

## **CHAPTER 3. PERMITS, REQUIREMENTS AND REGULATIONS**

Wastewater must be collected, treated, and disposed of or reused in a way that protects public health and receiving water quality, generates no objectionable off-site odors or aesthetic nuisances, and complies with all applicable regulations. Wastewater treatment facilities must meet the regulations and requirements of many federal, state, and local regulatory agencies. This chapter summarizes applicable rules and regulations that typically apply to wastewater projects.

### **FEDERAL REGULATIONS**

#### **Federal Water Quality Acts**

Programs and policies designed to protect water quality were first initiated on a nationwide scale by the Federal Water Pollution Control Act of 1956. This act was amended by the Water Quality Act of 1965, the Clean Water Restoration Act of 1966, and the Water Quality Improvement Act of 1970. The Federal Water Pollution Act Amendment of 1972 (Public Law 92-500) replaced the previous language of the Act entirely. This Act requires states to establish water quality standards for all of their water bodies. The standard must consist of two parts: a designation of the use of the water body; and the water quality criteria that water body must maintain to protect the designated uses from pollution. The State of Washington complies with this regulation through WAC 173-201A, which is described later.

The Clean Water Act of 1977, in further amending the Act, required any agency conducting an activity that may result in a discharge into navigable waters to obtain certification from the appropriate water pollution control agency, verifying that the discharge complies with applicable effluent limitations and water quality standards. Further, these amendments established the National Pollutant Discharge Elimination System (NPDES) permits, which regulate point discharges into water, and required various types of water quality planning by states. Grants for facilities and training were also authorized under these amendments.

With increased environmental awareness of the extent and effects of nonpoint pollution, including stormwater, additional amendments to the Federal Clean Water Act were passed by Congress in early 1987. These amendments, referred to as the Water Quality Act of 1987, and especially Section 319, direct the states in developing programs designed to reduce nonpoint source pollution. These sources of pollution have become increasingly evident over the past 25 years as abatement of source pollution has occurred. The Amendments required each state to do the following:

- Submit a report identifying navigable waters that cannot meet water quality standards without action to control pollution.
- Identify the categories of pollution sources.
- Describe processes for identifying best management practices and control strategies.
- Identify state and local programs for controlling pollution from both point and nonpoint sources.

These amendments resulted in the formation of the Puget Sound Water Quality Authority (PSWQA) and the Puget Sound Water Quality Management Plan.

## **Puget Sound Estuary Program**

The Water Quality Act of 1987 formally established the National Estuary Program and declared that the increase in coastal population, demands for development, and other direct and indirect uses of estuaries threaten these unique bodies of water. The law further states that it is in the national interest to maintain the ecological integrity of the nation's estuaries through long-term planning and management. The EPA's designation of Puget Sound as an estuary of national significance is the federal government's formal recognition that Puget Sound is a resource of vital importance to fish and wildlife, to recreation, and to commerce and trade.

The Puget Sound Estuary Program, which is co-managed by the EPA, the Washington State Department of Ecology, and the Puget Sound Action Team (formerly the Puget Sound Water Quality Authority), has been designated as the management conference for Puget Sound. The Puget Sound Action Team is supplanted by the Puget Sound Partnership in 2007 legislation. The management conference is responsible for the development and implementation of a site-specific "Comprehensive Conservation and Management Plan" (CCMP). Under the law, the management plans developed by each conference must do the following:

- Assess trends in water quality, natural resources, and uses of the estuary.
- Collect, characterize, and assess data on toxics, nutrients, and natural resources within the estuarine zone to identify the causes of environmental problems.
- Develop the relationship between the in-place loads and point and nonpoint loadings of pollutants to the estuarine zone and the potential uses of the zone, water quality, and natural resources.
- Develop a comprehensive conservation and management plan that recommends priority corrective actions and compliance schedules addressing point and nonpoint sources of pollution.
- Develop plans for the coordinated implementation of the plan by the states as well as federal and local agencies participating in the conference.
- Monitor the effectiveness of the actions taken pursuant to the plan.
- Review all federal financial assistance programs and federal development projects to determine whether such assistance program or project would be consistent with and further the purposes of the plan.

The 1987 Puget Sound Water Quality Management Plan developed by the Authority is recognized as being a partial CCMP by the National Estuary Program. Successive updates complete the requirements for a CCMP.

## **Federal Effluent Limitations**

Section 301 of the Federal Water Pollution Control Act requires all publicly owned wastewater treatment facilities to provide a minimum of secondary treatment unless a special waiver is obtained. This act requires the following:

- The monthly average of biochemical oxygen demand (BOD) and total suspended solids (TSS) concentrations shall not exceed 30 milligrams per liter (mg/L).
- The weekly average of BOD and TSS concentrations shall not exceed 45 mg/L.
- The monthly average removal of BOD and TSS shall be at least 85 percent.

- The pH of the effluent shall be between 6.0 and 9.0.

There can be exceptions to these regulations when treatment works receive combined sewer flows or certain industrial wastes. However, in general, these are the minimum federal requirements for effluent quality. The Washington State Department of Ecology administers these regulations under the NPDES.

## **National Environmental Policy Act**

The National Environmental Policy Act (NEPA) requires appropriate environmental documentation for projects that could have a significant adverse impact on the quality of the natural and human environment. The EPA can declare that a proposed action is categorically exempt from these requirements. Otherwise, the proposing agency must prepare an Environmental Information Document (EID), commonly referred to as an Environmental Assessment or Environmental Report. An Environmental Report has been prepared for this project (Tt/KCM, 2007). An Environmental Report looks at various elements of the environment such as soils, water quality, and air quality. In addition, the document addresses how the proposed project complies with federal and state regulations. Letters were sent to various regulatory agencies requesting input and comments regarding the proposed action. The EPA uses the Environmental Report to determine whether to issue a “finding of no significant impact” or to require an environmental impact statement.

## **Federal Standards for Use or Disposal of Sludge**

The federal document that regulates the use and disposal of sewage sludge is the Code of Federal Regulations, Part 503 (40 CFR 503, EPA 1993). These regulations, published in February 1993, address three main sludge disposal options:

- Land application
- Surface disposal
- Incineration.

Land-applied sludge must meet requirements in the 503 regulations for pathogen and vector attraction reduction. Two basic classes for pathogen reduction are established in the regulations. In general, sludge distributed in bagged form must meet Class A requirements. Sludge applied to the land in bulk form must meet Class B requirements. The discussion below focuses on the regulations applicable to bulk land application because that is the only disposal option evaluated in this report.

### ***Pathogen Reduction***

Class A sludge must have levels of fecal coliform organisms below 1,000 per gram of total solids and meet other time and temperature requirements, or the sludge must have been treated with an EPA-defined “process to further reduce pathogens.” These processes include composting, heat drying, heat treatment, thermophilic aerobic digestion, irradiation, and pasteurization.

Class B sludge must have levels of fecal coliform organisms less than 2 million per gram of total solids, or meet other requirements, or the sludge must have been treated with an EPA-defined “process to significantly reduce pathogens.” These processes include aerobic digestion for a mean cell residence time greater than 40 days at 20°C or 60 days at 15°C, air drying, anaerobic digestion, composting, or lime stabilization.

### **Vector Attraction Reduction**

The regulations require that land-applied sludge be processed to reduce its “vector attraction.” This means that the sludge should be stabilized sufficiently to not be an attraction to rodents or birds that could spread pathogens contained in the sludge and thereby increase the risk of human exposure. The basic measure of the adequacy of sludge stabilization in the regulations is that the volatile solids concentration in the sludge be reduced through processing by at least 38 percent. A series of alternative procedures are provided for reducing vector attraction, including injection below the ground surface.

### **Metals**

Limits are specified for the concentration of various metals in the sludge and for the cumulative loading of these metals on the land used for its application. Table 3-1 lists the concentration limits for any sludge that is land applied. Table 3-2 lists further guidelines for sludge that is land applied in bulk. Either the monthly average concentration criteria or the cumulative pollutant loading rate criteria must be met.

### **Other Measures**

In addition to regulating the quality of biosolids, the regulations require specific management measures, including the following:

- Record-Keeping and Reporting—Records must be kept by the producer describing the quantity and quality of the biosolids that have been applied to specific sites for up to five years. Even if the producer has a contract for biosolids disposal with a private contractor, the producer is ultimately responsible for the record-keeping and reporting.
- Monitoring—The producer is responsible for monitoring the biosolids for metals and specific pathogens on a regular basis.
- Management Practices—Biosolids should not be applied to flooded, frozen, or snow-covered ground, so that biosolids do not enter surface waters.

<b>TABLE 3-1. CEILING CONCENTRATIONS FOR METALS IN LAND-APPLIED SLUDGE</b>	
<b>Parameter</b>	<b>Ceiling Concentration Limit (mg/kg)</b>
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

<b>TABLE 3-2. METAL CONCENTRATION LIMITS FOR BULK SEWAGE SLUDGE LAND APPLICATION</b>		
Parameter	Monthly Average Concentration Limit (mg/kg)	Cumulative Pollutant Loading Rate (kg/hectare)
Arsenic	41	41
Cadmium	39	39
Copper	1,500	1,500
Lead	300	300
Mercury	17	17
Nickel	420	420
Selenium	100	100
Zinc	2,800	2,800

### Clean Air Act

The Federal Clean Air Act of 1992 requires that all federally funded projects be in compliance with state and regional air quality plans. The local air-quality authority for Jefferson County is the Olympic Region Clean Air Agency; agency requirements are discussed later in this chapter.

### EPA Reliability Criteria

An important reference for wastewater treatment plant reliability is the EPA's *Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability* (EPA 1974). This document outlines requirements in three reliability classes, with specific provisions for each unit process. Table 3-3 summarizes its requirements for component reliability.

**TABLE 3-3.  
SUMMARY OF EPA DESIGN CRITERIA FOR SYSTEM AND COMPONENT RELIABILITY**

Component	Class I	Class II	Class III
Reliability classification	Works discharging into navigable waters that could be permanently or unacceptably damaged by effluent that was degraded in quality for only a few hours. Examples of Reliability Class I works might be those discharging near drinking water reservoirs, into shellfish waters, or in proximity to areas used for water contact sports.	Works discharging into navigable waters that would not be permanently or unacceptably damaged by short-term effluent quality degradation, but could be damaged by continued (on the order of several days) effluent degradation.	Works not otherwise classified as Reliability Class I or II
Trash removal	Required	Same as Class I	Same as Class I
Grit removal	Required if sludge is handled	Same as Class I	Same as Class I
Clean-out of solids	Provisions for cleaning of solids required for components prior to dewatering or sedimentation	Same as Class I	Same as Class I
Controlled diversion	Screened, gravity overflow required with alarm, annunciation, and measurement of flow discharged. Holding basin required	Same as Class I, but no holding basin required	Same, as Class I but no holding basin required
Unit operation bypassing	Required except for unit operations with two or more open basins	Same as Class I	Same as Class I
Mechanically cleaned bar screens	Backup manual screen required	Same as Class I	Same as Class I
Pumps	Capacity to handle peak flow with any one pump out of service must be provided	Same as Class I	Same as Class I
Comminution	Overflow bypass must be provided with manual bar screen	Same as Class I	Same as Class I
Primary sedimentation basins	With largest unit out, remaining units shall have design flow of at least 50 percent of the total design flow to that unit operation	Same as Class I	At least two basins
Final and chemical sedimentation basins, trickling filters, filters, and activated carbon columns	With largest unit out, remaining units shall have design flow of at least 75 percent of the total design flow to that unit operation	With largest unit out, remaining units shall have design flow of at least 50 percent of the total design flow to that unit operation; backup not required for chemical sedimentation basins, filters, and activated carbon columns	At least two basins; backup not required for chemical sedimentation basins, filters, and activated carbon columns
Aeration basin	At least two equal volumes shall be provided	Same as Class I	Single basin permissible
Aeration blowers or aerators	Sufficient to provide for peak oxygen demands with the largest capacity unit out of service	Same as Class I	At least two units

**TABLE 3-3 (continued).  
SUMMARY OF EPA DESIGN CRITERIA FOR SYSTEM AND COMPONENT RELIABILITY**

Component	Class I	Class II	Class III
Diffusers	Designed so that isolation of the largest section of diffusers does not measurably impair oxygen transfer capability	Same as Class I	Same as Class I
Chemical flash mixer	At least two basins or a backup means of adding chemicals	Backup not required	Backup not required
Flocculation basins	At least two basins	Backup not required	Backup not required
Disinfectant contact basins	With largest unit out, remaining units shall have design flow of at least 50 percent of the total design flow to that unit operation	Same as Class I	Same as Class I
Sludge handling	Alternate methods of sludge disposal and/or treatment shall be provided for each sludge treatment unit operation without installed backup capability. No recycles permitted that will compromise liquid treatment.	Same as Class I	Same as Class I
Sludge holding tanks	May be used to back up downstream tanks	Same as Class I	Same as Class I
Sludge pumps	A backup pump shall be provided for each set of pumps that performs the same function. The capacity of the pumps shall be such that with any one pump out of service, the remaining pumps will have capacity to handle the peak flow.	Same as Class I	Same as Class I
Anaerobic sludge digestion	At least two digestion tanks shall be provided. At least two of the digestion tanks provided shall be designed to permit processing all types of sludge normally digested. Tanks shall have sufficient flexibility or backup equipment to ensure that mixing is not lost when any one piece of equipment is out of service. Uninstalled backup is acceptable for mixing equipment	Same as Class I	Same as Class I
Aerobic sludge digestion	Backup aeration basin not required. At least two blowers shall be provided. Uninstalled backup is permissible. Largest section of diffusers can be isolated.		
Sludge holding tanks	May be used to back up downstream tanks	Same as Class I	Same as Class I
Vacuum filter	There shall be sufficient number of vacuum filters to enable the design flow to be dewatered with largest capacity unit out of service. Two vacuum pumps and two filtrate pumps shall service each vacuum filter. These may be uninstalled.	Same as Class I	Same as Class I
Centrifuges	There shall be sufficient number of units to enable the design flow to be dewatered with largest capacity unit out of service. The backup unit may be uninstalled.	Same as Class I	Same as Class I
Incinerators	A backup incinerator is not required. Auxiliary equipment shall be provided with backup.	Same as Class I	Same as Class I

**TABLE 3-3 (continued).  
SUMMARY OF EPA DESIGN CRITERIA FOR SYSTEM AND COMPONENT RELIABILITY**

Component	Class I	Class II	Class III
Electric power source	Two separate and independent sources of electric power shall be provided to the works either from two separate utility substations or from a single substation and a works-based generator. Capacity of backup power shall be sufficient to operate all vital components, during peak wastewater flow conditions, together with critical lighting and ventilation.	Same as Class I except those vital components to support the secondary processes need not be included as long as treatment equivalent to sedimentation and disinfection is provided.	Sufficient to operate the screening or comminution facilities, the main wastewater pumps, the primary sedimentation basins, and the disinfection facility during peak flow together with critical lighting and ventilation.
Power distribution external to the works	The independent sources of power shall be distributed to the works transformers in a way to minimize common mode failures from affecting both sources.	Same as Class I	Same as Class I
Power distribution within the works	See Referenced EPA document	Same as Class I	Same as Class I
Instrumentation and control systems	Automatic control systems whose failures could result in a controlled diversion or a violation of the effluent limitations shall be provided with a manual override. Instrumentation whose failure could result in a controlled diversion or a violation of the effluent limitations shall be provided with an installed backup sensor and readout. Alarms shall be provided to monitor the condition of equipment whose failure could result in a controlled diversion or a violation of the effluent limitations. Vital instrumentation and control equipment shall be designed to permit alignment and calibration without requiring a controlled diversion or a violation of the effluent limitations	Same as Class I	Same as Class I
Auxiliary systems	If a malfunction of the system can result in controlled diversion or a violation of the effluent limitations and the required function cannot be done by any other means, then the system shall have backup capability.	Same as Class I	Same as Class I

Reference: U. S. Environmental Protection Agency. Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability. MCD-05, EPA-430-99-74-001. Office of Water Program Operations. Washington, D. C.,

The EPA’s requirements are very similar to Ecology’s reliability requirements, which are discussed later in this chapter. The wastewater facilities proposed in this sewer plan and engineering report will comply with the EPA and Ecology Class I reliability criteria.

### Historical and Archaeological Sites

Both federal and state laws require agencies to assess the effects of their proposed projects on significant archeological and historic properties. If facility improvement projects impact identified historical or archaeological sites, a more detailed evaluation of the site and potential impact of the project on the site will be required. The Washington State Office of Archaeology and Historic Preservation recommended a professional archaeological survey of the identified area of potential effect as well as consultation with the concerned tribes’ cultural committees and staff regarding cultural resource issues. The County will commence with an archaeological survey prior to construction of the proposed projects. If during

construction, archaeological resources are found, all work will be halted and the concerned tribe and State Office of Archaeology and Historic Preservation will be contacted.

## **Floodplains, Wetlands, and Flood Insurance**

The EPA restricts treatment projects on environmentally sensitive lands such as floodplains and wetlands.

## **Agricultural Lands**

It is EPA policy under the Farmland Protection Policy Act (PL 97-98) to protect agricultural lands from “irreversible loss as an environmental or essential food production resource.”

## **Coastal Zone Management**

The Coastal Zone Management Act requires that all federal activities be consistent with approved state coastal zone management programs to the maximum extent possible. This project is located in a coastal zone county and is consistent with Washington's Coastal Zone Management Program and enforceable regulatory policies (State Environmental Policy Act, Water Quality, Air Quality and the Shoreline Master Program). Depending on the scope of the project, Jefferson County may be required to submit a Coastal Zone Certification of Consistency to the Department of Ecology for approval as part of obtaining the appropriate permits and approvals.

A shoreline development permit would be needed prior to construction if construction is planned within 200 feet of the ordinary high water mark.

## **Wild and Scenic Rivers**

To comply with the Wild and Scenic Rivers Act, proposed projects should not directly and adversely impact any wild, scenic, or recreational river area.

## **Fish and Wildlife Protection**

The Fish and Wildlife Coordination Act requires that projects “controlling or modifying any natural streams or other body of water” be done in a way that protects fish and wildlife resources and habitats.

Also, since wastewater treatment facilities can attract birds, coordination with federal wildlife and aviation officials is recommended if treatment facilities are within 2 miles of any airports. The closest airport to the Port Hadlock area is the Jefferson County International Airport approximately 3 miles to the northwest.

## **Endangered Species Act**

Projects with a federal “nexus,” including federal permits, approvals or funding, require compliance with the Endangered Species Act. Listed fish species include the following:

- Chum salmon, Hood Canal summer-run—federally threatened
- Bull trout—federally threatened and a state species of concern
- Chinook salmon—federally threatened and a state species of concern
- Coho salmon—federal candidate species.

In addition, the Bald Eagle is considered threatened by the federal and state government.

## **Magnuson-Stevens Fishery Conservation and Management Act**

In December 1998, the National Marine Fisheries Service (which has since been renamed as NOAA Fisheries) issued interim final regulations to implement the Essential Fish Habitat (EFH) requirements of the 1996 Sustainable Fisheries Act. This act significantly amended the Magnuson-Stevens Fishery Conservation and Management Act of 1976.

The Magnuson-Stevens Act requires the following: for federal actions that may adversely affect EFH, except activities covered by a General Concurrence, federal agencies, must provide a written assessment of the effects of that action on EFH. EFH is defined as “waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” EFH must always include the critical habitat of endangered and threatened species.

If a project affects an endangered species of plant or wildlife, it should include mitigating measures to reduce the impact.

## **Public Participation**

Jefferson County has adopted a comprehensive approach for public participation for this project. The strategy includes stakeholder workshops, public meetings, a project website, and press releases. Informational fliers have been mailed to all property owners within the Port Hadlock Urban Growth Area (PHUGA) and to those who have included themselves on the project mailing list. Within this strategy, several public meetings were held to comply with a federal requirement for facilities plans. The federal requirement is for at least two public meetings.

The following public meetings were held during the development of this Facility Plan:

- March 16 2006 – Stakeholder Workshop: Collection System Alternatives and Evaluation
- May 25, 2006 – Stakeholder Workshop: Discharge and Treatment Alternatives Evaluation
- June 22, 2006 – Stakeholder Workshop: Alternatives for Collection, Treatment, and Discharge/Reuse
- July 19, 2006 – Public Meeting: Alternatives for Collection, Treatment, and Discharge/Reuse
- October 10, 2006 – Stakeholder Workshop: Preliminary Design, Cost & Finance
- October 25, 2006 – Public Meeting: Preliminary Design, Cost & Finance

At each meeting, a technical presentation was given discussing the topic. Questions and answer sessions occurred at the end of each meeting. Subsequent meetings began with a follow up on key topics and questions from the previous meeting which required further research. All meetings were open to the public and meeting summaries were posted on the project website ([www.porthadlocksewer.org](http://www.porthadlocksewer.org)).

The project website at [www.porthadlocksewer.org](http://www.porthadlocksewer.org) provided interested citizens and stakeholders with meeting schedules, meeting summaries, maps, background information and meeting slide presentations. The website also provided a comment section and a frequently asked question section. The website information was duplicated in hard-copy form in the project folder at the Jefferson County Library.

Appendix B contains meeting summaries from the stakeholder workshops and public meetings.

## STATE POLICIES

The Clean Water Act allows states to establish more stringent water quality requirements than are required by federal law. Like most other states, Washington State has developed requirements pertaining to surface water quality more stringent than those developed by the federal government. Ecology administers the NPDES wastewater and stormwater permits and has requirements relating to protection of ground and surface waters.

Agencies other than Ecology can also have involvement in construction and operation of facilities located in critical areas. The Washington State Department of Fish and Wildlife (WDFW) has involvement in cases involving fish-bearing streams. In addition, the Washington State Department of Natural Resources (DNR) has authority for facilities to be constructed on tidelands or along shorelines. To promote efficiency and reduce overlap, state agencies and the U.S. Army Corps of Engineers developed a Joint Aquatic Resource Permit Application (JARPA), which can be submitted for the following permits:

- WDFW's Hydraulic Project Approval (HPA)
- Local agency shoreline management permits
- Department of Ecology Water Quality Certification and Approval for Exceedance of Water Quality Standards
- Corps of Engineers Section 404 and Section 10 Permits
- Marine and aquatic lease.

Depending upon the final location of the wastewater treatment and reuse facilities proposed in this Facility Plan, a JARPA may be needed for the shoreline management permit. Depending on final alignment and design considerations relating to wetlands and streams, a Corps Permit and an HPA could be required.

## Water Quality Standards for Surface Waters

The applicable water quality standards for construction in or near streams or the shoreline are those adopted by Ecology pursuant to Section 303 of the Federal Water Pollution Act Amendments. *Water Quality Standards for Surface Waters of the State of Washington* was promulgated by Ecology in 2006 (WAC 173-201A). These standards describe general water quality conditions and classifications for specific surface waters and the water quality desired for each class. General conditions listed under the water quality standards are as follows:

- Existing beneficial uses shall be maintained and protected and no further degradation that could interfere with or become injurious to existing beneficial uses shall be allowed.
- Whenever the natural conditions of waters are of a lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria.
- Water quality shall be maintained and protected in waters designated as outstanding resource waters. These waters are the following:
  - Waters in national parks, national monuments, national preserves, national wildlife refuges, national wilderness areas, federal wild and scenic rivers, national seashores, national marine sanctuaries, national recreation areas, national scenic areas, and national estuarine research reserves.
  - Waters in state parks, state natural areas, state wildlife management areas, and state scenic rivers.

- Documented aquatic habitat of priority species as determined by the Department of Fish and Wildlife.
- Documented critical habitat for populations of threatened or endangered species of native anadromous fish.
- Waters of exceptional recreational or ecological significance.
- Whenever waters are of a higher quality than the criteria assigned for them, the existing water quality shall be protected and pollution of said waters that will reduce the existing quality shall not be allowed, except in instances where:
  - It is clear, after satisfactory public participation and intergovernmental coordination, that overriding considerations of the public interest will be served.
  - All wastes and other materials and substances discharged into said waters shall be provided with all known, available, and reasonable methods of prevention, control, and treatment by new and existing point sources before discharge. All activities that result in the pollution of waters from nonpoint sources shall be provided with all known, available, and reasonable best management practices.
  - When the lowering of water quality in high quality waters is authorized, the lower water quality shall still be of high enough quality to fully support all existing beneficial uses.

General classifications applying to various surface water bodies not specifically classified under 173-201A-130 & 140 are as follows (applicable items only):

1. All surface waters lying within national parks, national forests, and/or wilderness areas are classified Class AA or Lake Class.
2. All lakes and their feeder streams within the state are classified Lake Class and Class AA respectively, except for those feeder streams specifically classified otherwise.
6. (*Items 3 through 5 not repeated herein*) All unclassified surface waters that are tributaries to Class AA waters are classified Class AA. All other unclassified surface waters in the state are hereby classified Class A.

## **State Environmental Policy Act**

A State Environmental Policy Act (SEPA) review will be required upon completion of this document. A SEPA review is an environmental checklist completed to ensure the State that there are no adverse environmental impacts from proposed projects. Jefferson County will issue a threshold determination based on review of the environmental checklist. This determination will be sent to the Departments of Ecology and Health as well as USDA Rural Development for their concurrence. A copy of the SEPA checklist is included in *Port Hadlock UGA Sewer Facility Plan - Environmental Report and SEPA Checklist*.

## **State Environmental Review Process; Department of Ecology Documentation**

To be eligible for financial assistance from the State Water Pollution Control Revolving Fund, this plan must comply with the State Environmental Review Process (SERP, WAC 173-98-100). The SERP was established “to help ensure that environmentally sound alternatives are selected and to satisfy the state’s responsibility to help ensure that recipients comply with the National Environmental Policy Act and other applicable environmental laws, regulations, and executive orders.” This project included an extensive public involvement program and environmental documentation, and these efforts fully satisfy SERP.

In addition, the Department of Ecology has adopted a new set of requirements for environmental documentation in coordination with USDA Rural Development. Requirements include sending out a project description and summary of the proposed action to applicable regulatory agencies and requesting input and comments regarding the proposed action. The environmental report, which also serves as the Environmental Assessment for NEPA requirements, is a separate companion volume to this Facility Plan.

Since the Department of Health also has regulatory responsibility for wastewater treatment and effluent management per WAC 246-271, a copy of the environmental report will be sent to them as well.

## **National Pollutant Discharge Elimination System Permit**

### ***Wastewater Effluent***

The State of Washington administers the federal effluent limitations through the NPDES program. All wastewater discharges into the waters of the state, including treated effluent from treatment plants, must be permitted through the Department of Ecology with an NPDES Permit.

### ***Stormwater Discharge***

Construction projects that disturb more than 5 acres require a construction general permit for stormwater discharge under NPDES requirements; mitigation measures are required, including preparation of a Storm Water Pollution Prevention Plan. During construction, temporary erosion and sediment control measures are required.

## **State Waste Discharge Permit, Wastewater Effluent**

All wastewater disposed of via land application must be permitted through the Department of Ecology with a State Waste Discharge Permit. As will be discussed in Chapter 6, “disposal” via land application is generally taken to mean that the land application process is relied on to provide further treatment. Effluent to be “disposed” via land application is assumed not to meet reclaimed water standards before being land applied (similar to septic tank drainfield systems).

In comparison, “water reclamation” via land application is taken to mean that the effluent is treated to a high degree before being land applied, the land is not needed for further treatment, and the land application is for a beneficial use, such as groundwater recharge. Refer to the “Standards for Water Reclamation” section on the next page.

## **Washington State Standards for Use and Disposal of Sludge**

WAC 173-308, *Biosolids Management*, establishes guidelines for treatment and land application of biosolids generated by municipal wastewater treatment facilities. These mirror the federal guidelines in 40 CFR 503. The state Department of Ecology has authority to enforce these rules and may, if it chooses, delegate some of the authority to local health departments.

## **Washington Department of Ecology Criteria for Sewage Works Design**

The Ecology-developed *Criteria for Sewage Works Design* (Ecology 2006), also known as the Orange Book, is a guide for design of sewage collection and treatment systems. The primary goals of the manual are as follows:

- To ensure that the design of sewage collection and treatment systems is consistent with state public health and water quality objectives

- To establish a basis for the design and review of plans and specifications for sewage treatment works and sewerage systems
- To establish the minimum requirements and limiting factors for review of sewage treatment work and sewerage system plans and specifications
- To assist the owner or the owner’s authorized engineer in the preparation of plans, specifications, reports, and other data
- To guide departments in their determination of whether to issue approvals, permits, or certificates for sewage treatment works or a sewer systems.

Ecology uses the Orange Book design guidelines to review and approve reports, plans, and specifications. Design guidelines presented in this book will be used to evaluate the capacity of the proposed treatment facility and to establish design criteria. The Orange Book also presents guidelines for wastewater treatment component design, including the number of units required for operation during peak flows. In general, state requirements follow the federal requirements outlined in Table 3-3. The state reliability classification scheme is shown in Table 3-4.

<b>TABLE 3-4. RELIABILITY CLASS SYSTEM IN THE ORANGE BOOK</b>	
Reliability Class	Applies to
I	Works whose discharge, or potential discharge, (1) is into public water supply, shellfish, or primary contact recreation waters, or (2) as a result of its volume and/or character, could permanently or unacceptably damage or affect the receiving waters or public health if normal operations were interrupted.
II	Works whose discharge, or potential discharge, as a result of its volume and/or character, would not permanently or unacceptably damage or affect the receiving waters or public health during periods of short-term operations interruptions, but could be damaging if continued interruption of normal operations were to occur (on the order of several days).
III	Works not otherwise classified as Reliability Class I or II.

## Standards for Water Reclamation

The Washington State Departments of Health and Ecology jointly released a set of standards for wastewater reclamation projects in September 1997. The *Water Reclamation and Reuse Standards* describe the treatment and quality requirements for a variety of beneficial end uses. Four basic classes of reuse quality are listed, along with their suitability for various end uses. The four classes vary from Class A (highest quality) to Class D (lowest quality). For uses such as direct injection into a drinking water aquifer, there are more stringent standards than any of these four classes. Landscape irrigation requires Class A reclaimed water, which is defined as follows:

“*Class A Reclaimed Water*” means reclaimed water that, at a minimum, is at all times an oxidized, coagulated, filtered, disinfected wastewater. The wastewater shall be considered adequately disinfected if the median number of total coliform organisms in the wastewater after disinfection does not exceed 2.2 per 100 milliliters, as determined from the bacteriological results of the last 7 days for which analyses have been completed, and the number of total coliform organisms does not exceed 23 per 100 milliliters in any sample.

If surface percolation is used for land application of reclaimed water, a nitrogen reduction step is required in addition to other Class A requirements.

The *Water Reclamation and Reuse Standards* also list requirements for redundancy, including redundant filtration and disinfection equipment. Storage requirements are also listed, including emergency storage and wintertime storage.

Land application of reclaimed water is permitted under a single reclaimed water permit issued jointly by the DOE and DOH. Since the reclaimed water is being beneficially reused instead of disposed of, a State Waste Discharge Permit (described previously) is not required.

## **Washington Department of Natural Resources/Shellfish Closure Zone**

For treatment plants that discharge to aquatic lands, the use of the aquatic lands for the outfall is granted by the Washington Department of Natural Resources through an aquatic lands lease that must be periodically renewed. DNR also has the authority to condition uses of state lands as needed to ensure the well-being of lands and ecosystems, to deny uses not in compliance with applicable laws, codes, and policies, and to seek prosecution of users trespassing on state lands.

Additionally, the Washington Departments of Ecology, Fish and Wildlife, Health, and Natural Resources established a joint policy titled *Inter-Agency Permit Streamlining Document, Shellfish and Domestic Wastewater Discharge Outfall Projects* dated October 10, 1995. The policy requires that wastewater outfalls avoid impacts on shellfish altogether or, when that is not possible, do the following:

- Minimize shellfish impacts
- Rectify shellfish impacts
- Reduce or eliminate shellfish impacts over time
- Compensate for impacts to shellfish
- Monitor and take corrective measures over time.

The Department of Health establishes the closure zones for commercial and tribal shellfish harvesting around all wastewater treatment plant outfalls.

## **Office of Archaeology and Historic Preservation Approval**

Cultural resources are addressed in over 100 federal laws, regulations, and guidelines, including the National Environmental Policy Act of 1969 (NEPA) and the National Historic Preservation Act of 1966, amended in 1992 (NHPA). Section 106 of the NHPA requires federally assisted undertakings to take into account the effects of those undertakings on historic properties that are included in or may be eligible to be included in the National Register of Historic Places. "Historic properties" refers to prehistoric archaeological sites as well as buildings, structures, and other historic sites.

Applicable state laws include the Indian Graves and Records Act (RCW 27.44), which prohibits knowingly disturbing a Native American or historic grave, and the Archaeological Sites and Resources Act (RCW 27.53), which requires that anyone proposing to excavate into, disturb, or remove artifacts from an archaeological site on public or private lands obtain a permit from the Office of Archaeology and Historic Preservation.

Three elements are involved in cultural resources studies following Section 106 procedures:

1. The identification and evaluation of historic properties.

2. Assessment of effects of the proposed undertaking on historic properties.
3. Consultation among principal parties to consider ways to avoid, reduce, or mitigate adverse effects.

The first element, identification and evaluation, is of most concern at the beginning stages of projects. Methods for identification of historic properties consist of archival research, field survey, and consultation.

Archival research, including a check of the Washington state site inventory and records at the Office of Archaeology and Historic Preservation (OAHP), is conducted prior to any field activity in order to determine if sites are already recorded in the project area or its vicinity. Other information is collected from ethnographic and historic accounts, previous regional cultural resource investigations, informants, maps, photographs, and environmental information. Research to determine the age of landforms involved and the extent of modern disturbance are especially important. Locations of archaeological sites may be identified by this process. The potential for buried and hence undiscovered sites, or uplifted former shorelines favorable for habitation, may also be determined. Field visits are made after completion of the background research to verify field conditions, discuss construction locations and methods, and to identify historic properties. The results of these investigations are presented in a report for submittal to appropriate agencies, the OAHP, and, in this case, to the S'Klallam Tribe. The report includes recommendations for dealing with any sites discovered, additional discovery measures, if necessary, monitoring high-potential locations, and a Discovery Plan to be enacted in the event archaeological material is encountered during construction.

Although not critical areas as defined in the County's Critical Areas Ordinance, archaeology sites are important and very sensitive areas. The County requires that best management practices be implemented in these areas. The County maintains a current inventory of all known and suspected historical and archaeological sites. The Department of Community Development should be contacted to determine whether a project near a shoreline is located in a historical or archaeological site. For such sites, County regulations require that a professional archaeologist evaluate the site to determine potential impacts and recommend mitigation. The local tribal authority must be contacted if human remains or historical or archaeological resources are encountered. The tribal address and telephone number is as follows:

Port Gamble S'Klallam Tribe  
31912 Little Boston Road NE  
Kingston, Washington 98346

Phone: (360) 297-2646

## **LOCAL POLICIES**

### **SEPA Review**

An environmental checklist will be prepared to evaluate potential impacts of the work proposed in this report. The Jefferson County Department of Community Development, as lead agency, will issue a threshold determination based on its evaluation of the checklist.

If the responsible official determines there will be no probable significant adverse environmental impacts from the projects proposed or that the impacts would be properly mitigated, the lead agency would prepare and issue a "determination of nonsignificance" (DNS) or "mitigated determination of nonsignificance" (MDNS). The responsible official would send the DNS and environmental checklist to agencies with jurisdiction, Ecology and affected tribes. These entities may submit comments to the lead

agency within 15 days. An agency with jurisdiction may assume lead agency status within the 15-day period if it disagrees with the threshold determination.

A “determination of significance” (DS), which acknowledges the potential for significant environmental impacts, would require an environmental impact statement (EIS) that describes existing conditions, addresses and evaluates alternatives, analyzes potential environmental impacts and addresses mitigation measures. A scoping process would have to be conducted at the beginning of the EIS, in which the County would inform agencies and the public of the proposed projects and solicit comments that would have to be addressed in the EIS.

## **Critical Areas Review**

In noting the importance of sensitive habitats and wildlife species, and in complying with the Washington State Growth Management Act of 1990, Jefferson County has adopted a Critical Areas Section (17.02). Critical areas addressed in the Critical Areas Ordinance (CAO) include:

- Wetlands
- Aquifer recharge areas
- Fish and wildlife habitat conservation areas, including streams and shorelines
- Floodplains
- Geologically hazardous areas

The Jefferson County Department of Community Development reviews projects as to their impact on these critical areas and requires protection standards and buffers for their protection.

## **Shoreline Management Program**

Jefferson County has adopted a Shoreline Master Program as required by the Shoreline Management Act of 1971, (RCW 90.58). Shorelines covered by each Shoreline Management Program generally include all water areas of the state, including marine and fresh waters and their associated wetlands together with the underlying lands, except: (a) shorelines along streams and their associated wetlands where the mean annual flow is less than 20 cubic feet per second; and (b) shorelines of lakes less than 20 acres in area. Shoreline jurisdiction includes lands extending landward for 200 feet in all directions or measured on a horizontal plane from the ordinary high water mark.

The program is administered by the Jefferson County Department of Community Development.

## **International Fire Code / National Fire Protection Association**

Local County fire officials have authority to enforce the national International Fire Code (IFC). The UFC identifies required measures to prevent, control, and mitigate dangers related to the use and storage of hazardous chemicals.

In addition, local officials have authority to enforce National Fire Protection Association (NFPA) standards. NFPA 820, “Fire Protection in Wastewater Treatment and Collection Facilities,” is of particular interest.

## **International Building Code / International Building Code / Washington State Energy Code**

Local County building officials have authority to enforce the International Building Code (IBC) as well as the Washington State Energy Code. These codes govern structural, architectural, and mechanical design of buildings.

## **Olympic Region Clean Air Agency**

The Olympic Region Clean Air Agency (ORCAA) is a local agency of government having regulatory and enforcement authority in and for Clallam, Grays Harbor, Jefferson, Mason, Pacific, and Thurston counties of Washington state. It was established in 1968 after passage of the Clean Air Washington Act (RCW 70.94). The agency is responsible for enforcing federal, state and local air pollution standards and governing air pollutant emissions from new and existing sources.

The agency's primary concern with wastewater treatment facilities is from odor generation. The agency has indicated that permits are not required for wastewater treatment plants on the basis of occasional sewage odors. However, if a standby generator above 250 kW in capacity is used, a permit would be required. Also, if sludge drying or sludge incineration is used, a permit might be required, depending on the size of the facility.

## **Jefferson County Solid Waste Division**

The Jefferson County Department of Public Works Solid Waste Division governs the handling of solid waste in Jefferson County. Solid waste is centralized at the Jefferson County Solid Waste Complex near Port Townsend. From there, it is compacted into shipping containers before being trucked and trained to Roosevelt regional landfill in eastern Washington.

For this project, a particular concern is the potential need to dispose of screenings and grit from a wastewater treatment plant. Some wastewater treatment plants require a headworks at the front of the plant to remove rags, sticks, plastics, grit, and/or other non-organic objects before they reach the treatment process. The organic content, dryness, and overall aesthetics of the screenings and grit can vary considerably, depending on the type of collection system and the type of headworks equipment.

The Solid Waste Department may have concerns about accepting screenings and grit from a treatment plant.

This consideration of screenings and grit may not apply. For example, treatment plants that have Septic Tank Effluent Pumping (STEP) systems do not require headworks facilities. This will be discussed in detail in Chapter 7.

The other consideration related to the Solid Waste Division is acceptance of solids generated as part of the wastewater treatment process. This issue will also be discussed in detail in Chapter 7.