

## APPENDIX C

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# Regulatory Framework



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## INTRODUCTION

This appendix summarizes regulations related to surface water management, water quality, flood protection, and species and habitat protection that affect stormwater and surface water in the City of Sequim (City).

## ACRONYMS AND ABBREVIATIONS

AKART	All Known, Available and Reasonable methods of prevention, control and Treatment
B-IBI	Benthic Index of Biotic Integrity
BMP	Best Management Practices
City	City of Sequim
CFR	Code of Federal Regulations
DOH	Washington Department of Health
DRMT	Dungeness River Management Team
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Act
FIRM	Flood Insurance Rate Maps
GIS	geographic information systems
GMA	Growth Management Act
HPA	Hydraulic Project Approval
JARPA	Joint Aquatic Resource Application
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System

MTCA	Model Toxics Control Act
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NWP	Nationwide Permits
OHWM	Ordinary High Water Mark
PCBs	polychlorinated biphenyls
PSP	Puget Sound Partnership
RCW	Revised Code of Washington
RM	River Mile
SEPA	State Environmental Policy Act
SMA	Shoreline Management Act
SMC	Sequim Municipal Code
SWMP	Stormwater Management Program
SMP	Shoreline Master Program
TMDL	Total Maximum Daily Load
UGA	Urban Growth Area
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Services
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resources Inventory Area
WSDOT	Washington State Department of Transportation

## CURRENT REGULATIONS AND REGULATORY POLICIES

This section highlights current water quality standards, Underground Injection Control (UIC) requirements, recommendations in the Puget Sound Action Agenda, flood protection, and species and habitat protection.

### Water Quality Standards

Various federal and state laws related to water and sediment quality significantly affect stormwater management in the City. The primary regulatory influences are the federal Clean Water Act and several state-administered water quality programs, including the Washington State Department of Ecology (Ecology) surface water quality standards set forth in Washington Administrative Code (WAC) 173-201A, and water cleanup plans (Total Maximum Daily Loads [TMDLs]) that may be implemented in the future to address water quality management for surface waterbodies listed on Ecology's 303(d) list. This section also summarizes groundwater quality standards.

#### *State Surface Water Quality Standards*

Surface water quality standards describe the quality of water expected to support beneficial surface water uses. Section 303(c) of the Clean Water Act states that water quality standards are the responsibility of states and qualified tribes. Ecology administers water quality standards in Washington state to be "consistent with public health and public enjoyment of the waters and the propagation and protection of fish, shellfish, and wildlife" (WAC 173-201A).

Effective July 2003, Ecology restructured its surface water quality standards to more explicitly define water quality requirements for aquatic life, recreation, water supply, and other miscellaneous uses. For example, designated uses for aquatic life include: *char spawning and rearing; core summer salmonid habitat; salmonid spawning, rearing, and migration; salmonid rearing and migration only; non-anadromous interior redband trout; and indigenous warm water species*. There are now 18 designated uses in WAC 173-201A, and Ecology has established water quality criteria (such as maximum temperature and fecal coliform bacteria levels) for each of them. Human-health-based criteria have not yet been implemented in Washington State, but are discussed in the Evolving Regulations and Policies section of this appendix.

#### Listings

Specific reaches of the following waterbodies in Sequim have been assessed through the Water Quality Assessment program and assigned Category 2 (waters of concern) or Category 4c (impaired by a non-pollutant) (Ecology 2012):

- Bell Creek: fecal coliform, pH, and temperature (Category 2)
- Johnson Creek: fecal coliform, pH, and bioassessment (Category 2)
- Dungeness River: bioassessment (Category 2)
- Sequim Bay: dissolved oxygen(Category 2)

- Independent irrigation ditch (Sequim Prairie Tri): pH (Category 2)
- Strait of Juan de Fuca East: fish and shellfish habitat (Category 4c)

Ecology (2012) has included the following waterbodies on the 303(d) list of impaired waters (Category 5) for the following parameters:

- The lower reaches of Bell Creek: fecal coliform bacteria, dissolved oxygen, and Benthic Index of Biotic Integrity (B-IBI)
- Lower reaches of Johnson Creek: fecal coliform bacteria
- Sequim Bay: fecal coliform bacteria and dissolved oxygen

Additional listings on the recently proposed 2015 303(d) list of impaired waters (Category 5) include the following parameters:

- The lower reaches of Bell Creek: pH, temperature
- Middle (ephemeral) reach of Bell Creek: pH, fecal coliform bacteria, dissolved oxygen, and bioassessment
- Upper (perennial) reaches of Bell Creek: fecal coliform bacteria and dissolved oxygen
- Johnson Creek (entire length): pH and fecal coliform bacteria

### ***Groundwater Quality Standards***

Groundwater quality is regulated through various state and federal laws separate from the Clean Water Act. Those most pertinent to stormwater discharges into the ground include:

- Model Toxics Control Act (MTCA) - Chapter 70.105D RCW
- Federal Safe Drinking Water Act and associated state Water Pollution Control Act - Chapter 90.48 RCW
- Groundwater quality standards (Chapter 173-200 WAC/Chapter 90.46.080 RCW) and associated implementation guidance

All are administered by Ecology except the federal Safe Drinking Water Act which is administered by the Washington State Department of Health (DOH) through regulation of public water systems. DOH also administers the federal Well Head Protection Program, which is focused on source control for contaminants potentially entering the recharge areas of public water systems.

### ***Applicability***

The City is responsible for regulating surface water discharges to receiving waters in its jurisdiction to meet Ecology's surface water and groundwater quality standards. None of the receiving waters in the City or downstream of the City are explicitly addressed in Ecology's surface water quality standards. However, the City needs to manage discharges from its stormwater systems in a manner that supports achieving the water quality standards for all surface waters and groundwater.

To date, no water cleanup (TMDL) plans have been developed by Ecology for impaired waterbodies or any other waterbodies or watersheds within the City limits. In order to avoid a future TMDL, the City could take action to develop a pollution control program for waterbodies currently on the Category 5 303(d) list of impaired waters; this would change the designation to Category 4b. The components of a pollution control program are described in the Stormwater Program Evaluation and Recommendations section in the main text of the Storm and Surface Water Master Plan under Water Quality Compliance.

## Underground Injection Control Requirements

Chapter 173-218 WAC (UIC Program) satisfies Part C of the Federal Safe Drinking Water Act and the Washington State Water Pollution Control Act, Chapter 90.48 RCW. The most common type of UIC well in Washington is a Class V injection well. Class V injection wells include manmade subsurface fluid distribution systems designed to discharge fluids into the ground and consists of an assemblage of perforated pipes, drain tiles, or other similar mechanisms, or a dug hole that is deeper than the largest surface dimension (WAC 173-218-040). Examples include drywells, pipe or French drains, drain fields, and other similar devices that are used to discharge stormwater directly into the ground (Ecology 2006).

Chapter 173-218-090(1) WAC states that the following must be implemented for UICs:

- UIC wells must be registered
- New UIC wells must be constructed according to Chapter 173-218 WAC specifications
- A well assessment must be completed for all existing wells
- Existing UIC wells that are determined to be a high threat to groundwater must be retrofitted

UIC wells constructed prior to February 3, 2006, are considered to be existing wells. Owners of 50 or fewer wells were expected to register their wells by February 3, 2009, and complete their well assessment by February 3, 2011. Owners of more than 50 wells were expected to register their wells by February 3, 2011, and complete their well assessment by February 3, 2013.

### *Applicability*

The City owns more than 50 UIC wells; therefore the City should identify all wells (includes some facilities not currently identified as drywells in the stormwater geographic information systems [GIS] data), register all wells, and conduct well assessments, and begin planning and constructing retrofits for wells with a high threat to groundwater.

## Puget Sound Partnership Action Agenda

The Puget Sound Partnership (PSP) was established by Washington State statute in 1983 as the Puget Sound Water Quality Authority, later becoming the Puget Sound Action Team, and eventually the PSP in 2007. This group was directed to identify pollution-related threats to Puget Sound's resources, conduct risk assessments, and coordinate and report on information relating to water quality in Puget Sound.

In December 2008, the PSP published an Action Agenda for restoration and protection of Puget Sound which was revised in May 2009 (PSP 2009). This document supersedes the previous water quality management plan, encompassing a wider range of ecological, social, and economic issues in addition to water quality. The Action Agenda calls on all governments and citizens in the Puget Sound basin to support its priorities and initiatives. In the 2011 update to the Action Agenda, the PSP added a list of ecosystem recovery targets to aid in achieving substantial restoration and recovery of the Puget Sound by the year 2020 (PSP 2011). The 2012 Action Agenda identifies strategies and actions to help reduce the effect of five main pressures on the ecosystem: land development, shoreline alteration, runoff from the built environment, wastewater, and loss of floodplain function (PSP 2012). Decisions are based on science, focusing on actions that have the biggest impact, and hold people and organizations accountable for results. The City is located in the Strait of Juan de Fuca Action Area, which includes the following high priority local strategies in the 2014-2015 Action Agenda (PSP 2014):

1. Support efforts to monitor, adaptively manage, and restore the Elwha River ecosystem
2. Implement salmon recovery 3-year work plans
3. Support improvements in oil spill prevention, preparedness, and response, within the strait action area and adjacent waters
4. Develop and adopt shoreline master programs, and work to coordinate implementation of these programs among local governments
5. Update and implement stormwater management programs and work to coordinate implementation of these programs using a watershed-based approach
6. Develop, adopt, and implement water resources management program rules
7. Support climate change mitigation, adaptation, and implementation of programs and plans
8. Implement water quality cleanup plans

A total of 39 local near-term actions are identified for the Strait of Juan de Fuca Action Area in the 2014-2015 Action Agenda Update (PSP 2014). The near-term actions related to Sequim and the City's stormwater program include the following:

- **STRT1:** Assess vulnerabilities of local communities, tribes, and natural resources to the effects of climate change and concurrent human population increases.
- **STRT2:** Implementation of water quality cleanup plans for Sequim-Dungeness Bay and East Jefferson County Clean Water Districts
- **STRT17:** Implement the highest priority projects listed within the City of Sequim Restoration Plan, a part of the City's updated Shoreline Master Program
- **STRT24:** Expand pilot Ecosystem Services Valuation analysis conducted along the Central Strait nearshore to other shorelines within the Strait Action Area and North Olympic Peninsula.
- **STRT28:** Develop and adopt a Storm and Surface Water Management Plan for the City of Sequim.
  - Conduct a stormwater management needs assessment

- Develop a Storm and Surface Water Management Master Plan
- Adopt Low Impact Development (LID) incentives and stormwater ordinances to support surface water pollution reduction
- **STRT35:** Complete the collection of habitat information for use by the Washington State Department of Transportation (WSDOT) to inform the prioritization of stormwater road retrofits within the Strait Action Area.

The City should closely monitor implementation of the Action Agenda, as this may lead to opportunities for grant funding, partnering with other local governments, and assistance with technical guidance that is of interest to the City.

### ***Applicability***

A key theme of the Action Agenda is stormwater pollution. The Action Agenda and other work by the PSP is not legally binding on the City. However, because the City is located within the Strait of Juan de Fuca drainage basin, many of the provisions of PSP's plan will affect the decisions of regulatory authorities in the region, indirectly affecting the City's stormwater program. The development of this Storm and Surface Water Master Plan is also identified as a near-term action (STRT28) in the 2014-2015 Action Agenda Update (PSP 2014).

### **Dungeness Water Rule**

The Water Resources Management Program for the Dungeness portion of the Elwha-Dungeness Water Resources Inventory Area (WRIA) 18 or Dungeness Water Rule (WAC Chapter 173-518) was adopted on November 16, 2012. This rule applies to all surface and groundwaters within the Dungeness River watershed, excluding the Elwha-Morse watershed basin. The chapter generally enacts recommendations from the Elwha-Dungeness Watershed Management Plan (Elwha-Dungeness Planning Unit 2005), which was approved on April 15, 2004, by the Dungeness River and Elwha-Morse management teams (with City of Sequim participation) and adopted by Clallam County in 2005. In-stream flow requirements are outlined for the following creeks that have a portion of their drainage basins within the City limits (but with all control points downstream of the city limits):

- Bell Creek at Schmuck Road (River Mile [RM] 0.2)
- Cassalery Creek at Woodcock Road (RM 1.8)
- Gierin Creek at Holland Road (RM 1.7)
- Dungeness River at Schoolhouse Bridge (RM 0.8)

The Dungeness Water Rule also states that all future new surface and groundwater uses, other than collection of rainwater, shall be measured. Consumptive water use may be mitigated through the purchase of credits available through the Dungeness Water Exchange. Ecology's 2008 Dungeness Groundwater Flow Model is the basis for determining mitigation credits. A proponent may also choose to submit a mitigation plan as an alternative to the Dungeness water exchange.

## ***Applicability***

The City contains drainage area within multiple subbasins that are in the Dungeness Water Rule area. Instream flow requirements apply within this area for Bell Creek, Cassalery Creek, Gierin Creek, and the Dungeness River. Future projects, if involving new consumptive water use, may be impacted by having to purchase mitigation credits or preparing a mitigation plan.

## **Flood Protection**

The US Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a federal program enabling property owners in participating communities to purchase insurance as protection against flood losses, in exchange for floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between local communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk for new construction, the federal government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. The Federal Emergency Management Act (FEMA) is currently responsible for the NFIP.

On September 22, 2008, the National Marine Fisheries Service (NMFS) issued a Biological Opinion that required changes to the implementation of the NFIP in order to meet the requirements of the Endangered Species Act (ESA) in the Puget Sound watershed (NMFS 2008). FEMA offers several ways to meet this ESA requirement:

- Prohibit all development in the floodway and other areas as specified by the Reasonable and Prudent Alternatives in the Biological Opinion
- Enact regulations that allow development that meet the criteria specified in the Biological Opinion by either:
  - Adopting a Model Ordinance, or enforce the same requirements in other ordinances, such as growth management, zoning, or critical areas regulations, or
  - Showing compliance with ESA on a permit-by-permit basis. This will typically involve requiring applicants for floodplain development permits to develop in the Special Flood Hazard Area to submit permit applications to the NMFS. If this option is chosen, NFIP communities must ensure that permit applicants have demonstrated compliance with ESA before issuing a floodplain development permit.

## ***Applicability***

Section 1315 of the National Flood Insurance Act prohibits FEMA from providing flood insurance unless a community adopts and enforces floodplain management regulations that meet or exceed floodplain management criteria established under Section 1361(c) of the act. These floodplain management criteria are specified in the Code of Federal Regulations (CFR), Title 44, Part 60, Criteria for Land Management and Use. The emphasis of the NFIP floodplain management requirements is focused on reducing threats to lives and the potential for damages to property in flood-prone areas.

In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the nation's floodplains. Mapping of floodplains creates broad-based awareness of the flood hazards and provides the data needed for floodplain management programs and for determining flood insurance rates for new construction.

The City complies with the NFIP with a flood control ordinance and explicit code requirements for development in flood hazard areas (Sequim Municipal Code [SMC] 8.36.080). The City currently manages floodplain hazards through its Flood Damage Prevention code (SMC Chapter 8.36) which address areas of special flood hazard as identified by the Federal Insurance Administration in *The Flood Insurance Study for the Clallam County, Washington Unincorporated Areas*, revised February 23, 2001. This study includes flood profiles and accompanying Flood Insurance Rate Maps (FIRMs). The code adopts these maps and any future revisions (SMC 8.36.040), and requires the best available information for flood hazard area identification (SMC 8.36.050(B)) be used as the basis for regulation until new flood insurance rate map is issued that incorporates new data. A flood risk mapping project is currently underway in Clallam County through FEMA Region X; interim results are imminent.

The flood hazard area code is also consistent with the requirements of the Growth Management Act (GMA) wherein local governments are required to designate and protect five types of *critical areas*, including flood hazard areas. Wetlands and streams and their buffers are also protected as critical areas and generally correspond with FEMA floodplains. The combination of development restrictions for floodplains, wetlands, and streams limit development within the FEMA designated floodplains. Refer to the *Growth Management Act* section for an understanding of development regulations as they relate to public facilities (e.g., stormwater facilities) maintenance and/or construction within critical areas.

## Species and Habitat Protection

This section summarizes the requirements of the ESA, State Salmon Recovery Planning Act, Watershed Planning Act, GMA, State Environmental Policy Act (SEPA), Shoreline Management Act, and other applicable regulations.

### *The Endangered Species Act*

The 1973 ESA is a federal act administered by the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) NMFS (i.e., the Services) that provides for protection of species determined to be threatened or endangered of becoming extinct, and their habitat (i.e., critical habitat). The USFWS is responsible for predominant freshwater species (e.g., Puget Sound bull trout), terrestrial wildlife, and plants, whereas NMFS is responsible for predominant marine species (e.g., Puget Sound Chinook). The Services consider a species endangered when it is "in danger of extinction throughout all or a significant portion of its range" and threatened when it is "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."

The ESA prohibits take of listed species defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct." Take also includes "significant modification or degradation of critical habitat." The take prohibition applies to all persons including private citizens and federal, state, and local government

entities. Proponents of activities with a federal nexus (e.g., carried out by a federal agency, federally funded, or require a federal permit) are required to consult with the Services according to Section 7 of the ESA unless they are exempted according to a Section 4(d) rule as discussed below.

For species listed as *endangered*, Section 9 take prohibitions are applied. The Services protect threatened species through a more flexible ESA Section 4(d) rule that prohibits take. On July 10, 2000, NMFS published a final rule under Section 4(d), which prohibits actions that result in take of Puget Sound salmon species listed as *threatened*. On September 25, 2008, NMFS included Puget Sound steelhead within this rule based on its recent listing as threatened. The rule follows the standard practice of prohibiting the take of a threatened species without written authorization. However, the rule does not prohibit all take. The rule exempts certain activities from take prohibitions if the take occurs as the result of a program approved by NMFS that adequately protects listed species and their habitat. NMFS specifies 13 categories of activities that can limit the situations in which take prohibitions apply, known as 4(d) limits. By providing limitation from take liability, NMFS encourages governments and private citizens to adjust their programs and activities to be salmon safe.

### Applicability

Listed species potentially present in the City's marine and tidally influenced waters include those listed in Table C-1. Additionally, stormwater management activities and related development could affect listed species in tributaries of nearby waters such as the Dungeness River, where chinook and steelhead are present (WDFW 2015) and critical habitat is designated (64 FR 14308 and 78 FR 2725). The Strait of Juan de Fuca supports several ESA-listed fish species including threatened Chinook salmon (*Oncorhynchus tshawytscha*), coho (*Oncorhynchus keta*), steelhead trout (*Oncorhynchus mykiss*), and bull trout (*Salvelinus confluentus*), endangered bocaccio (*Sebastes paucispinis*), threatened canary rockfish (*Sebastes pinniger*), threatened yelloweye rockfish (*Sebastes ruberrimus*), and endangered southern resident killer whale (*Orcinus orca*). Furthermore, the Strait of Juan de Fuca and marine waters are listed as critical habitat for Chinook salmon and southern resident killer whale, and critical habitat is proposed for steelhead trout.

Within city limits, the Hood Canal summer-run evolutionarily significant unit (ESU) of coho salmon is documented by the Washington Department of Fish and Wildlife (WDFW 2015) as occurring in Johnson Creek and Gierin Creek. Hood Canal summer-run chum salmon includes all naturally spawned populations of summer-run chum salmon in Hood Canal and its tributaries as well as populations in Olympic Peninsula rivers between Hood Canal and Dungeness Bay, including Sequim Bay.

**Table C-1. ESA Status of Species Under the Jurisdiction of NMFS and USFWS in City of Sequim and Vicinity.**

<b>Species</b>	<b>Species Listing Status</b>	<b>Critical Habitat Designation</b>	<b>Location</b>
Coastal-Puget Sound Bull Trout ( <i>Salvelinus confluentus</i> )	Threatened Nov. 1, 1999 (64 FR 58909)	Oct. 18, 2010 Revision (75 FR 63898)	Dungeness River and associated tributaries; Bell Creek; Johnson Creek
Georgia Basin Bocaccio DPS ( <i>Sebastes paucispinis</i> )	Endangered July 27, 2010 (75 FR 22276)	Not designated	Strait of Juan de Fuca
Georgia Basin Canary Rockfish DPS ( <i>S. pinniger</i> )	Threatened July 27, 2010 (75 FR 22276)	Not designated	Strait of Juan de Fuca
Georgia Basin Yelloweye Rockfish DPS ( <i>S. ruberimus</i> )	Threatened July 27, 2010 (75 FR 22276)	Not designated	Strait of Juan de Fuca
Hood Canal Summer-run Chum ESU ( <i>Oncorhynchus keta</i> )	Threatened March 25, 1999 (63 FR 14507)	August 12, 2005 (70 FR 52630)	Strait of Juan de Fuca, Sequim Bay, Dungeness River
Humpback Whale ( <i>Megaptera novaeangliae</i> )	Endangered Dec. 2, 1970 (35 FR 18319)	Not designated	Strait of Juan de Fuca
Marbled Murrelet ( <i>Brachyramphus marmoratus marmoratus</i> )	Threatened Oct. 1, 1992 (57 FR 45328)	May 24, 1996 (61 FR 26256)	Potentially forested areas (nesting) and marine water (foraging), no designated critical habitat in City limits or UGA
Puget Sound Chinook ESU ( <i>Oncorhynchus tshawytscha</i> )	Threatened March 24, 1999 (64 FR 14308)	Sept. 2, 2005 (70 FR 52630)	Dungeness River and associated tributaries, Sequim Bay and Strait of Juan de Fuca nearshore
Puget Sound Steelhead ESU ( <i>Oncorhynchus mykiss</i> )	Threatened June 11, 2007 (72 FR 26722)	Proposed Jan. 14, 2013 (78 FR 2725)	Dungeness River and associated tributaries, Gierin Creek, Bell Creek, Johnson Creek
Southern Pacific Eulachon DPS ( <i>Thaleichthys pacificus</i> )	Threatened May 17, 2010 (75 FR 13012)	Oct. 20, 2011 (76 FR 65324)	Strait of Juan de Fuca Critical habitat is not designated within the City
Southern Resident Killer Whale DPS ( <i>Orcinus orca</i> )	Endangered Nov. 18, 2005 (70 FR 69903)	Nov. 26, 2006 (71 FR 69054)	Strait of Juan de Fuca

DPS = Distinct Population Segment

ESU = Evolutionarily Significant Unit

UGA = Urban Growth Area

Because City tributaries and stormwater systems flow into waterbodies where listed species are present, there is the potential for the “taking” of listed species. Consultation with the Services is required for activities with a federal nexus (e.g., carried out by a federal agency, federally funded, or require a federal permit) proposed by the City, other government entities, or individuals, that could directly or indirectly modify critical habitat, or kill or injure listed species. Specific examples include:

- Constructing or maintaining barriers that eliminate or impede a listed species' access to habitat essential for its survival or recovery
- Removing, poisoning, or contaminating plants, fish, wildlife, or other biota required by the listed species for feeding, sheltering, or other essential functions
- Discharging pollutants (including those in stormwater runoff) into a listed species' habitat
- Removing or altering rocks, soil, gravel, vegetation, or other physical structures that are essential to the integrity and function of a listed species' habitat
- Removing water or otherwise altering streamflow when it is likely to impair spawning, migration, or other essential functions
- Releasing non-indigenous or artificially propagated individuals into a listed species' habitat
- Constructing or operating inadequate fish screens or fish passage facilities at dams or water diversion structures in a listed species' habitat
- Constructing or using inadequate bridges, roads, or trails on stream banks or unstable hill slopes adjacent or above a listed species' habitat
- Constructing or using inadequate pipes, tanks, or storage devices containing toxic substances, where the release of such a substance is likely to significantly modify or degrade listed species' habitat
- Conducting timber harvest, grazing, mining or other land use activities that increase sediment loading to streams
- Disturbing streambeds so as to trample eggs or trap adult fish preparing to spawn
- Altering lands or waters in a manner that promotes unusual concentrations of predators
- Shoreline and riparian disturbances that retard or prevent the development of habitat conditions upon which listed species depend
- Filling or isolating side channels, ponds and intermittent waters upon which listed species depend for refuge during high flows

Many of these activities are applicable to the City because the City is either engaged in them or writes permits for private developments that also have a federal nexus. The City does not have specific regulations addressing "take" as it applies to ESA, but does address ESA-listed species through SEPA compliance (SMC Chapter 16.02) and critical areas regulations (SMC Chapter 18.80). In accordance with the SEPA (RCW 43.C.120 and SEPA rules, WAC 197-11-904), permit applicants are required to identify ESA species in their project area. The City also applies protection for fish and wildlife habitat conservation areas (SMC Chapter 18.80) in accordance with the GMA requirements for critical areas. Thus, it is the City's policy to require site planning and habitat management to avoid or minimize damage to habitat conservation areas including nesting and feeding areas for rare and endangered birds and habitat for fish and other wildlife including those that are rare and endangered. Official designation of fish and wildlife habitat conservation areas include areas with which state or

federally designated endangered, threatened, and sensitive species have primary association. Although SEPA and the critical areas ordinance require the consideration of listed species, these regulations do not require analysis to determine the potential for “take” of listed species if they are determined to be present in the vicinity of a proposed project. That analysis is, instead, explicitly addressed under the requirements of the ESA.

Project proponents with a federal nexus may be required to assess the project’s potential impact on listed species and critical habitat in greater detail, and in the case of no-effect may be required to write a Biological Assessment report in support of consultation with the Services or federal funding or permitting agency (e.g., the US Army Corps of Engineers).

The following are examples of actions that may trigger impacts on ESA-listed species:

- Grading of a site
- Clearing of a site
- Work below the ordinary high watermark of any wetlands or creeks that have ESA listed species present, ESA species habitat, or drain to watercourses that have habitat for ESA listed species
- Installation of additional impervious surfaces
- Discharge of stormwater to watercourses that have ESA listed species, ESA species habitat, or drain to watercourses that have habitat for ESA listed species
- Processing, handling, storage, or treatment of hazardous substances in the vicinity of ESA listed species or their habitat
- Withdrawal, interception, or injection of groundwater
- Landscaping or reoccurring activities that require the application of herbicides, pesticides, and fertilizers
- Physical alterations to a watercourse or its banks

Clallam County participates in the Regional Road Maintenance Forum, which has developed a joint routine road maintenance program for NOAA Fisheries. Thirty agencies, including Clallam County, have received a Biological Opinion from NOAA that states that the proposed road maintenance activities are not likely to jeopardize the continued existence of ESA-listed salmon or adversely modify their designated critical habitat. The City of Sequim should consider participating in this forum and apply for its own Biological Opinion for road maintenance activities.

### ***State Salmon Recovery Planning Act***

The State has responded to the ESA listings described above by enacting legislation authorizing (but not requiring) local governments, and other stakeholders to take certain actions to promote salmon recovery. The Washington state legislature established the Salmon Recovery Planning Act (Revised Code of Washington [RCW] 77.85) through House Bill 2496 for the improvement and recovery of salmonid fish runs throughout the state. This act established a Salmon Recovery Office within the Office of the Governor to coordinate a

state strategy for salmon recovery to healthy sustainable population levels with the purpose of coordinating and assisting the development of salmon recovery plans.

### **Applicability**

The City is located in the Hood Canal Salmon Recovery Region. The Hood Canal area is in the Puget Sound Salmon Recovery Region for Chinook and steelhead, but is a separate salmon recovery region for summer chum. PSP is the regional salmon recovery organization charged with overseeing salmon recovery efforts for and implementing the regional recovery plan for Puget Sound salmon (SSPS 2007) finalized and adopted by NMFS in 2007. The summer-run Chum recovery plan (HCCC 2005) was approved by NMFS in 2007 and is led by the Hood Canal Coordinating Council.

The Puget Sound Salmon recovery plan includes measures that address stormwater and wastewater. It encourages retrofitting stormwater systems to improve water retention and treatment. It also promotes land use practices that prevent stormwater flows, monitoring and wastewater reuse, and a street sweeping program. The plan also includes strategies to identify flow related problems and develop instream flow protection and enhancement actions. It calls for an aggressive and coordinated effort among all interested parties. The summer chum recovery plan addresses mostly site specific and programmatic actions in the counties around hood canal. However, the City's stormwater management practices should support the overall goal of chum salmon recovery and objectives to protect and restore water quality and habitat for chum salmon.

### ***Watershed Planning Act***

The Watershed Planning Act (Chapter 90.82 RCW) was passed by the State Legislature in 1998 (and amended in 2003) to provide a forum for citizens of the watershed to develop and implement locally-based solutions to watershed issues. The intent of the Watershed Management Act is, "meeting the needs of a growing population and a healthy economy statewide; meeting the needs of fish and healthy watersheds statewide; and advancing these two principles together, in increments over time." The Watershed Management Act goes on to state that, "The legislature finds that improved management of the State's water resources, clarifying the authorities, requirements, and timelines for establishing instream flows, providing timely decisions on water transfers, clarifying the authority of water conservancy boards, and enhancing the flexibility of our water management system to meet both environmental and economic goals are important steps to providing a better future for our State."

### **Applicability**

The City is located in WRIA 17 (Quilcene/Snow Watershed) and WRIA 18 (Elwha/Dungeness Watershed). The portion of the City that drains into Sequim Bay is within WRIA 17. Watershed planning for the portions of both WRIsAs that include the City is led by Clallam County, the lead agency. Watersheds in the City are included in the Elwha-Dungeness Watershed Plan (Elwha-Dungeness Planning Unit 2005), which covers WRIA 18 and Sequim Bay in northwestern WRIA 17. The City is not one of the five initiating governments in the planning unit (which were designated by statute), but is represented on the Dungeness River Management Team (DRMT) implementing the plan. The plan includes recommendations for protecting and enhancing water quality and quantity to support beneficial uses, as well as recommendations

for comprehensive stormwater management. For the City, the plan recommends focus on minimizing stormwater and associated impacts to the natural stream channels. Many other recommendations related to monitoring, impervious surfaces, and LID, for example, are also applicable to the City's stormwater management.

## ***Growth Management Act***

The GMA was passed by the Washington state legislature in 1990. The GMA was enacted in response to rapid population growth and concerns about suburban sprawl, environmental protection, and quality of life. The GMA has been amended several times and is codified primarily in Chapter 36.70A of the RCW. Under the requirements of Section 4 of the GMA, the City must develop and adopt comprehensive plans and development regulations that prevent the adverse effects of uncontrolled development, and poor land use practices. One of the key directives of the GMA is to use *best available science* to support effective land use planning that can avert environmental degradation.

## **Applicability**

The GMA provides a framework for regional coordination. To satisfy GMA requirements, the City's comprehensive planning must include the following elements: land use, housing, capital facilities, utilities, and transportation. The City's planning must be consistent with Clallam County's planning efforts and growth management policies.

To protect critical areas as required by the GMA, the City established Critical and Environmentally Sensitive Areas regulations contained in SMC Chapter 18.80. Wetlands, streams, flood hazards, geologic hazards (erosion, landslide, seismic), steep slopes, fish and wildlife habitat areas, locally unique features (ravines, marine bluffs, beaches) and protective buffers, and critical aquifer recharge areas constitute critical areas that are of special concern to the City and regulated under SMC 18.80. The City is responsible for updating these regulations as best available science is developed.

## ***Comprehensive Plan***

City zoning and development regulations (SMC Title 18) are consistent with the intent of the GMA and current comprehensive plan adopted in 2006. The City is in the process of updating their comprehensive plan and has prepared a preliminary draft of the comprehensive plan for public review (Sequim 2015). It contains a future land use map, and goals and policies that provide guidance to the City as it grows and changes to meet the demands of a growing region. The 2015 Comprehensive Plan outlines the City's policy and vision with respect to urban growth, land use, transportation, capital facilities and utilities, housing, parks and recreation, economic development, energy, and environment.

## ***Critical Areas***

Activities related to stormwater management that involve normal repair, maintenance and operation are exempt from the requirements of critical areas protection as long as they are not prohibited by any other ordinance or law and are conducted using best management practices (BMPs) (SMC 18.80.055). This would include normal repair and routine maintenance and operation of existing utilities (e.g., water and sewer lines) and irrigation and drainage ditches. The repair and maintenance must not involve expansion (SMC 18.80.055(A)).

Replacement, expansion, relocation or placement of new utility service lines are subject to critical area protection standards in the SMC (Section 18.80.055(B)).

Modifications to existing structures including remodeling, reconstruction, or replacing, is allowed as a development exception provided that the new construction does not further disturb or encroach upon a critical area or its buffer (SMC 18.80.080(B)). The code also allows public drainage facilities in some critical areas with certain conditions (SMC 18.80.080(E)). Category III or IV wetlands and their buffers, and stream buffers, may be altered for use as a public drainage facility; provided that all requirements of the City stormwater management plan and all other local, state, and federal laws are satisfied, and so long as increased and multiple natural resource functions are achievable and the benefits outweigh any lost resource. Public drainage facilities in buffers may be approved by the Department of Community Development director only when long-term impacts are minimal or when there are no practicable or reasonable alternatives and mitigation is provided. Public drainage facilities are also limited to the outer 25 percent of a buffer. According to development standards in SMC 18.80.070(F)(4)(h), stormwater management facilities in wetlands and wetland buffers are a regulated activity requiring a permit from the City.

Similarly, utilities (i.e., water, sewer, stormwater) in streams and stream buffers may be approved when there is no practicable or reasonable upland alternative. Utilities development would also be subject to criteria for stream crossing established in the code (SMC 18.80.080(H)), which are designed to protect fish and fish habitat, and flood-carrying capacity.

Development in critical areas that may be allowed under SMC 18.80.080 are also subject to mitigation sequencing requirements (SMC 18.80.080(K)). The adverse impacts of any allowed development exception must be unavoidable but mitigatable by the following sequence of actions:

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; and/or
6. Monitoring the impact and taking appropriate corrective measures.

### ***State Environmental Policy Act***

SEPA (Chapter 43.21C RCW) was adopted in 1971 to ensure that environmental values were considered during decision-making by state and local agencies. SEPA provides a way to identify possible environmental impacts that may result from government decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies or plans. Information provided during the SEPA review

process helps agency decision-makers, applicants, and the public understand how a proposal will affect the environment. This information can be used to change a proposal to reduce likely impacts, or to condition or deny a proposal when adverse environmental impacts are identified.

## Applicability

Under SMC Environmental Policy, Chapter 16.04.010, the City adopts SEPA, RCW 43.21C.120, and the SEPA Rules, WAC 197 11-904. Under SEPA, the City assumes the role of lead agency responsible for environmental review of private and City proposals, with the exception of other public agencies that have SEPA authority. SMC 16.04 contains the City's SEPA rules and procedures.

SEPA requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An Environmental Impact Statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. A SEPA checklist is typically prepared to determine whether an EIS is required. However, not all projects require SEPA, and are considered *categorically exempt*. Categorical exemptions are reserved for projects that either are unlikely to have a significant adverse environmental impact or were designated exempt by the State legislature.

Stormwater construction and maintenance activities are categorically exempt from threshold determination and Environmental Policy Act requirements as described under WAC 197-11-800(23)(b): *all storm water, water and sewer facilities, lines, equipment, hookups, or appurtenances including utilizing or related to lines twelve inches or less in diameter.*

## Shoreline Management Act

The Shoreline Management Act (SMA) was passed by the Washington state legislature in 1971 (RCW 90.58). The primary goal of the SMA is *to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines*. Under the SMA, each city and county with *shorelines of the state* must prepare and adopt a Shoreline Master Program (SMP) that is based on state laws and rules but is tailored to the specific geographic, economic and environmental needs of the community. All SMPs must satisfy the requirements of WAC 173-26, state master program approval and amendment procedures, master program guidelines, and WAC 173-27.

## Applicability

The City completed a comprehensive SMP update in November 2013 (Sequim 2013), which is implemented through the City's Shoreline Master Program Code (SMC Chapter 19.05). The SMP and SMC Chapter 19.05 are applicable to the shoreline environment of marine and tidally influenced waters within the City. The City's shoreline jurisdiction, or regulated shoreline, includes all the submerged lands from the mid-channel to the adjacent shorelands located within 200 feet of the Ordinary High Water Mark (OHWM). The City does not have any streams or rivers that meet the 20 cubic feet per second (cfs) requirement for shorelines regulated under the SMA, though the portion of Johnson Creek tidally influenced by Sequim Bay falls within the shoreline jurisdiction. The City's shoreline jurisdiction also includes shorelines of

statewide significance, which are those submerged lands extending from extreme low tide to mid-channel. One associated wetland falls within the City's shoreline jurisdiction.

The wetland commonly known as Pitship Marsh is within 200 feet of the OHWM and hydrologically connected to Sequim Bay; as such, the entire wetland falls within the City's shoreline jurisdiction. Similarly, the wetland in Washington Harbor along the inner portion of South Spit near Pacific Northwest National Laboratory/Battelle is an associated wetland, but is not yet within the City's jurisdiction because it lies within the City's Urban Growth Area (UGA). The City's regulations have no effect in the UGA until annexed into the City (Sequim 2013).

The City's SMP is essentially a shoreline-specific combined comprehensive plan, zoning ordinance, critical areas ordinance, and development permit system. In the City, shoreline permitting and enforcement procedures related to the SMP are intended to meet the SMP goals and policies. Within the City, all non-exempt substantial development undertaken within the shorelines of the state must first obtain a Shoreline Substantial Development, Shoreline Conditional Use, or Variance Permit from the City.

The type of shoreline permit can vary depending on the type of activity and the shoreline environment where work is proposed. Unless exempted, a development, use, or activity shall not be undertaken within the jurisdiction of the SMA unless a shoreline substantial development permit has been obtained. The SMP Section 7.2 identifies those activities that are considered exempt (e.g., normal maintenance and repair) from the requirement to obtain a shoreline substantial development permit. However, regardless of an exemption, activities that occur in the shoreline are required to adhere to the conditional development standards. A development or use that is listed as a conditional use or unlisted use must obtain a conditional use permit even though a substantial development permit is not required.

The City has established six environmental designations: urban, urban conservancy, shoreline residential, research district, natural, and aquatic, as identified in Figure 5-1 in the SMP. Each designation sets out the classification criteria, management policies, and regulations associated with that designation. These categories represent a relative range of development land use preferences:

- **Urban** designation provides for high intensity water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring previously degraded ecological functions.
- **Research District** designation provides for research and development uses associated with environment, biotechnology, energy efficiency, marine and coastal security, and public and private educational partnerships. Protection or enhancement of existing ecological resources is a recognized objective of this designation.
- **Shoreline residential** accommodates residential development and associated structures that are consistent with the SMA (RCW 90.58) and that provide appropriate public access and recreational uses
- **Urban Conservancy** is designed to protect and restore ecological functions of open space, flood plain and other sensitive lands where they exist in urban and developed settings, while allowing a limited variety of compatible uses.

- **Natural** designation is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use. These systems require that only very low intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes. Consistent with the policies of the designation, local government should include planning for restoration of degraded shorelines within this environment.
- **Aquatic** is a designation intended to protect, restore, and manage the unique characteristics and resources of the areas waterward of the OHWM.

For each shoreline environmental designation, the SMP specifies shoreline standards (e.g., building height, marine buffers, and building setbacks), allowed uses, prohibited uses, allowed shoreline modifications, and permitting requirements. In general, utilities (including stormwater management facilities) may be permitted within all of the shoreline environment designations, except that in natural and aquatic environments they may be permitted as a conditional use only (refer to SMP Chapter 6).

### ***Other Regulations***

In addition to local requirements, wetland and stream regulations are imposed by federal and state agencies. These regulations require permitting and mitigation for impacts on wetlands and streams. The Clean Water Act sections 404, 401, and Hydraulic Project Approval (HPA) are the most common permits that would be required for work associated with surface water management projects. The following describes the permits in greater detail.

#### **Clean Water Act Sections 404 and 401**

Section 404 of the federal Clean Water Act regulates activities in waters of the United States, including wetlands (33 United States Code [USC] 1344), but not wetland buffers. The United States Army Corps of Engineers (USACE) administers the permitting program under this law. Such permits include nationwide (general) permits or individual permits. Nationwide permits (NWP) cover a category or categories of activities that are either similar in nature and cause only minimal individual and cumulative adverse impacts. Individual permits are intended for projects where activities have more than minimal adverse impacts and evaluation of the permit application involves more thorough review of the potential effects of the proposed activity. Close coordination with USACE to confirm the type of review necessary is an integral part of project planning. The difference in review timeframes for an individual permit versus a nationwide permit could have implications on schedule.

Section 401 of the Clean Water Act requires that proposed dredge and fill activities permitted under Section 404 be reviewed and certified by Ecology to ensure that the project meets state water quality standards. These regulations will be applicable if any portion of the on-site wetlands are filled, dredged, or otherwise affected by project activities.

#### **Joint Aquatic Resources Permit Application (JARPA)**

Several types of aquatic permits can all be applied for through a streamlined permit application called the Joint Aquatic Resource Application (JARPA) including Clean Water Act permits (Section 404, Section 10, Section 401), City shoreline permits, other City permits (e.g., critical areas), HPAs, and Aquatic Use Authorizations. Activities that trigger these

permits are associated with work in a surface water body (e.g., streams, lakes, tidal waters) or a wetland (e.g., bogs, riverine wetlands, salt marshes).

Surface waters and wetlands are also considered Environmentally Sensitive Areas under the GMA, and thereby are subject to City regulations (SMC Chapter 18.80). For both the purposes of local regulations and those of state and federal entities (e.g., Ecology, USACE), it is important that the extent of the surface waterbody or wetland be properly defined, rated by professional scientists, and the amount of dredge or fill be appropriately calculated by certified engineers.

Finally, it is also important to understand that although this is one permit application, the typical review schedules vary among the regulatory authorities reviewing the application. It is also important to understand where there may be a need for prior approval for a separate permit or authorization before approval under the JARPA. For example, the HPA permit (Washington Department of Fish and Wildlife [WDFW]) is typically reviewed in a shorter timeframe than a Section 404 permit (USACE); however, the HPA permit cannot be approved until the SEPA determination is finalized. To avoid project delays, it is recommended to meet with the regulatory agencies making permitting decisions. Oftentimes they will require more information or materials not specifically required in the JARPA. Early coordination with all of the regulatory agencies may prevent delays in the processing of the JARPA.

## EVOLVING REGULATIONS AND POLICIES

The City faces several evolving regulations relevant to stormwater management. These regulations are expected to increase the City's obligations to protect water quality and fish habitat, and require greater integration and coordination between programs aimed at improving environmental protection. This section focuses on upcoming state water quality standards that the City will need to accommodate in its ongoing stormwater management program.

### Upcoming State Water Quality Standards

Following is a summary of upcoming revisions to the state water quality standards based on evolving human health criteria, and methods for compliance with the revised standards.

#### ***Washington State Surface Water Quality Standards (WAC 173-201A)***

Ecology is working on the following updates to the Surface Water Quality Standards (WAC 173-201A) (<[www.ecy.wa.gov/programs/wq/ruleddev/wac173201A/1203inv.html](http://www.ecy.wa.gov/programs/wq/ruleddev/wac173201A/1203inv.html)>):

1. Establishing new human health criteria
2. Providing new implementation and compliance tools for dischargers

Prior to adoption of the new final rule, Ecology implemented a water quality policy forum to educate and obtain feedback from municipal stormwater permittees and other stakeholders

on these updates. A preliminary draft rule package was released on September 30, 2014. The public review period was open from January 12, 2015, through March 25, 2015.

## ***Human Health Criteria***

Washington's surface water quality standards include aquatic life criteria for toxic substances, but lack human health criteria for toxic substances. EPA requested that Washington use new science and information to update the standards with human health criteria for toxic substances to protect people who consume water, fish, and shellfish. Ecology has been using the 1992 National Toxics Rule mandated by EPA for developing 303(d) lists of impaired waters, TMDLs, and discharge permits to protect human health from toxic substance consumption. This rule is outdated and EPA has since recommended national human health criteria for 114 toxic substances (<<http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm>>). These EPA criteria recommend maximum concentrations of toxic substances in surface waters (or fish tissue for methylmercury only) that vary by designated uses of the surface water for protection from consumption of either 1) water and organism (fish/shellfish) or 2) organism only.

Human health criteria for organism (fish/shellfish) consumption are of primary concern for stormwater dischargers. These criteria vary directly with the reference dose (daily intake), relative source contribution (from other sources), and human body weight, vary inversely with the fish consumption rate and bioconcentration factor, and can also vary by the carcinogen risk factor. Criteria adopted by Ecology will likely be lower than the EPA criteria due to the high fish consumption rate of tribal and other populations in Washington State.

Mercury and polychlorinated biphenyls (PCBs) are examples of persistent bioaccumulative toxins that will be most challenging for human health criteria development, and discharge permit compliance because they are commonly associated with 303(d) listings and TMDLs, and largely originate from out-of-state sources of atmospheric deposition. For example, Oregon recently adopted human health criteria in 2011 for methylmercury and PCBs that are 10 times lower than EPA criteria because they are based on a 10 times higher fish consumption rate (175 versus the 17.5 grams per day used for EPA criteria, and compared to only 6.5 grams per day currently used by Washington from the 1992 National Toxics Rule) (<<http://www.deq.state.or.us/wq/standards/toxics.htm>>). The majority (74 percent) of current 303(d) listings for freshwater fish tissue are for two carcinogens: PCBs and dichloro-diphenyl-trichloroethane (DDT; including dichlorodiphenyldichloroethylene [DDE] and dichlorodiphenyldichloroethane [DDD] degradation products). Ecology may choose to use a lower risk factor for some carcinogens, such as the risk factor of  $10^{-5}$  used by Great Lakes states versus EPA's and Washington's current risk factor of  $10^{-6}$ , which would increase criteria for carcinogens and possibly negate a decrease from a revised consumption rate.

## ***Implementation and Compliance Tools***

New human health criteria may result in lower discharge permit limits that will be challenging for permitted municipalities and industries to achieve. Recognizing this, Ecology is concurrently revising the water quality standards rule to allow permit compliance while toxic substance source control efforts and technologies are improved. At water quality policy forums, Ecology has provided examples of permitting scenarios for various types of

dischargers to 303(d) listed or unlisted waterbody segments. These forums include the following response to a question on the potential impact of new human health criteria to municipal stormwater permittees:

“The most immediate impact would likely be additional 303(d) listed waterbody segments as criteria are implemented (under the current 303(d) listing policy). The current permits contain requirements for discharges to 303(d) listed waterbody segments for which TMDL studies have been completed and approved by EPA. These requirements contain a series of actions for permittees to take if the TMDL identifies municipal stormwater discharges as a cause of or contributor to the impairment, and if the actions for the stormwater system go beyond the regular permit requirements. Ecology incorporates them when reissuing the permit, unless there is a compelling reason to bring them in sooner. Actions required in the permits provide a path for permittees to address situations where criteria are exceeded in waters. Permittees that follow this path are not in violation of the permit.”

Initially, increased listings of impaired water body segments would not require additional actions by municipal stormwater permittees unless Ecology determines that stormwater treatment requirements currently defined as All Known Available and Reasonable methods of prevention, control, and Treatment (AKART) in stormwater manuals are no longer protective of water quality. However, new TMDL implementation plans resulting from those listings ultimately may require additional source control, treatment, and monitoring by municipal stormwater permittees.

Adoption of human health criteria is not likely to increase 303(d) listings for conventional, microbial, and inorganic substances because either these parameters do not have human health criteria or the human health criteria are higher than the aquatic life criteria. Exceptions include arsenic that typically exceeds EPA human health criteria but not aquatic life criteria in surface waters, and manganese that often exceeds human health criteria in surface waters and has no aquatic life criteria. Adoption of human health criteria is likely to increase 303(d) listings for some organic chemical substances that are detected in surface waters, and either do not have aquatic life criteria or the human health criteria are lower than the aquatic life criteria, and commonly observed concentrations. Examples (and the associated human health criterion for organism only) include bis(2-ethylhexyl) phthalate (2.2 micrograms per liter [ $\mu\text{g/L}$ ]), several polycyclic aromatic hydrocarbons (0.018  $\mu\text{g/L}$ ), and total PCBs (0.000064  $\mu\text{g/L}$ ). Currently, the City has no Water Quality Assessment listings for the water quality parameters that may be further regulated by human health criteria.

## National Pollutant Discharge Elimination System Municipal Stormwater Permit

The City is currently not a permittee under the state National Pollutant Discharge Elimination System (NPDES) municipal stormwater permit; however, several nearby jurisdictions (Gig Harbor, Oak Harbor, Port Angeles, Port Orchard, Port Townsend, and Poulsbo) are Phase II permittees. The rules that outline when a small municipal separate storm sewer system (MS4) may be designated for coverage under Phase II include the following:

1. **Automatic designation:** all MS4s located in a census-defined urban area.
2. **Required evaluation:** Ecology must evaluate cities located outside of the census-defined urban areas with a population greater than 10,000.

3. **Petition:** Any person may petition Ecology to evaluate whether a jurisdiction not otherwise covered by Phase II should be regulated.

Waivers can be issued if the MS4 serves a population less than 1,000 if:

- They are not contributing significantly to the pollutants loadings of an interconnected regulated MS4
- A TMDL has not been completed for pollutant(s) in its stormwater discharges

NPDES Phase II permittees must implement a stormwater management program (SWMP) that includes the following five elements:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Municipal Operations and Maintenance

Additional NPDES Phase II Permit requirements apply for the following:

- Compliance with TMDLs
- Monitoring and Assessment
- Reporting

The Regulatory Gap Analysis and Needs Assessment (Appendix G) summarizes additional stormwater program elements that the City would need to address if they were to become a permittee in the future.

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