CHAPTER 3

STORMWATER REGULATIONS

3.1 INTRODUCTION

Regulations affecting stormwater management have been developed at the federal, State, County, and local levels. Federal regulations, administered by the Environmental Protection Agency (EPA), require stormwater from point sources to be permitted as part of the National Pollutant Discharge Elimination System (NPDES). The Washington Department of Ecology (DOE) is responsible for implementing EPA requirements for stormwater permits in Washington State. These current federal and State regulations will place increased burdens on local governments.

3.2 FEDERAL REGULATIONS

Pollutants in stormwater discharges from many sources are uncontrolled. Nationwide, up to 30 percent of recorded water quality problems are caused by stormwater discharges. Although pollutants found in stormwater primarily originate from nonpoint sources (such as runoff from streets and parking lots), as soon as the stormwater enters a ditch, pipe, or other conveyance system, the pollutants become defined as point sources (CFR 122.45). Federal regulation applies only to point source stormwater discharged to surface waters and storm sewers. Federal regulations are documented in the Federal Water Pollution Control Act and its amendments, the Clean Water Act of 1977 and the Water Quality Act of 1987.

To reduce water quality problems associated with stormwater discharges, Congress amended the Clean Water Act to require the EPA to control stormwater discharges through the National Pollutant Discharge Elimination System (NPDES) permit program. In response to this responsibility, the EPA adopted new permit regulations for stormwater (40 CFR, Parts 122, 123, 124). The goals of these new stormwater NPDES regulations are as follows:

- Stop the illegal discharge of wastewaters and other pollutants into storm sewers, which should be used only for stormwater and other legally permitted discharges.
- Reduce the amount of pollutants in stormwater.
- Establish a permit system for stormwater discharges by municipalities over 100,000 in population.
- Establish a permit system for stormwater discharged from industrial sites.

- Eliminate water quality standards violations caused by stormwater discharges.

3.2.1 PHASE I NPDES STORMWATER PERMITS

In 1990, the United States Environmental Protection Agency (EPA) set out 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 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, and runoff discharges operated by local governments with a population over 100,000.

3.2.2 PHASE II NPDES STORMWATER PERMITS

The United States Environmental Protection Agency (EPA) issued draft regulations for Phase II NPDES stormwater permits in January 1998 and issued final Phase II regulations on December 8, 1999. The EPA proposes to cover all urban areas, areas with populations greater than 10,000 or located in federally designated urbanizing areas, not initially covered by Phase I regulations under a Phase II general permit.

In the State of Washington, the Department of Ecology is the delegated authority to issue and administer NPDES permits to municipal and industrial point and nonpoint source discharges. Eighty municipalities and five counties will be subject to the requirements. Ecology is preparing a general permit that will cover all the Phase II communities. The draft permit was issued on May 15, 2005. The final draft permit will be available in October 2005. The final permit will be issued in March 2006.

The proposed regulations specify minimum requirements for the stormwater programs developed to comply with the Phase II permits. One of those requirements is the adoption of a program for "post-construction stormwater management in new development and redevelopment." Another is a program for "construction site stormwater runoff control."

The Town of Friday Harbor is not located in a federally recognized urban area and, as such, is not required at this time to obtain a Phase II permit. However, the Town of Friday Harbor is in compliance with many of the requirements of the Phase II permits. The Town has development ordinances in place and has adopted an earlier version of the Ecology Stormwater Management Manual.

3.2.3 ENDANGERED SPECIES ACT

In a rule published March 24, 1999, the National Marine Fisheries Service (NMFS) listed the Puget Sound Chinook as "threatened" under the Endangered Species Act (ESA). In addition, during the summer of 1999, the United States Fish and Wildlife Service (USFWS) listed the Bull Trout as "threatened" under the ESA. The Town of Friday Harbor is in the Evolutionary Significant Unit (ESU) for Chinook Salmon. The USFWS considers all of Washington to be Bull Trout habitat. ESA listings are expected to significantly impact activities that affect salmon and trout habitat, such as water use, land use, construction activities, and wastewater disposal. Impacts to the Town may include longer timelines for permit applications, more stringent regulation of construction impacts, and alteration of maintenance activities.

The purpose of the 1972 ESA is to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved…" In pursuit of this goal, 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 (although Bull Trout can also be anadromous), while 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 with the foreseeable future throughout all or a significant portion of its range." The ESA defines critical habitat as the "geographical area continuing physical and biological features essential to the conservation of the species."

The ESA Section 9 "take" prohibition applies to all "persons" including local public entities. State and local governments may face twin exposures through their direct conduct and through the exercise of the regulatory authorities over activities which themselves may "take."

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" has been interpreted by the federal courts to include "significant modification or degradation of critical habitat" that impairs essential behavior patterns. For species listed as endangered, the blanket prohibitions against "take" are immediate. However, threatened species may be protected through a more flexible Section 4(d) rule describing specific activities that are likely to result in a "take." The draft of the Section 4(d) rule prepared by NMFS was published in the Federal Register on January 3, 2000 (Federal Register, Vol. 65, No. 1). The final 4(d) rule was published in June 2000 and became effective 180 days after publication (50 CFR Part 223.203).

The 4(d) rules may exempt certain activities from "take" liabilities up front and thereby offer an alternative mechanism by which to secure relief from potential "take" liability.

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. NMFS published "A Citizen's Guide to the 4(d) Rule for Threatened Salmon and Steelhead on the West Coast" in June 2000. A copy of the guide is included in Appendix I. The guide introduces and explains the rule. The following summary is from the guide.

Section 4(d) requires NMFS to issue regulations deemed "necessary and admissible to provide for the conservation to the species." NMFS must establish protective rules for all species now listed as threatened under the ESA. The rules need not prohibit all take. There may be an "exception" from the prohibitions on take 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 can "limit" the situations to which the take prohibitions apply. By providing limitation from take liability, NMFS 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 have a significant potential to degrade habitat and injure or kill salmon and steelhead in a variety of ways. The 4(d) guide states that appropriate safeguards, MRCI development can be specifically tailored to minimize impacts on listed fish to the extent that additional federal protections would not be needed to conserve the listed ESU. 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. An MRCI development ordinance or plan ensures that development will avoid inappropriate areas such as unstable slopes, wetlands, areas of high habitat value, and similarly constrained sites.

2. An MRCI development ordinance or plan adequately prevents stormwater discharge impacts on water quality and quantity and stream flow patterns in the watershed – including peak and base flows in perennial streams.

3. An MRCI development ordinance or plan protects riparian areas well enough to attain or maintain Proper Functioning Condition (PFC), habitat that provided for the biological requirements of the fish, around all rivers, estuaries, streams, lakes, deepwater habitats, and intermittent streams.

4. An MRCI development ordinance or plan avoids stream crossings – whether by roads, utilities, or other linear development – wherever possible and, where crossings must be provided, minimize impacts.

5. An MRCI development ordinance or plan adequately protects historic stream meander patterns and channel migration zones and avoids hardening stream banks and shorelines.

6. An MRCI development ordinance or plan adequately protects wetlands, wetland buffers, and wetland function – including isolated wetlands.

7. An MRCI development ordinance adequately preserves permanent and intermittent streams' ability to pass peak flows.

8. An MRCI development ordinance or plan stresses landscaping with native vegetation to reduce the need to water and apply herbicides, pesticides, and fertilizer.

9. An MRCI development ordinance or plan contains provisions to prevent erosion and sediment runoff during (and after) construction and thus prevent sediment and pollutant discharge to streams, wetlands, and other water bodies that support listed fish.

10. An MRCI development ordinance or plan ensures that demands on the water supply can be met without affecting either directly or through groundwater withdrawals – the flows salmon need.

11. An MRCI development ordinance or plan provides mechanisms or monitoring, enforcing, funding, reporting, and implementing its program.

12. An MRCI development ordinance or plan complies with all other State and federal environmental and natural resource laws and permits.

Currently, however, there are no regulations, ordinances, or policies identified in the 4(d) rule that provide blanket coverage for municipal, residential, commercial, or industrial development or municipal maintenance activities within Washington State.

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 listed species, including adverse modification of critical habitat. Possible regulatory impacts may include the following:

- Adopt model critical areas ordinance designed to protect critical habitat. Model ordinances are expected to be prepared by a State agency.

- 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 GMA comprehensive plans to require an "environmental protection element."
- Adopt stormwater operation and maintenance ordinances requiring regular, frequent maintenance of stormwater facilities.
- Increase inspection and enforcement of stormwater best management practices.
- Require monitoring of best management practices.
- Implement stormwater utilities to provide adequate funding of stormwater infrastructure.
- Amend Shoreline Master Programs to encourage greater use of conservancy and natural designations, and limit conversion of agricultural and forest land.

It should be noted that the ESA includes a third-party citizen suit provision. Compliance with the Section 4(d) rule does not, therefore, rule out legal challenges, although it is likely to provide greater protection from successful litigation.

3.3 STATE REGULATIONS

The principal state programs already in existence that relate to stormwater include the *Puget Sound Water Quality Management Plan*, municipal NPDES stormwater permits, the Growth Management Act, the Shorelines Management Act, and Hydraulic Project Approvals.

3.3.1 PHASE I NPDES AND STATE WASTE DISCHARGE STORMWATER PERMITS FOR MUNICIPALITIES

The Washington Department of Ecology is responsible for implementing EPA requirements for stormwater permits in Washington State. The Town of Friday Harbor does not fall under the requirements of the Phase I permits. Phase I permits cover the large metropolitan areas of Clark County, King County, Pierce County, Snohomish County, Seattle, and Tacoma. The Washington State Department of Transportation is also a Phase I municipal stormwater permittee for its stormwater discharges within the jurisdiction of the above cities and counties. These permittees are required to implement stormwater programs that must include ordinances (except WSDOT's program), minimum requirements, and best management practices (BMPs) equivalent to those

found in Volumes I through IV of Ecology's *Stormwater Management Manual for the Puget Sound Basin* (2005 edition and as amended by its replacement).

3.3.2 PHASE II NPDES AND STATE WASTE DISCHARGE STORMWATER PERMITS FOR MUNICIPALITIES

The EPA adopted Phase II stormwater regulations in 1999. As discussed in the earlier section on federal Phase II permits, the Department of Ecology has been delegated the authority of issuing and enforcing the Phase II permits. Those rules identify additional municipalities as subject to NPDES municipal stormwater permitting requirements. At this time 80 municipalities and 5 counties will be subject to the requirements. The Town of Friday Harbor is not in an urbanizing area and, at this time, will not be included in the Phase II permits.

The proposed regulations specify minimum requirements for the stormwater programs developed to comply with the Phase II permits. One of those requirements is the adoption of a program for "post-construction stormwater management in new development and redevelopment." Another is a program for "construction site stormwater runoff control."

To at least partially fulfill these requirements, Ecology intends to require the Phase II municipalities to adopt ordinances, minimum requirements, and BMPs equivalent to those in the updated Ecology Manual (*Stormwater Management Manual for Western Washington*, 2005).

3.3.3 THE PUGET SOUND WATER QUALITY MANAGEMENT PLAN

The Puget Sound Water Quality Management Plan calls on local governments in the Puget Sound Basin to develop comprehensive stormwater management programs. The goal of the program is to protect and enhance the health of Puget Sound's aquatic species and habitat, natural hydrology and processes, and water quality, and to achieve standards for water and sediment quality by managing stormwater runoff and reducing combined sewer overflows.

Local Government Planning and Stormwater Programs (SW-1)

The following items are specific recommended components for local government planning and stormwater programs designed to protect water quality.

> ***SW-1.1. Growth Management Planning.*** *Every city and county required to plan under the Growth Management Act (GMA) shall review and revise, as necessary, county-wide planning policies, local comprehensive plans and policies, zoning, capital facilities plans, and development regulations to ensure that development does not degrade water quality, aquatic species and habitat, and natural hydrology and processes.*

SW-1.2. Comprehensive Stormwater Programs for Cities and Counties. *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 efficiently.*

a. Stormwater Controls for New Development and Redevelopment – Adopt ordinances that require the rise 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.

Stormwater Technical Manual (SW-2.1)

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.

Ecology prepared the 1992 Stormwater Management Manual for the Puget Sound Basin in response to the requirements of the 1991 Puget Sound Water Quality Management Plan. Ecology prepared a new manual, *Stormwater Management Manual for Western Washington*, in 2001 to incorporate the latest "best available science" methodology for water quality control. The *Stormwater Management Manual for Western Washington* was updated in 2005.

Cities and counties are to adopt ordinances and manuals that are substantially equivalent to the Ecology requirements. The Town of Friday Harbor, with the passage of Ordinance No. 1038, Stormwater Technical Manual, effective January 1, 1998, adopted the 1992 Department of Ecology *Stormwater Management Manual for the Puget Sound Basin* or latest version and all amendments and additions thereto. Ordinance No. 1038 does not confer automatic adoption of the 2005 Ecology *Stormwater Management Manual for Western Washington*.

3.4 COUNTY REGULATIONS

San Juan County, per the Unified Development Code for San Juan County, requires all new development to conform to the standards and minimum requirements set by the Washington Department of Ecology *Stormwater Management Manual for the Puget Sound Basin 1992* or as amended, as the technical manual which directs erosion control and stormwater quality and quantity control from new development.

3.5 TOWN REGULATIONS

The Town of Friday Harbor regulates stormwater management through the Stormwater Technical Manual, adopted by Ordinance #1038. The Manual contains policies for the management of stormwater from new development and redevelopment and for the operation and maintenance of stormwater facilities. The Technical Manual is included as Appendix A. The Town requires all new development in the Town, which meets the threshold for large parcel development, to provide detention for stormwater runoff from the site, such that post-development runoff from the 10-year, 24-hour, and 100-year, 24-hour storm events match the pre-development 10-year, 24-hour, and 100-year, 24-hour storm event runoff, respectively. In addition, parcels which are tributary to areas identified in this Plan where the existing stormwater conveyance capacity is inadequate to convey the existing 2-year storm event peak flow would also be required to provide detention adequate to match the 2-year, 24-hour pre-developed condition.

Projects tributary to the following conveyance systems are required to meet the 2-year detention requirement:

Basin No. 2	Frank Street Linder Street Nelson Street Hunt Street “C” Street
Basin No. 4	Argyle Avenue Caines Street Spring Street Price Street Blair Avenue Park Street Reed Street Second Street First Street Court Street
Basin No. 7	Carter Street north of Harbor Street

Portions of the drainage system in Basin No. 4 have been upgraded since the adoption of the Town's Technical Manual. The need for detention of the runoff expected for the 2-year, 24-hour storm event are no longer required for projects located on Spring Street north of First Street, First Street from West Street to Spring Street, and from Spring Street to A Street.

In addition, the design of detention BMPs must include a volume factor of safety as discussed in the DOE Stormwater Management Manual. The factor of safety is dependent on the percentage of total area that is impervious, which is contributing flow to the BMP.

The Stormwater Technical Manual names the Department of Ecology, *Stormwater Management Manual for the Puget Sound Basin,* 1992, or latest version and all amendments and additions thereto, as part of the Town's technical manual. This manual is a comprehensive technical support document for implementing erosion and sedimentation control facilities and stormwater quality and quantity control on development sites.

3.6 WASHINGTON STATE DEPARTMENT OF TRANSPORTATION REGULATIONS

The Washington State Department of Transportation (WSDOT) owns and operates the ferry terminal located in downtown Friday Harbor. WSDOT stormwater management policies are stated in the 1995 *Highway Runoff Manual.* The *Highway Runoff Manual* establishes minimum requirements and provides technical, uniform guidance for the avoidance and mitigation of water resource impacts of the highway system. *The Highway Runoff Manual* requires water quality treatment of stormwater runoff from impervious surfaces created after the effective date of the manual. The manual does not require quantity control for projects, which discharge directly to saltwater.

3.7 JURISDICTIONAL COORDINATION

The main purpose of stormwater management is to improve surface water quality. For many communities, this may be accomplished by passage of ordinances or the adoption of Capital Improvement Plans, which address local problems. In the case of Friday Harbor, such a simplistic approach would only deal with a part of the problem. As illustrated in Figure 2-5, a large portion of unincorporated San Juan County drains into Friday Harbor just north of Town. This drainage basin is more than three times greater in size than the Town of Friday Harbor and has a great impact on the water quality of the harbor. Coordination between the Town and the County is necessary to provide the best protection for Friday Harbor. Coordination between the Town and the County may be in the form of similar development regulations, the development of a basin plan, and cost sharing of necessary facilities.

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