

## CHAPTER 2

### REGULATORY CONSIDERATIONS

#### INTRODUCTION

Stormwater drainage planning and construction has historically been provided for the purposes of keeping stormwater away from structures and property so that the property can be drained and protected from damage due to stormwater runoff. Local and state governments have installed the majority of existing stormwater facilities to drain roadways. Private property owners have installed facilities to drain their property, which then discharge into public drainage systems that in turn connect associated with the roadways drainage system. However, over the last thirty years new regulations have required protection of the natural environment from the increasing flows and pollution contained in stormwater runoff. Chapter 6 describes many of the water quality and quantity problems associated with today's urban stormwater runoff.

Through the Clean Water Act and other legislation, the Federal government has delegated to Washington State the authority to implement rules and regulations within the state provided that meet the goals of the Act. Subsequently, the State has delegated some of this authority to local agencies: cities, counties, and drainage districts. These agencies are free to enact and enforce rules and policies that are more stringent than those of the State, but cannot enact ones that are less stringent. Permits may be issued by all three levels of government depending on the type of project and the impacts it may have on the natural drainage systems, which may include streams (intermittent or year-around flows), wetlands, lakes, ponds, rivers, estuaries, marine waters, and groundwater.

The role of Federal, State, and local stormwater regulations is to provide minimum standards for the drainage and discharge of stormwater runoff. Specifically, the goal of these regulations is to reduce the damaging effects of increased runoff volumes to the natural environment as the land surface changes, to prevent pollutants from getting into runoff, and, to remove the pollutants that become entrained in the runoff.

#### FEDERAL REGULATIONS

The Federal government regulates stormwater through several different programs. Responsibility for implementing the policies of these programs is often delegated to the state and local agencies through various rules, regulations, and permitting policies. The federal government does, however, maintain some of the responsibilities for those activities that are of national interest.

## **FEDERAL WATER POLLUTION CONTROL ACT (CLEAN WATER ACT)**

The Clean Water Act (CWA) is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States. The Act gave the Environmental Protection Agency (EPA) the authority to set effluent standards on an industry basis (technology-based) and continued the requirements of the original Act to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into waters of the United States unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained.

The CWA provides for the delegation by EPA of many permitting, administrative, and enforcement aspects of the law to state governments. In states with the authority to implement CWA programs, EPA still retains oversight responsibilities.

Provisions of the CWA also apply non-point source management program. Non-point sources of pollutants are, as the term implies, from diffuse sources. It is caused by runoff from rainfall and snowmelt transporting the pollutants from their source. Under the CWA, stormwater control was established as part of the NPDES permit program (Section 402 of CWA).

### **Phase I NPDES Stormwater Permits**

In 1990, the Environmental Protection Agency established regulations for Phase I stormwater permits for large and medium municipalities as well as industries and construction sites. Section 402 of the Clean Water Act, establishes this regulatory program for point sources of pollution but exempts most agricultural activities. The NPDES permit program draws its power from this section and was originally designed to reduce pollution from point sources such as domestic and industrial wastewater discharges. The program now includes certain runoff discharges from specific industrial activities, including construction sites that disturb more than five acres of land, and runoff discharges operated by local governments with a population over 100,000. To obtain a NPDES permit, a plan must be developed and implemented to reduce the discharge of pollutants to the "Maximum Extent Practicable," protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act.

### **Phase II NPDES Stormwater Permits**

In December 1999 the Environmental Protection Agency (EPA) issued final regulations for Phase II NPDES stormwater permits. Phase II regulations cover all urban areas not initially covered by Phase I. The regulations require development of stormwater management programs that include the following components:

- Public Education and Outreach,
- Public Involvement and Participation,
- Elicit Discharge Detection and Elimination,
- Construction Site Stormwater Runoff Control,
- Post-Construction Stormwater Runoff Control, and
- Pollution Prevention / Good Housekeeping for Municipal Operations.

These program components must include quantitative goals and a description of how these goals will be met. Monitoring and adaptive management are therefore important components to the program.

While Jefferson County is not designated as a NPDES community and is not required to obtain a Phase II permit, the program components provide excellent guidance for developing an urban stormwater management program.

The Washington Department of Ecology has been delegated authority to issue and administer NPDES permits. In order to provide technical standards for stormwater management in Western Washington, Ecology developed the *Stormwater Management Manual for Western Washington*.

## ENDANGERED SPECIES ACT

The purpose of the 1972 Endangered Species Act (ESA) is to “provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved....” The ESA authorizes the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to list species as endangered or threatened, and to identify and protect the critical habitat of listed species. USFWS has jurisdiction over terrestrial and freshwater plants and animals such as bull trout. NMFS is responsible for protection of marine species including anadromous salmon. Under the ESA, endangered status is conferred upon “any species which is in danger of extinction throughout all or a significant portion of its range...” while threatened status is conferred upon “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The ESA defines critical habitat as the “geographical area containing physical and biological features essential to the conservation of the species.”

Once a species is listed as endangered or threatened, the ESA makes it illegal for the government or individuals to “take” a listed species. "Take" is defined in Section 9 of the act and includes killing, hunting, trapping, or otherwise "harming" the listed species or habitat the species depends upon. The Federal courts have interpreted the term “take” to include “significant modification or degradation of critical habitat” that impairs essential behavior patterns.

The ESA Section 9 “take” prohibition applies to all “persons” including local public entities. State and local governments face twin exposures to the “take” prohibition: through their direct conduct and through the exercise of their regulatory authority over ~~activities which~~ activities that may result in a “take”. ESA listings significantly affect activities that affect salmon and bull trout habitat, such as water use, land use, construction activities, wastewater disposal, and stormwater management.

Threatened species may be protected through a more flexible Section 4(d) rule that describes activities that are likely to result in a “take” and exempts certain activities from “take” liabilities so long as the “take” occurs as the result of a program that adequately protects the listed species and its habitat. The 4(d) rule approves some specific existing state and local programs, and creates a means for NMFS to approve additional programs if they meet certain standards set out in the rule. The 4(d) rule is intended to encourage governments and private citizens to adjust their programs and activities to be “salmon safe.”

One of the limitations on the “take” prohibitions contained in the 4(d) rule is Limit No. 12 – Municipal, Residential, Commercial and Industrial development and redevelopment (MRCI). The 4(d) rule recognizes that MRCI development and redevelopment can degrade habitat and injure or kill salmon and steelhead. The 4(d) guide states that with appropriate safeguards, MRCI development can minimize impacts on listed fish. The

guide further states that NMFS would individually apply the following 12 evaluation considerations when determining whether MRCI development ordinances or plans adequately conserve listed fish.

1. Development will avoid inappropriate areas such as unstable slopes, wetlands, areas of high habitat value, and similarly constrained sites.
2. Stormwater discharge will not impact water quality and quantity and stream flow patterns in the watershed – including peak and base flows in perennial streams.
3. Riparian areas will be adequately protected to maintain Proper Functioning Condition (PFC) so they can provide the biological requirements of the fish, around all rivers, estuaries, streams, lakes, deepwater habitats, and intermittent streams.
4. Stream crossings will be avoided wherever possible and, where crossings must be provided, they will be designed to have minimal impacts.
5. Historic stream meander patterns and channel migration zones will be protected and hardening stream banks and shorelines will be avoided.
6. Wetlands, wetland buffers and wetland functions will be protected.
7. The capacity of permanent and intermittent streams to pass peak flows will be protected.
8. Landscaping with native vegetation will be encouraged to reduce the need to water and apply herbicides, pesticides, and fertilizer.
9. Erosion and sediment run-off will be prevented during and after construction in order to prevent sedimentation and pollutant discharge to streams, wetlands and other water bodies that support listed fish.
10. Demands on the water supply will be met without affecting the flows salmon need either directly or through groundwater withdrawals.
11. There will be mechanisms for monitoring, enforcing, funding, reporting, and implementing the program.
12. All other state and Federal environmental and natural resource laws and permits will be complied with.

### **National Marine Fisheries Service**

Under the ESA, NMFS is responsible for the protection of marine life, including anadromous salmon such as Puget Sound Chinook and Hood Canal summer Chum. The threatened status of Puget Sound Chinook and Hood Canal summer Chum salmon allowed NMFS to establish regulations designed to protect these species under the Section 4(d) rule.

### **United States Fish and Wildlife Service**

Under the ESA, USFWS is responsible for the protection of all non-marine life such as bull trout. The bull trout was listed as threatened in 1999. The USFWS does not

differentiate between threatened and endangered species, so a Section 4(d) rule will not contain exceptions to the Section 9 prohibition on “take”.

## WASHINGTON STATE STORMWATER REGULATIONS

The principal State programs related to stormwater management include the *Puget Sound Water Quality Management Plan*, the Growth Management Act, the Shorelines Management Act, and the Salmon Recovery Strategy.

### PUGET SOUND WATER QUALITY MANAGEMENT PLAN

In December 2000, the Puget Sound Water Quality Action Team adopted the 2000 *Puget Sound Water Quality Management Plan* (Puget Sound Plan). The plan establishes the framework for managing and protecting the Puget Sound and coordinating the roles and responsibilities of Federal, State, tribal and local governments. As part of this plan, a *Water Quality Work Plan* is established every two years to identify actions needed to maintain or improve water quality in the region. The Plan is separated into 21 programs including:

- Estuary Management and Plan Implementation
- Puget Sound/Georgia Basin Shared Waters
- Aquatic Nuisance Species
- Contaminated Sediments and Dredging
- Marine and Freshwater Habitat Protection
- Municipal and Industrial Discharges
- Nonpoint Source Pollution
- Agricultural Practices
- Forest Practices
- Household Hazardous Waste
- Local Watershed Action
- Marinas and Recreational Boating
- On-Site Sewage Systems
- Pest Management
- Shellfish Protection
- Spill Prevention and Response
- Stormwater and Combined Sewer Overflows
- Education and Public Involvement
- Laboratory Support
- Monitoring
- Research

RCW 90.71.070 requires local governments to implement elements of the work plan subject to the availability of funds.

The Puget Sound Plan provides guidance regarding actions to benefit water quality. The Plan includes elements calling for counties and cities to develop and implement local stormwater management programs.

The Puget Sound Plan directed Ecology to develop stormwater guidance for local programs, including a technical manual (SW-2) and model ordinances (SW-3.2) for stormwater management, operation and maintenance. In 2001 Ecology recently released the technical manual entitled *Stormwater Management Manual for Western Washington*.

The 2000 Puget Sound Plan also calls for jurisdictions to adopt a comprehensive stormwater program (SW-1). Densely populated urbanized areas, in accordance with EPA regulations, must also meet the requirements of municipal stormwater NPDES permits (SW-2.5). This 2000 Plan also suggests Ecology develop criteria for determining whether small municipalities outside of urban areas will need an NPDES phase II permit. These criteria include evaluation of the potential to degrade water quality through discharge to sensitive waters, high growth or growth potential, high population density, and the evaluation of the effectiveness of water quality programs currently in place. Based on these criteria, some smaller communities may be required to obtain NPDES phase II permits.

~~The Port Ludlow Drainage District Jefferson County~~ should be committed to meeting the stormwater management guidelines of the Puget Sound Plan. In the event the Irondale and Port Hadlock ~~District UGA~~ is designated as an urbanized area under the Clean Water Act, it will be required to meet Phase II NPDES stormwater regulations. By fulfilling the requirements of a comprehensive stormwater program, the ~~District County~~ may well be in compliance with the Phase II NPDES requirements.

### **Local Government Planning and Stormwater Programs (SW-1)**

The following are recommended components from the Puget Sound Plan for local government planning and stormwater programs to protect water quality:

***Growth Management Planning:*** Every city and county required to plan under the Growth Management Act (GMA) shall review and revise, as necessary, countywide planning policies, local comprehensive plans and development regulations to ensure that development does not degrade water quality, aquatic species and habitat, and natural hydrology and processes. This review shall be completed according to GMA amendment timelines using best available science and shall include:

- a. Designating urban growth management areas with appropriate densities and sufficient capital facilities to reduce sprawl;
- b. Providing sufficient vegetative buffers and development setbacks in critical areas ordinances to protect riparian zones, shorelines, wetlands and other sensitive areas;
- c. Assessing how full build-out according to the comprehensive plan will alter natural hydrology, water quality and aquatic species; and
- d. Incorporating measures to retain natural hydrology and processes, such as establishing goals for limiting effective impervious surfaces and preserving open spaces and forests.

***Comprehensive Stormwater Programs:*** Every city and county shall develop and implement a comprehensive stormwater management program. Cities and counties are encouraged to form intergovernmental cooperative agreements in order to pool resources and carry out program activities most efficiently. Programs shall include:

- a. **Stormwater Controls for New Development and Redevelopment** – Adopt ordinances that require the use of best management practices (BMPs) to control stormwater flow, provide treatment, and prevent erosion and sedimentation from all new development and redevelopment projects. Adopt and require the use of the Department of Ecology’s stormwater technical manual (or an alternative manual developed under SW-1.3) to meet these objectives. All new development in the basin, particularly new development sited outside of urban growth areas, shall seek to achieve no net detrimental change in non-natural surface runoff and infiltration.
- b. **Stormwater Site Plan Review** – Review new development and redevelopment projects to ensure that stormwater control measures are adequate and consistent with local requirements.
- c. **Inspection of Construction Sites** – Regularly inspect construction sites and maintain temporary BMPs according to guidance developed under SW-2 and 3. Adopt ordinances to ensure clear authority to inspect construction sites, to require maintenance of BMPs and to enforce

violations. Provide local inspectors with training under SW-3 on erosion and sediment control practices.

- d. **Maintenance of Permanent Facilities** – Adopt ordinances that require that all permanent stormwater facilities be regularly maintained according to guidance developed under SW-2 and 3 to ensure performance. Develop provisions as necessary, such as agreements or maintenance contracts, to ensure that facilities on private land (e.g., residential subdivisions and commercial complexes) are maintained. Provide training under SW-3 for professionals who maintain stormwater facilities.
- e. **Source Control** – Develop and implement a program to control sources of pollutants from new development and redevelopment projects and from existing developed lands, using BMPs from Ecology’s stormwater technical manual. Source control activities shall include pollution from roadways and landscaping activities. Integrated pest management practices shall be used to manage roadside vegetation.
- f. **Illicit Discharges and Water Quality Response** – Adopt ordinances to prohibit dumping and illicit discharges. Carry out activities to detect, eliminate and prevent illicit discharges, and respond to spills and water quality violations.
- g. **Identification and Ranking of Problems** – Identify and rank existing problems that degrade water quality, aquatic species and habitat, and natural hydrologic processes. Local governments may choose to achieve this through watershed or basin planning (SW-1.2.j) or another process. Conduct a hydrologic analysis and map stormwater drainages, outfalls and impervious surfaces by watershed. Develop plans and schedules and identify funding to fix the problems.
- h. **Public Education and Involvement** – Educate and involve citizens, businesses, elected officials, site designers, developers, builders and other members of the community to build awareness and understanding of stormwater and water quality issues. Provide practical alternatives to actions that degrade water quality and biological resources.
- i. **Low Impact Development Practices** – Adopt ordinances that allow and encourage low impact development practices. These are practices that infiltrate stormwater (using proper safeguards to protect groundwater) on-site rather than collecting, conveying and discharging stormwater off site. The goals of low impact development practices are to enhance overall habitat functions, reduce runoff, recharge aquifers, maintain historic in-

stream flows and reduce maintenance costs. Low impact development provides a variety of benefits, including cost savings and added market appeal, additional green space for recreational uses and greater esthetic appeal than traditional facilities. Low impact development practices may not be appropriate for all sites. Low impact principles include:

- i. Maintain the pre-developed, undisturbed stormwater flows and water quality;
  - ii. Retain native vegetation and soils to intercept, evaporate and transpire stormwater on the site (rather than using traditional ponds and conveyances);
  - iii. Emphasize a higher standard of soil quality in disturbed soils (by using compost and other methods) to improve infiltration, reduce runoff and protect water quality;
  - iv. Cluster development and roads on the site and retain natural features that promote infiltration; and
  - v. Reduce impervious surface area and use permeable surfaces instead.
- j. **Watershed or Basin Planning** – Participate in watershed or basin planning processes, such as planning under Chapter 400-12 WAC or Chapter 90.82 RCW, in order to coordinate efforts, pool resources, ensure consistent methodologies and standards, maintain and restore watershed health, and protect and enhance natural hydrology and processes, including natural surface runoff, infiltration and evapotranspiration. Progress in achieving this goal shall include biological monitoring. Cities and counties may choose watershed or basin planning processes to identify and rank existing stormwater problems, develop a plan and schedule to fix the problems, and set goals for limiting effective impervious surfaces and preserving open spaces and forests. Basin planning should use continuous runoff modeling to simulate existing and potential impacts of land use and water management on natural hydrology. Basin plans shall address water quality, aquatic habitat, groundwater recharge and water re-use. Basin plans may prescribe stronger stormwater management measures to protect sensitive resources in a certain basin or sub-basin. Stormwater management measures in all basins shall at least meet the minimum requirements of ecology’s technical manual. Cities and counties shall incorporate recommendations from watershed or basin plans and specific requirements from Total Maximum Daily Load (TMDL) Water Cleanup Plan processes into their stormwater programs, land use comprehensive plans and site development ordinances.

- k. **Funding** – Create local funding capacity, such as a utility, to ensure adequate, ongoing funding for program activities and to provide funding to contribute to regional stormwater projects.
- l. **Monitoring** – Monitor program implementation and environmental conditions and trends over time (according to guidance developed under SW-2 and 3) to measure the effectiveness of program activities. Periodically share monitoring results with local and state agencies, citizens and others.
- m. **Schedule for Implementation** – Develop an implementation schedule with specific target dates and funding sources to help plan program activities.

### **Stormwater Technical Manual (SW-2)**

The Puget Sound Plan states that Ecology shall maintain a stormwater technical manual for new development and redevelopment with overall goals of protecting and restoring aquatic species and habitat, water quality and natural hydrology and processes, including achieving no net detrimental change in natural infiltration and surface runoff, particularly for new development sited outside of urban growth areas.

Jefferson County has adopted the August 2001 Department of Ecology's *Stormwater Management Manual for Western Washington*. [Port Ludlow Drainage District The Irondale & Port Hadlock UGA](#) is under the regulatory requirements of Jefferson County. The *Stormwater Management Manual for Western Washington* establishes the minimum requirements for stormwater control and site development requirements for all new development and redevelopment. This manual outlines water quantity design criteria, water quality controls, erosion and sediment control practices, and site development.

The intent and purpose of the manual is to provide for the following elements:

- Establish criteria for review and analysis of all development,
- Manage stormwater to minimize contact with contaminants,
- Mitigate the impacts of increased runoff due to urbanization,
- Manage runoff from developed property and that being developed, and
- Protect the health, safety, and welfare of the public.

### **STATE OF WASHINGTON SHORELINE MANAGEMENT ACT**

On November 29, 2000, the Department of Ecology adopted new shoreline master program guidelines (Chapter 173-26 WAC) after a five-year review and update. This was the first time since 1972 the regulations had been updated. However, the guidelines were challenged and the State Shoreline Hearings Board subsequently invalidated them. In an effort to avoid years of legal appeals, the Department of Ecology director asked the governor and attorney general to sponsor mediation talks aimed at reaching a legal settlement.

The outcome of the negotiations is new draft shoreline management guidelines that Ecology will propose through formal rule-making. In addition, all parties to the mediation will jointly propose legislation in 2003 to change implementation deadlines contained in the underlying Shoreline Management Act, and to seek state funding, beginning with \$2 million over the next two years, to help local governments update their local shoreline master programs.

When the new shoreline master program guidelines are adopted, Jefferson County will need to update its Shoreline Master Program.

### **WASHINGTON STATE SALMON RECOVERY STRATEGY**

In response to ESA listings in Washington State, Governor Locke established the Office of Salmon Recovery in 1997 to direct the State's salmon recovery efforts. The Office of Salmon Recovery supported by the Joint Natural Resources Council (composed of representatives of state natural resource agencies) prepared the Statewide Strategy to Recover Salmon, entitled "Extinction is Not an Option" (January, 1999). The goal of the Statewide Strategy is to restore wild salmon, steelhead, and trout populations to harvestable levels. Rather than attempting to avert additional ESA listings, the Statewide Strategy intends to provide local input into, and hopefully maintain some local control over the salmon recovery regulatory processes that will inevitably affect the majority of Washington State. The Statewide Strategy was submitted to NMFS in 1999 but was not included in the final 4(d) rule.

In order to minimize liability under the ESA, local governments will need to demonstrate that their land use regulations will not result in a prohibited "take" of a listed species,

including adverse modification of critical habitat. Possible regulatory requirements may include:

- Adopt model critical areas ordinances designed to protect critical habitat.
- Amend critical areas ordinances to include riparian buffers, vegetation retention, soil retention, maximum road density within a watershed, maximum impervious surface in a watershed, and limits on road crossings of streams.
- Amend comprehensive plans to include an “environmental protection element.”
- Adopt stormwater operation and maintenance ordinances and require regular maintenance of stormwater facilities.
- Adequate inspection and enforcement of stormwater best management practices.
- Conduct on-going monitoring of best management practices.
- Provide adequate funding for stormwater management infrastructure.
- Amend Shoreline Master Programs to encourage greater use of conservancy and natural designations, and limit conversion of agricultural and forest land.

## **JEFFERSON COUNTY STORMWATER MANAGEMENT PROGRAM**

Local jurisdictions are typically responsible for implementing and enforcing regulations passed down from the State and Federal governments and for enacting additional policies, procedures and regulations based on local conditions and desires of the citizens. ~~A proposed stormwater ordinance is provided in Appendix J. Adoption by Jefferson County of this ordinance is a necessary step in creating a complete set of policies and regulations with respect to stormwater drainage in the Port Ludlow Drainage District.~~

### **JEFFERSON COUNTY COMPREHENSIVE PLAN**

Jefferson County adopted its Comprehensive Plan in 1989. The Plan is a planning document with goals, policies, and strategies that are implemented by County actions, including adoption of County development regulations. The Plan Elements contain discussion and numerous goals and policies related to stormwater management.

#### **Land Use Element**

While the Comprehensive Plan Land Use element is not a stormwater management regulation, it guides how land is developed, specifically the location of commercial development, residential densities, and open space requirements. These policies in turn have a direct impact on the water quantity and quality of runoff from a particular area.

#### **Environmental Element**

The Comprehensive Plan Environmental Element contains goals, policies, and strategies intended to prevent impacts to the following Environmentally Sensitive Areas (ESAs):

*Jefferson County*

*2-13*

*Irondale & Port Hadlock UGA Stormwater Management Plan December 2003 Port Ludlow Drainage District* — 2-3

- Critical Aquifer Recharge Areas
- Frequently Flooded Areas
- Geologically Hazardous Areas
- Fish and Wildlife Habitat Areas
- Wetlands

Stormwater management plays a critical role in protecting ESAs.

### **Appendix G: Review of Drainage, Flooding, Stormwater Management Issues and Polluted Discharges**

Comprehensive Plan Appendix G provides goals and policies related to surface water and stormwater management.

#### **JEFFERSON COUNTY UNIFIED DEVELOPMENT CODE - STORMWATER REGULATIONS**

☐ The Comprehensive Plan goals and policies are implemented through the Jefferson County Unified Development Code (UDC). The UDC contains development regulations and performance standards, including Sections 6.6 Grading and Excavation Standards and 6.7 Stormwater Management Standards that establish standards for design and operation of stormwater management facilities to serve development projects.

The UDC adopts the technical standards of Ecology’s *Stormwater Management Manual for Western Washington*.

The UDC requires new developments to provide construction erosion and sediment control, detention or infiltration of stormwater runoff, and water quality treatment unless the development is below the thresholds set by the *Manual*.

The UDC also includes an Environmentally Sensitive Areas Overlay District to implement the Comprehensive Plan ESA policies. Development proposals must meet the ESA requirements of the UDC.