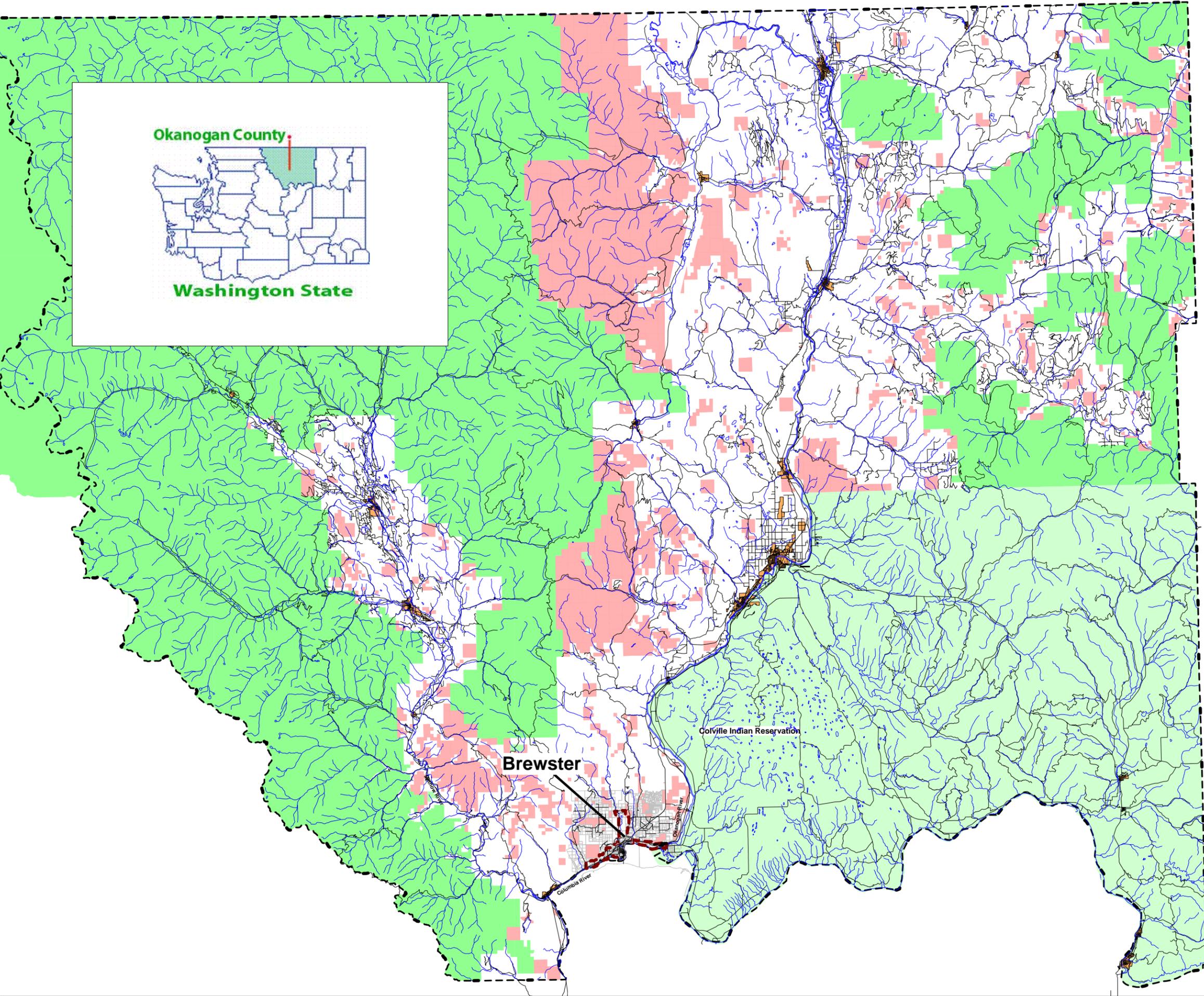
“Temporary” means having a specific, short-term duration. (See Seasonal).

“Temporary sign” means a sign not intended to be permanently installed.

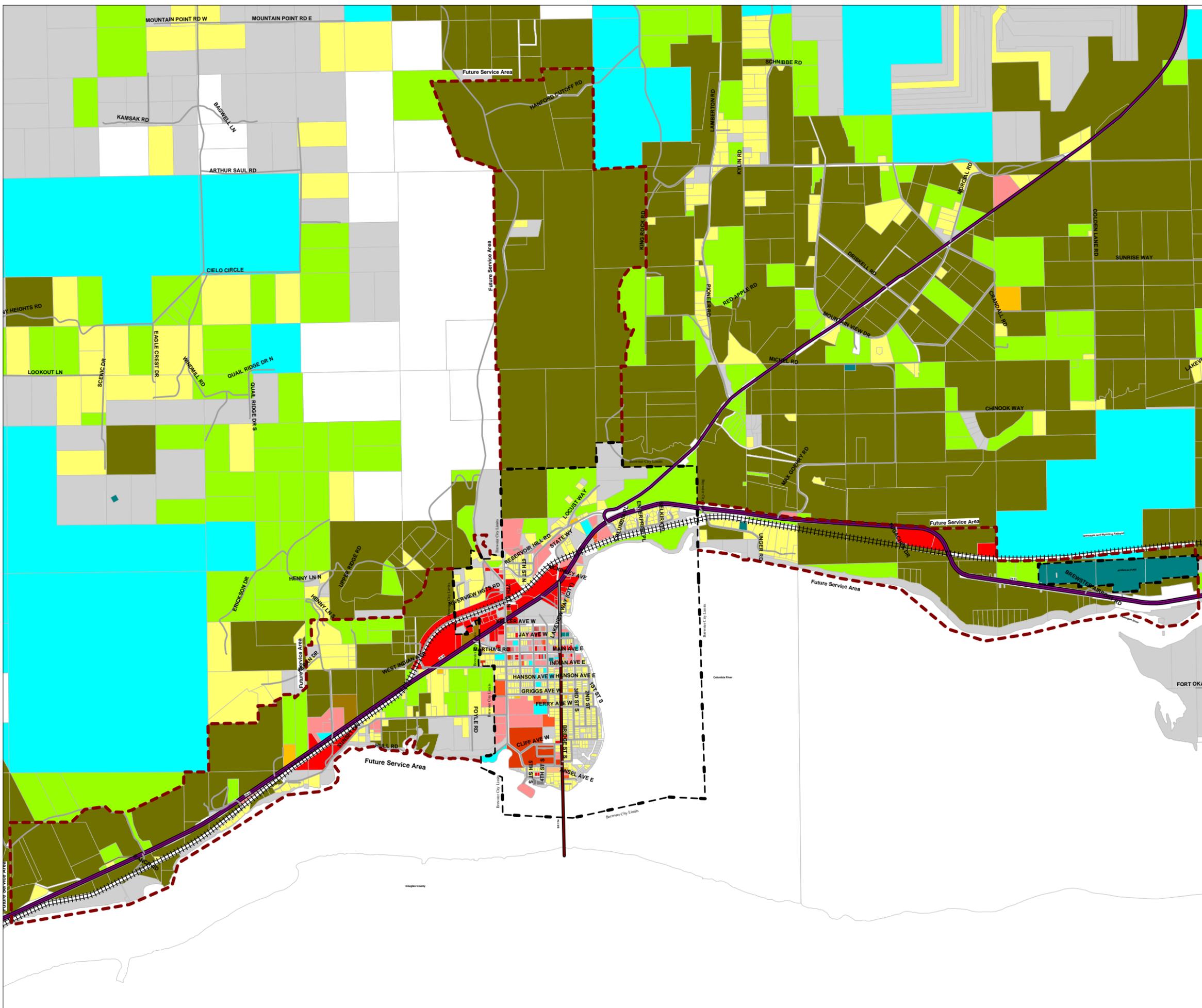
“Temporary Use” means a use that is limited in scope, duration, and frequency.

“Wetland” or “wetlands” means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland 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.

City of Brewster Comprehensive Plan Map I-1 Location



City of Brewster Comprehensive Plan Map II-1 Existing Land Use

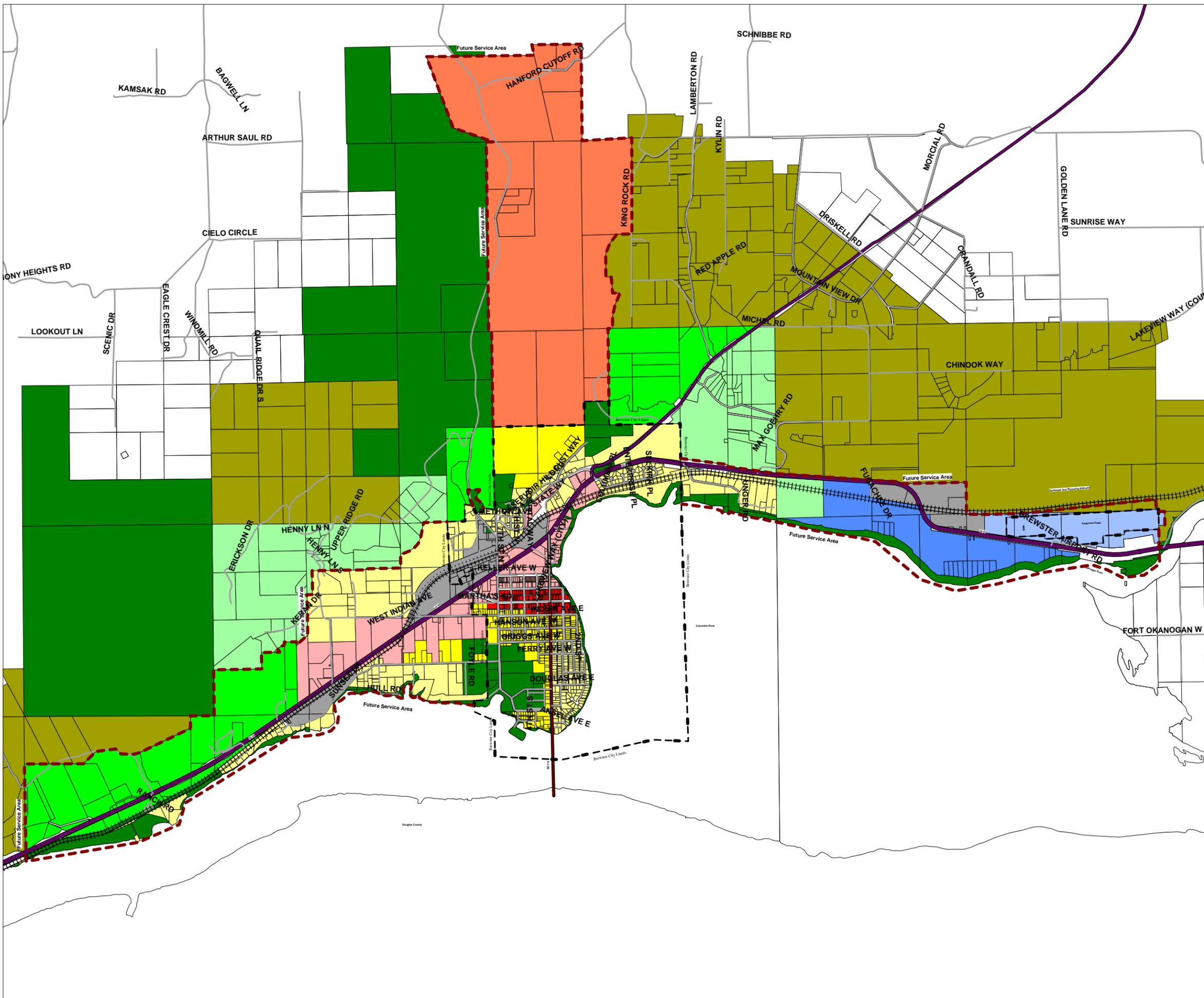


LEGEND

- Single Family Residential (DOR 11, 19)
- Residential 2 to 4 units (DOR 12)
- Residential 5 or more (DOR 13)
- Mobile Home Courts/Parks (DOR 15)
- Motel/Hotel (DOR 16)
- Transportation/Communication/Utilities (DOR 40-49)
- Trade (DOR 50-59)
- Services (DOR 60-69)
- Cultural/Educational/Recreational (DOR 70-79)
- Manufacturing (DOR 20-39)
- Agricultural Land (DOR 81)
- Open Space Agricultural (DOR 83)
- Resource Production/Extraction (82)
- Undeveloped Land (DOR 90-99)
- No DOR Code (Public Lands)



City of Brewster Comprehensive Plan Map II-2 Land Use Designations

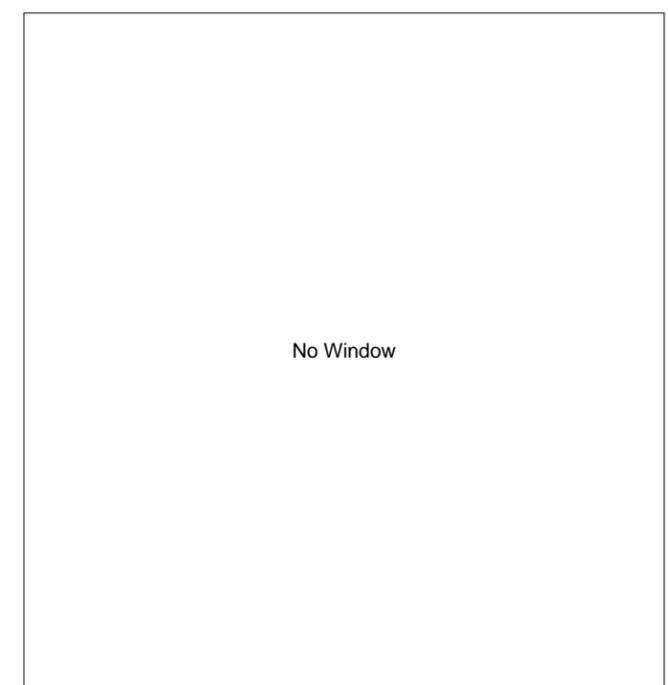
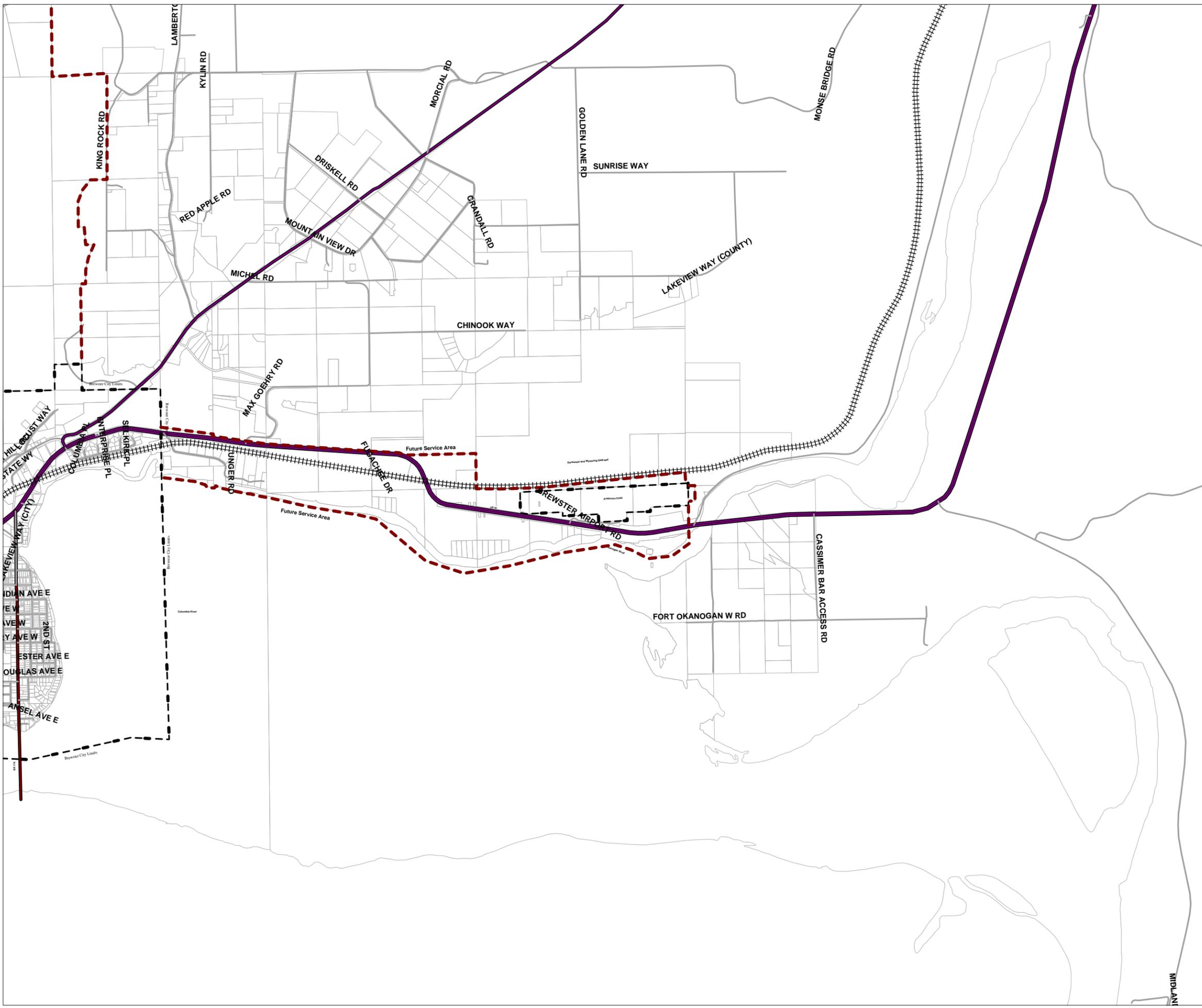


Land Use Designations

- AI
- CBD
- HI
- MAD
- MC/LI
- MR
- PU
- RMU
- RR1
- RR4
- RUR
- SFR

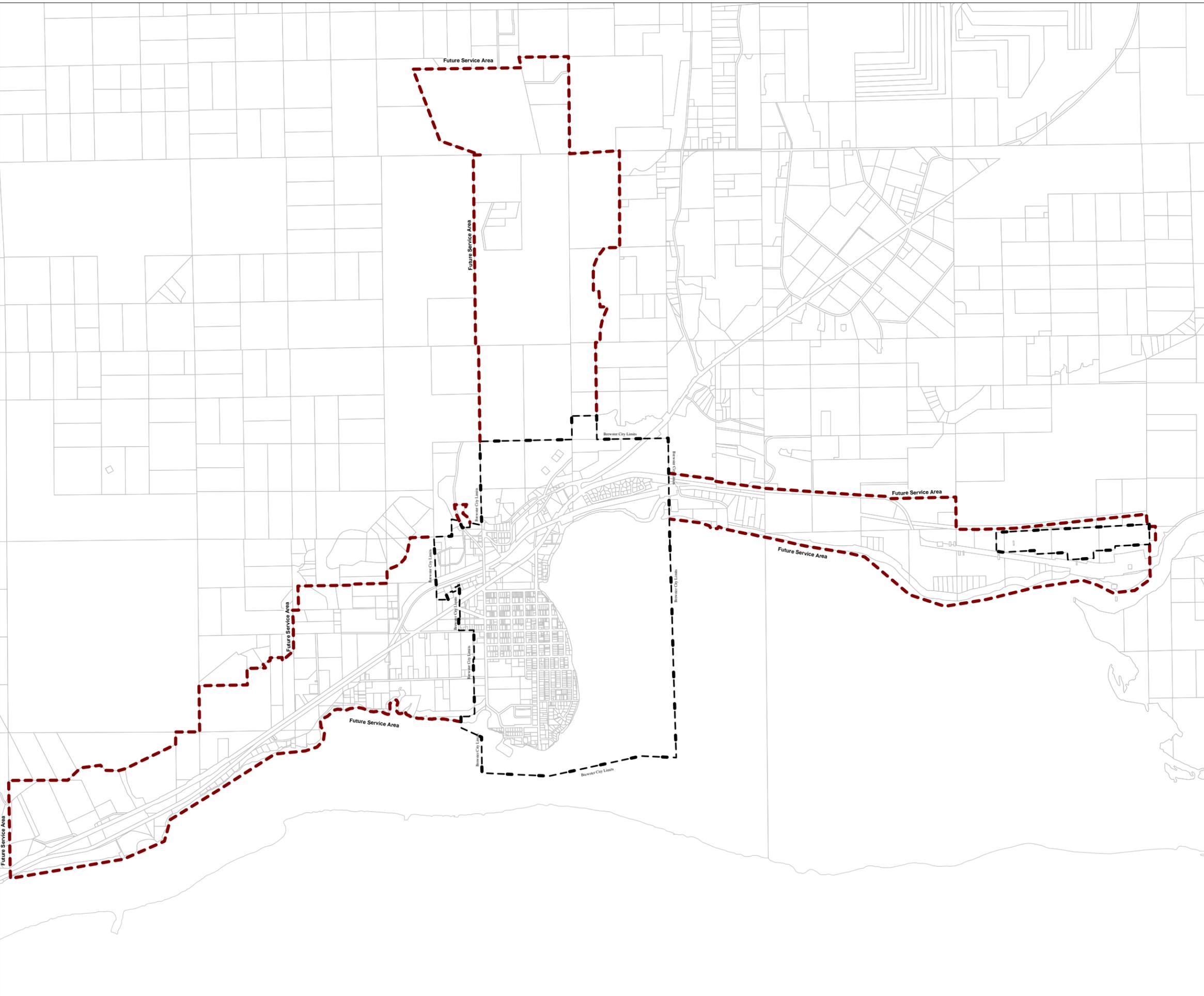


City of Brewster Comprehensive Plan Map II-3 Airport Protection Overlay



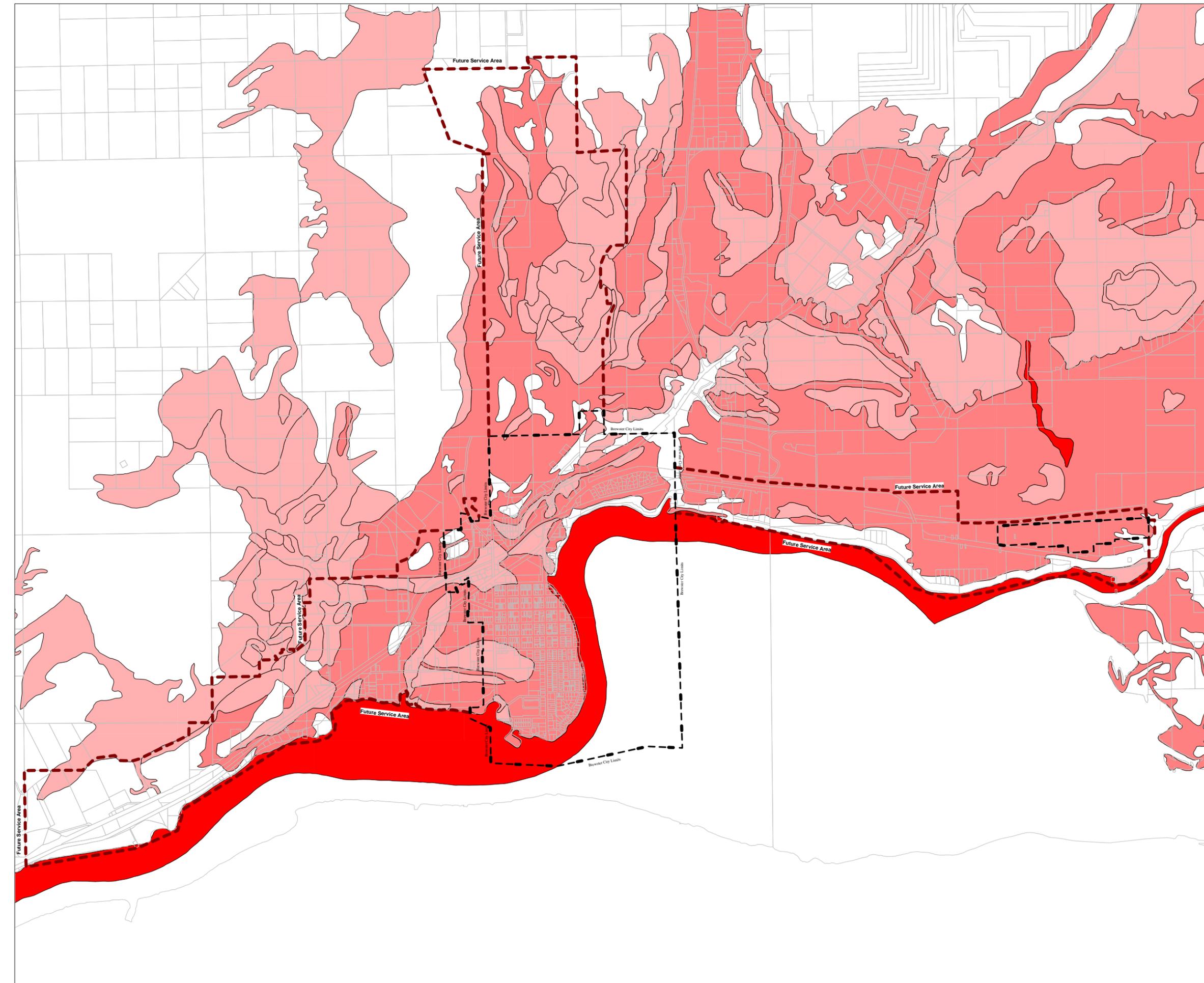
City of Brewster Comprehensive Plan Map VII-1 Wellhead Protection Areas

 Wellhead Protection Areas



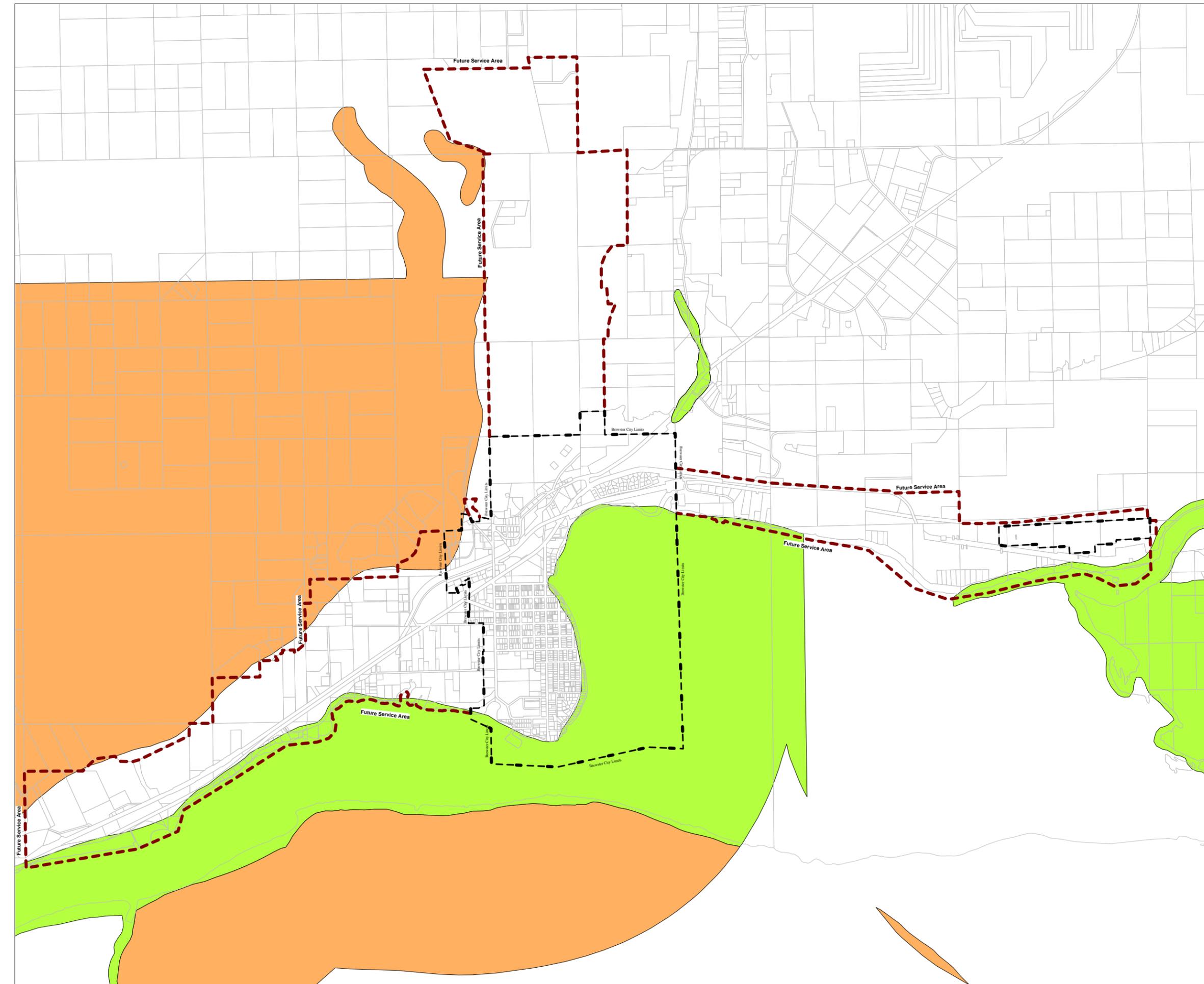
City of Brewster Comprehensive Plan Map VII-2 Aquifer Recharge Potential

-  Critical Potential
-  High Potential
-  Moderate Potential



City of Brewster Comprehensive Plan Map VII-3 Fish & Wildlife Habitat

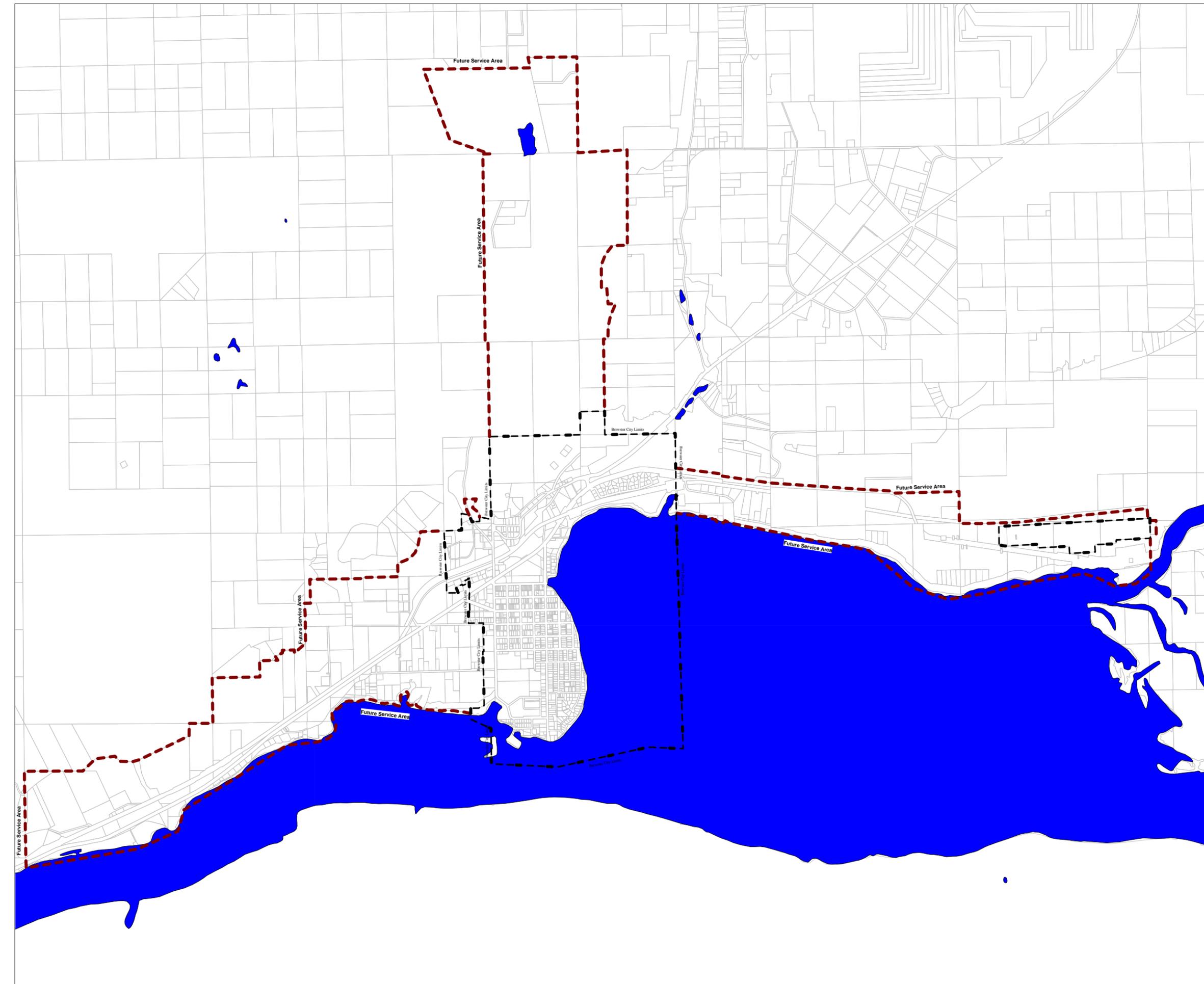
-  Uplands Habitat
-  Riparian Habitat



NORTH

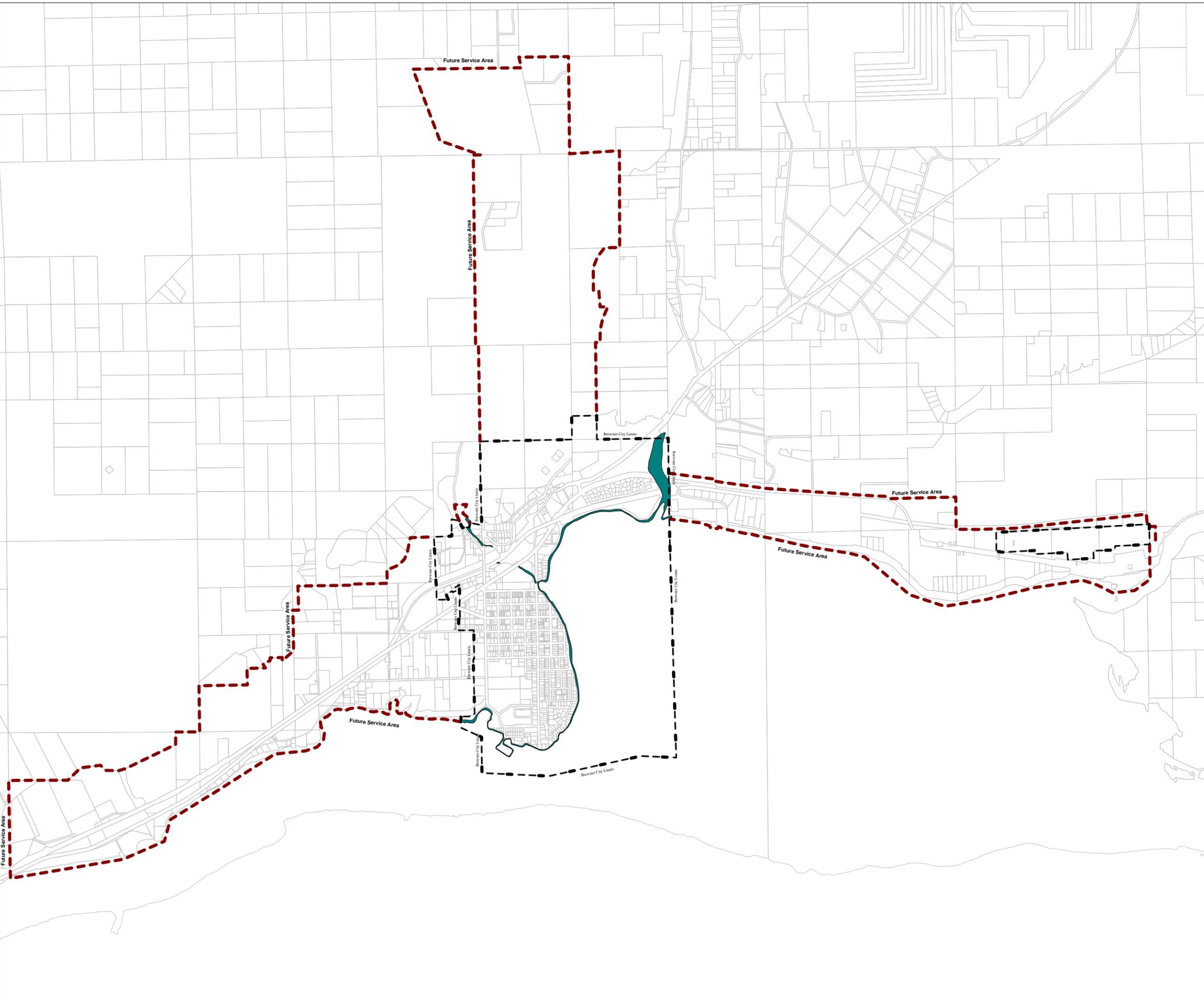
City of Brewster Comprehensive Plan Map VII-4 Wetlands

 Wetlands



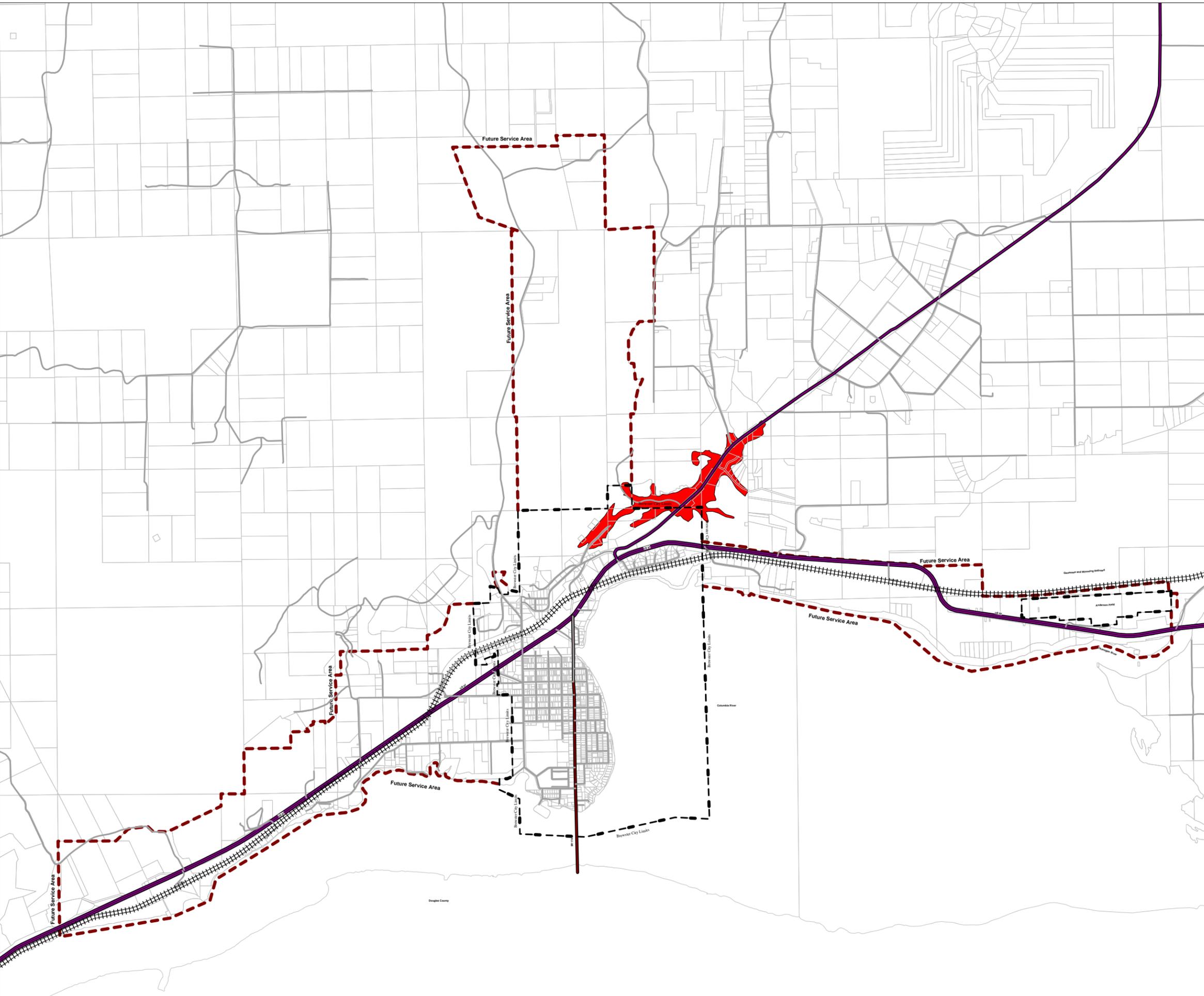
City of Brewster Comprehensive Plan Map VII-5 Flood Hazard Areas

 100 Year Floodplain



**City of Brewster
Comprehensive Plan
Map VII-6
Geologically Hazardous Area**

 **Geologically Hazardous Area**



City of Brewster Comprehensive Plan Map VII-1 Shoreline Ownership

- Private
- City
- Douglas PUD
- State
- Federal

