

# Chapter 17

## State and Federal Regulatory Details

The City of Ferndale’s surface water program must comply with a number of state and federal regulations that are pertinent to stormwater. A detailed review of the existing federal, state, and city policies, regulations, and ordinances relevant to stormwater management is presented in this chapter.

### Federal Regulations

#### **Endangered Species Act**

#### **17.1**

The Endangered Species Act (ESA) became relevant to local stormwater programs in 1999 when the National Marine Fisheries Service (NMFS) listed as “threatened” several species of salmonid fish, including the Puget Sound Chinook salmon and Bull Trout (native char) that use streams and rivers draining into Puget Sound.

This report discusses salmonids and certain forage fish that are priority species and are known to occur in City of Ferndale stream systems. More information on other species, including birds, shellfish, and marine fish, is included in the 2005 update to the Ferndale Comprehensive Plan.

#### **Endangered Species Act Background – 17.1.1:**

When evaluating the City’s stormwater program, it is important to be aware of how the ESA (as it relates to fish species) can impact the City’s activities. Puget Sound and its tributary streams in the vicinity of the City of Ferndale provide habitat, or may provide habitat, for aquatic species listed as threatened or endangered under the Endangered Species Act of 1973. The ESA prohibits killing or harming any endangered species in any way, including significant modification of critical habitat for that species. The ESA requires federal agencies to develop programs to conserve endangered and threatened species and assist in species recovery. Under the ESA, a species likely to become extinct in the foreseeable future is categorized as “endangered,” while one likely to become endangered unless action is taken is categorized as threatened.

The ESA is jointly administered by the Secretaries of the Department of Commerce (DOC) and the Department of the Interior (DOI) (16 USC 1532 [15]). The National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), an agency under the DOC, is responsible for marine species including anadromous fish, some sea turtles, and marine mammals. (Until recently, NOAA Fisheries was known as the National Marine Fisheries

Service, or NMFS.) The U.S. Fish and Wildlife Service (USFWS), an agency under the DOI, is responsible for terrestrial species and resident aquatic species.

Although the ESA is a federal statute, its implementation can affect local jurisdictions and their citizens in several ways. A listing can potentially affect a wide variety of activities including, but not limited to, stormwater management practices, infrastructure improvements, land use planning, maintenance of existing facilities, and private development proposals.

The body of federal legislation that is commonly termed the “Endangered Species Act” is comprised of 11 sections, six of which are commonly referenced in relation to regulatory actions. These are:

- Section 4: Determination of Endangered and Threatened Species
- Section 6: Cooperation with States
- Section 7: Interagency Cooperation
- Section 9: Prohibited Acts
- Section 10: Exceptions
- Section 11: Penalties and Enforcement.

The following describes these six sections of the ESA.

- **Section 4: The 4(d) Rulemaking Process:** Following the listing of several species of salmonid fish, the NMFS developed protective regulations for conservation of species, known as the “4(d) rule”. The 4(d) rule prohibits “take” (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt any of these things) of the 14 groups of salmon and steelhead listed as threatened under the ESA listed species. The 4(d) rule prohibits killing or injuring protected species without specific authorization. It does not apply this prohibition where programs adequately protect fish. The rule does not prohibit actions, it prohibits killing or injuring protected species. NOAA adopted the rule in July of 2000, and it became effective on January 8, 2001.

In addition to the 4(d) rule, the ESA provides a variety of tools for saving species threatened with extinction. Under Section 7 of the ESA, no federal agency may fund, permit, or carry out any activity that will jeopardize their continued existence. Projects that require a federal permit or have federal funding must go through a “consultation” with NOAA Fisheries (for salmon and steelhead) or the USFWS (for bull trout). This “consultation” is to make sure that the project will adequately limit any impacts and qualify for an “incidental” take of listed species. Another tool, under Section 10 of the ESA, allows NOAA Fisheries to issue incidental take permits for specific activities such as research that usually do not apply to a municipality.

Under Section 4(d), the ESA requires that activities of state and local governments, tribes, and private citizens be controlled so they do not lead to extinction of listed species. To comply with this, NOAA Fisheries has established protective rules for threatened species. The rules need not prohibit all “take,”

however. The 4(d) rule can “limit” the situations to which the take prohibitions apply. But NOAA Fisheries offers 4(d) “limits” only for those programs or activities that will not impair properly functioning habitat of listed species. In accordance with this provision, NOAA Fisheries has established 13 general categories of programs that can qualify for 4(d) limits on the take prohibitions. NOAA Fisheries will evaluate programs under these 13 categories that wish to be granted a 4(d) limit on take prohibitions.

The ESA does not directly require jurisdictions to change their practices to conform to the take limits described in the final rule. The take limits provide a way for jurisdictions to make sure an activity or program does not violate the take prohibitions. Without this assurance, jurisdictions would risk ESA penalties when an activity in question is determined to result in a take of a listed fish.

The 4(d) rule also provides a list of activities that have a high risk of resulting in a “take” of the listed threatened or endangered salmonids. The following list includes items that the 4(d) rule has determined are likely to result in injury or harm to listed salmonids. City design standards should prohibit:

- Construction of structures like culverts, berms, or dams that eliminate or impede a listed species’ ability to migrate or gain access to habitat
- Removal, addition, or alteration of rocks, soil, gravel, vegetation, or other physical structures that are essential to the integrity and function of a listed species’ habitat
- Construction of dams or water diversion structures with inadequate fish screens or passage facilities
- Construction of inadequate bridges, roads, or trails on stream banks or unstable hill slopes adjacent to or above a listed species’ habitat
- Removal of water or otherwise altering streamflow in a manner that significantly impairs spawning, migration, feeding, or other essential behavioral patterns
- Operations that substantially disturb soil and increase the amount of sediment going into streams.

The following list includes items that should be included in the City’s regulations so that these activities that the 4(d) rule has determined are likely to result in injury or harm to listed salmonids would be illegal.

- Discharge of pollutants, such as oil, toxic chemicals, radioactivity, carcinogens, mutagens, teratogens, or organic nutrient-laden water (including sewage water) into a listed species’ habitat is prohibited.
- The release of non-indigenous or artificially propagated species into a listed species’ habitat or into areas where they may gain access to that habitat is prohibited.

The 4(d) rule has determined that the following maintenance-related items are likely to result in injury or harm to listed salmon. The City’s maintenance program should not:

- Maintain structures like culverts, berms, or dams if maintenance eliminates or impedes a listed species’ ability to migrate or gain access to habitat
- Remove, poison, or contaminate plants, fish, wildlife, or other biota that the listed species requires for feeding, sheltering, or other essential behavioral patterns
- Remove, add, or alter rocks, soil, gravel, vegetation, or other physical structures that are essential to the integrity and function of a listed species’ habitat
- Remove water or otherwise alter streamflow in a manner that significantly impairs spawning, migration, feeding, or other essential behavioral patterns
- Operate dams or water diversion structures with inadequate fish screens or passage facilities
- Maintain or operate inadequate bridges, roads, or trails on stream banks or unstable hill slopes adjacent to or above a listed species’ habitat.

Chinook salmon in Puget Sound were federally listed as threatened species by the National Marine Fisheries Service in March 1999. Bull trout in Puget Sound and coastal waters were listed as threatened species by the U.S. Fish and Wildlife Service in October 1999, and Coho salmon are currently candidate species in the Puget Sound.

- **Section 6: Cooperation with States:** Although Section 6 is titled “Cooperation with States,” the law only requires agencies to “cooperate to the maximum extent practicable” with the states. Such cooperation includes “consultation with the states concerned before acquiring any land or water, or interests therein, for the purpose of conserving any endangered species or threatened species” (16 USC 1535[a]). The ESA does not require the federal government to delegate any authority to state or local governments concerning the conservation or recovery of listed species, although provisions for this are made in Section 10 of the ESA (described later in this section).
- **Section 7: Federal Responsibilities:** This section requires the federal government and its agencies to conserve listed species and to ensure that any projects or actions it authorizes, funds, or implements are not likely to jeopardize listed species or destroy or adversely modify their critical habitat. Under Section 7, the federal agency with permit or funding authority must review a project to determine if the project “may affect” a listed species (50 CFR 402.07). If a project is determined to affect a listed species, the federal agency must consult with the

USFWS or NOAA Fisheries (or both), depending on the species (50 CFR Section 402.14). An informal or “conference” process is required if a project may affect a proposed species (50 CFR 402.13). Section 7 requires the preparation of a Biological Assessment (BA) (also termed Biological Evaluation, or BE) for projects with a federal link or “nexus” to determine what, if any, effects the project or action may have on a listed species (50 CFR 402.12). A BA/BE may also be required for species that are proposed for listing, but are not yet formally listed. At this time, coho is a candidate species in the Puget Sound region.

The purpose of a BA/BE is to review the biological requirements of a listed species to determine potential effects of the project or action on those species (50 CFR 402.12). After the consultation process is complete, the USFWS or NOAA Fisheries will issue a Biological Opinion (BO) (50 CFR 402.15). The BO will determine if the project or action would result in “jeopardy” or the destruction or modification of critical habitat (50 CFR 402.14[h][3]). If a project or action is determined to affect a species that has been proposed for listing, the federal lead agency must complete an informal consultation with either the USFWS or NOAA Fisheries, but the results of the subsequent conference is non-binding.

Section 7 consultation is only required for projects that may lead to construction. If a local construction project has a federal nexus, either through federal funding or a requirement for a federal permit, review of that action will be necessary under Section 7. Common federal permits or actions requiring review under Section 7 include:

- National Environmental Policy Act (NEPA) reviews for proposed construction projects
- Corps of Engineers Clean Water Act Section 10 and Section 404 permits
- Funding for construction projects derived from a federal source.

Funding does not have to be in the form of a direct grant from a federal agency. Many types of grant programs are administered by state or local agencies, but these programs often include full or partial federal funding. Such programs include urban development block grants, clean water programs, and most forms of transportation funding.

- **Section 9: Prohibition of “Take:”** Under Section 9 of the ESA, individuals and groups within U.S. jurisdiction are specifically prohibited from “taking” or otherwise harming a listed species (16 USC 1538 [a][1][b]). “Take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct,” any fish, wildlife, or plant that has been listed as threatened or endangered (16 USC 1532 [19]). Subsequent interpretation and clarification by federal courts and agencies have expanded “harm” to include indirect actions which may result in the death or injury of protected species

including significant habitat modification which may impair “essential behavior patterns, including breeding, feeding, or sheltering” (50 CFR 17.3).

Whereas the Section 7 process, as stated in the law (16 USC 1536) and implementing regulation (50 CFR 402), includes specific instructions and requirements for review by federal agencies, Section 9 simply states “with respect to any endangered species of fish or wildlife listed pursuant to [Section 4 of the ESA] it is unlawful for any person subject to the jurisdiction of the United States to take any such species within the United States or the territorial sea of the United States” (16 USC 1538[a][1][b]). While Section 9 arguably includes a much broader range of prohibited actions by simply prohibiting take, unlike Section 7, the language of Section 9 does not include a parallel process by which take is evaluated and adjudicated. To deal in part with the ambiguity, the 4(d) rulemaking process often includes criteria that NOAA Fisheries or USFWS will use in determining what constitutes “take.”

- **Section 10: State and Local Involvement:** Although the ESA does not require the federal government to impart any authority to state or local governments or private parties concerning the conservation or recovery of listed species, the recent policy of federal agencies has been to provide state and local governments and large private landowners the opportunity to develop and implement their own protection and conservation measures. These are accomplished through voluntary, although legally binding, agreements provided for under Section 10 of the ESA (16 USC 1530). The types of agreements allowed under Section 10 include candidate Conservation Agreements, Safe Harbor Agreements, and Habitat Conservation Plans (HCPs). These plans can provide specific legal protection for actions not included as exemptions under 4(d) rules, but these agreements require a significant amount of coordination and legal efforts to implement.
- **Section 11: Third-Party Lawsuits:** Section 11 of the ESA specifically enables “citizen suits” for the purpose of: (1) enjoining a person or agency alleged in violation of any provision in the ESA; (2) compelling federal agencies to list a specific species; and (3) compelling the government to enforce protective measures upon the listing of a species (16 USC 1540 [g][1]). In addition, Section 11 provides specific penalties for violations of the ESA including civil fines and criminal judgments (16 USC 1540 [a] and (16 USC 1540 [b], respectively).

**City Response to Endangered Species Act – 17.1.2:**

ESA-regulated species occurring or having the potential to occur in the vicinity of the City of Ferndale, as indicated in ESA Section 4 including several runs of chinook salmon have been documented in the Nooksack River.

The City of Ferndale Critical Areas Map on the following page graphically shows the location of critical creeks, streams, and waterways.

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**“CITY OF FERNDALE  
CRITICAL AREAS MAP”**

The City of Ferndale will continue to develop policies, programs and operating procedures that will aid in conservation and recovery of the salmon species listed above, as well as address other environmental considerations such as water quality. In particular with the adoption of this plan the City of Ferndale will be taking action sufficient to achieve 4(d) protection in regards to stormwater management. The City of Ferndale’s proposed stormwater management program elements are listed in table 17.1 below. The stormwater elements are very similar to the elements required under Puget Sound Water Quality Management Plan (PSWQMP) and the anticipated requirements under NPDES Phase II. Each of these elements is addressed in greater detail throughout this document.

Table 17.1 STORMWATER PROGRAM ELEMENTS
Technical Standards
Inspection and Enforcement
Maintenance Standards/Programs
Source Control
Illicit Discharge Reduction
Public Education
Public Involvement/Outreach
Intergovernmental/Intragovernmental Coordination
Monitoring
Stormwater Planning
Capital Improvement Programs
Land Use Decisions/Regulations
Habitat Enhancement/Rehabilitation
Habitat Acquisition

**County Response to Endangered Species Act – 17.1.3:**

At the time when ESA listings of threatened fish species occurred, it was recognized by all levels of government that planning and regulatory activities in the region needed to be re-evaluated. In addition, development and business interests began to inquire as to how this listing would affect them. To prepare a response to the listings that would attempt to consider all public and private needs in a coordinated fashion, several different planning and analysis efforts were begun. The following section presents a brief description of ESA response activities that are currently underway and could affect stormwater planning in the City of Ferndale.

As a response to the federal Endangered Species Act listings of Chinook salmon and Bull Trout (native char) Whatcom County established a program to aid in the recovery of salmon in Whatcom County. There are four pieces to this program area:

- Whatcom County participates in salmon recovery and watershed management planning for the Nooksack River and adjacent streams.
- Whatcom County coordinates the local citizen stakeholder process and project grant applications for salmon recovery funding.

- Technical assistance on salmon habitat recovery is provided to other Public Works divisions, to county departments, and to the public and private projects that are implemented via a Whatcom County funded Washington Conservation Corps Crew that employs 6 young people in daily salmon recovery project activities.
- Salmon recovery oriented public outreach and education remains an ongoing focus for Whatcom County Water Resources Staff.

According to the Whatcom County website, the Lummi Nation and Nooksack Tribe, City of Bellingham and other local governments, state and federal agencies, non-profit organizations, and the public together with Whatcom County are working on a long-term strategy to ensure the protection and restoration of healthy salmon populations. The local plan developed to recover salmon in Whatcom County will "roll-up" into the regional salmon recovery plan known as the Shared Strategy for the Recovery of Puget Sound Salmon. The "Shared Strategy" will become the official ESA recovery plan when it is completed over the next several years. Whatcom County is also participating in the development of the watershed management plan that will guide water resource management in Whatcom County into the future. Salmon habitat recovery is intricately linked to, will be affected by, and will be most successful if salmon recovery objectives are carefully coordinated with watershed management plan objectives. Whatcom County plays a pivotal role in developing these planning linkages and implementation strategies.

The City of Ferndale, along with the Nooksack Tribe, Lummi Nation, City of Everson, Lynden, Sumas, Nooksack, Blaine, and Bellingham; and Skagit and Whatcom counties, have passed a resolution naming Whatcom County the Lead Entity for the purpose of the state Salmon Recovery Act (also known as the ESHB 2496) process. The central focus is to organize and support the local piece of the Salmon Recovery Funding Board grant application process, the main source of salmon recovery funding. Project applicants are guided by a habitat restoration strategy developed jointly by Water Resources, Nooksack Natural Resources, Lummi Natural Resources, Washington Department of Fish and Wildlife, and the City of Bellingham. The strategy guides technical and citizen project review. The Salmon Habitat Restoration Citizen Advisory Committee appointed by the County Executive does the latter. The creation of a habitat project list and work schedule is also a lead entity core responsibility and has been accomplished in partnership with the Nooksack Recovery Team (NRT). The NRT is a broad-based non-profit group coordinating salmon recovery projects and resources in Whatcom County since 1994.

While Whatcom County must clearly plan and operate within the context of a general statewide recovery plan and the applicable regulatory sections of the ESA, the county and others are not waiting for completion of a recovery plan to implement a meaningful local response. The Governor's Salmon Recovery Office issued The Statewide Strategy to Recover Salmon - Extinction is Not an Option to provide statewide guidance for salmon recovery. Local salmon habitat and population information has been gathered by the Lummi Nation, Nooksack Tribe, Washington Department of Fish and Wildlife, and others. With this background information as guidance, Whatcom County is committed to an emphasis on non-regulatory approaches to protecting and restoring salmon habitat while recognizing that regulatory options is appropriate and necessary in certain circumstances.

The Washington Conservation Corps crew funded by Whatcom County is a good example of a proactive and voluntary approach to salmon recovery. The six-member crew is coordinated by the Nooksack Salmon Enhancement Association and works mostly with landowners who voluntarily want to restore streamside vegetation and salmon habitat. The crew also works on public ownership when the need arises and are available to the City of Ferndale to help out in emergencies such as flooding. The crews bring a lot of welcome youthful enthusiasm to their labors.

The annual Nooksack Recovery Team Salmon Summit is a day of presentations, displays, and dialog about the over 500 salmon recovery projects completed or underway in Whatcom County and provides a forum to learn from the partnerships involved. As part of an effort to coordinate with other local agencies, the City of Ferndale will participate in the annual Summit.

# National Pollutant Discharge Elimination System (NPDES)

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17.2

## **Federal Stormwater Management Policy – 17.2.1:**

Congress amended the federal Clean Water Act (CWA) to address stormwater discharge and to further protect our nation's streams, rivers, and beaches from polluted stormwater runoff. Federal regulations established two phases for the stormwater permit program which require controls to reduce stormwater pollutant discharges to the maximum extent practicable. In 1990, the NPDES Phase I Rule was adopted, which addressed priority sources of pollutant runoff, including stormwater pollution from medium and large Municipal Separate Storm Sewer Systems (MS4s), industrial sources, and construction sites. In 1999, the Phase II rule was adopted which extended coverage of the National Pollutant Discharge Elimination System (NPDES) program to certain "small" municipal separate stormwater sewer systems (MS4s) not covered under Phase I that are part of urbanized areas, plus construction activities of between one and five acres.

## **NPDES Phase II Objectives – 17.2.2:**

The EPA's objectives in developing the Phase II regulations include:

- Providing a comprehensive stormwater program that designates and controls additional sources of stormwater discharges to protect water quality, pursuant to CWA Section 402 (p)(6)
- Addressing discharges of stormwater from activities not addressed by Phase I, including:
  - All construction site activities involving clearing, grading, and excavating land equal to or greater than one acre (including projects that are comprised of several sites of less than one acre each)
  - "Light" industrial activities not exposed to stormwater (light industrial activities exposed to stormwater are covered under Phase I)
  - MS4s located in urbanized areas not covered under Phase I
  - Municipally owned industrial facilities that were addressed under Phase I but granted an extension under ISTEA (Intermodal Surface Transportation Efficiency Act)
- Facilitating and promoting watershed planning as a framework for implementing water quality programs wherever possible.

EPA aims to achieve these objectives by balancing nationwide automatic designation and locally based designation. EPA will designate, on a nationwide basis, that the NPDES Phase II rule is applicable to the following:

- Stormwater discharges from small MS4s located in urbanized areas
- Construction activities that result in land disturbance equal to or greater than one acre.

EPA believes that these designation criteria address the main sources of stormwater pollution causing significant degradation of surface waters. Permitting authorities (Ecology, in Washington State) may designate additional Phase II permittees, such as additional small MS4s and categories of individual sources of stormwater discharges that are problematic in specific communities.

### **NPDES Phase II State Permitting Authority – 17.2.3:**

The State of Washington is authorized to administer the federal NPDES program and Ecology is the state agency with responsibility for the following:

- Issuing NPDES permits
- Issuing the menu of appropriate BMPs in cases of general permits
- Supporting local programs by:
  - Overseeing programs
  - Ensuring municipalities have adequate legal authority
  - Providing technical assistance
- Providing waivers for some or all permit requirements.

Ecology has stated that it will issue one general permit for all Phase II permittees that will describe permit conditions for all small MS4s in order for them to be in compliance with the federal NPDES Phase II Rule.

According to the federal rule, the NPDES permitting authority (Ecology) was supposed to issue a final general permit by December 8, 2002. Based on recent conversations with Ecology, the expected date for issuance of the final general permit is between fall 2003 and fall 2004. The expiration date of the first permit term for the general permit will be five years after its issuance.

The federal rule specifies that the regulated MS4 programs, described in this case in Ecology's general permit, must be developed and implemented within the first five-year permit term.

### **NPDES Phase II Stormwater Requirements – 17.2.4:**

Stormwater Management Requirements for entities affected by the NPDES Phase II Rule are as follows:

- **For MS4s:** The EPA requires, under the Phase II regulation, that all owners/operators of small MS4s reduce the discharge of pollutants from a regulated system to the “maximum extent practicable” to protect water quality (Federal Register Vol. 63, p. 1574). At a minimum, jurisdictions regulated under Phase II must:
  - Specify BMPs for six minimum control measures and implement them to the “maximum extent practicable”
  - Identify measurable goals for control measures
  - Show an implementation schedule of activities or frequency of activities
  - Define the entity responsible for implementation.
- **For Construction and Other Activities:** Construction activities that disturb one to five acres must also be regulated under an NPDES Phase II permit. The NPDES permitting authority may also require that other facilities and industrial and construction activities, as well as small MS4s outside urbanized areas, be designated on a case-by-case or categorical basis.

Each of these requirements is discussed in more detail in the following section:

### **BMPs for Six Minimum Control Measures – 17.2.5:**

Six minimum control measures have been established by the EPA that must be included in a Phase II stormwater program to protect water quality.

1. Public Education and Outreach
  - A public education program must be implemented to distribute educational materials to the community.
  - The community should be made aware about the impacts of stormwater discharges to water bodies and the steps needed to reduce stormwater pollution.
  - Municipalities are encouraged to work with other governmental entities and civic, environmental, and industrial organizations to develop an education/outreach program more efficiently.
2. Public Participation/Involvement
  - The public must be involved in developing the municipality’s stormwater program by following applicable state, tribal, and local public notice requirements.
  - All economic and ethnic groups should be included.
  - Examples of public involvement/participation that should be considered include public hearings, citizen advisory boards, and working with citizen volunteers.
3. Illicit Discharge Detection and Elimination

- The goal of this control measure is for the Phase II MS4 permittee to demonstrate awareness of its system, using maps or other existing documents.
  - Phase II MS4 permittees must develop a storm sewer system map, showing the location of all outfalls and the names and location of all waters that receive discharges from those outfalls;
  - Through ordinance or other regulatory mechanism, effectively prohibit non-storm water discharges into storm sewer systems and implement appropriate enforcement procedures and actions;
  - Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping; and,
  - Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
4. Construction Site Runoff Control
- Phase II MS4 permittees must develop, implement, and enforce a program to reduce nonpoint source pollution from construction sites with a land disturbance of more than one acre.
  - A regulatory mechanism must be used to control erosion and sediment from applicable construction sites to the maximum extent practicable and allowable under state, tribal, or local law.
  - Existing erosion and sediment control ordinances may suffice, if approved by the NPDES permitting authority.
5. Post-Construction Runoff Control
- Phase II MS4 permittee must develop, implement, and enforce a program that addresses stormwater runoff from new development and redevelopment projects that result in land disturbances of at least one acre and that discharge to their MS4.
  - Appropriate structural and non-structural BMPs must be used.
  - Controls must ensure that water quality impacts are minimized.
  - Adequate long-term operation and maintenance of BMPs connected to a regulated MS4 must be addressed.
  - The goal, at a minimum, should be to maintain pre-development runoff conditions.
  - EPA encourages the use of preventive measures, including non-structural BMPs, which are usually thought to be more cost-effective.
6. Pollution Prevention/Good Housekeeping
- Phase II MS4 permittees must develop and implement cost-effective operation and maintenance, as well as training programs, with the goal of preventing or reducing pollutant runoff from municipal operations.

The federal rules identify two additional standards with which an operator of a regulated MS4 must comply:

- 7. Fulfillment of requirements of an approved TMDL (water-cleanup plan).
- 8. Record keeping, evaluation, and reporting on the progress of the program.

**Measurable Goals for Control Measures – 17.2.6:**

The requirement allowing each permittee to identify its own measurable goals for each control measure is unique to Phase II. Communities regulated under Phase I were subject to more prescriptive compliance requirements. Examples of measurable goals include:

- Inspecting or repairing a certain number of drain inlets each year
- Conducting street-sweeping operations a certain number of times each year
- Inspecting municipal right-of-ways to identify illicit discharges
- Conducting a certain number of training classes for municipal operations each year
- Reporting the help of a certain number of volunteers each year to perform water quality monitoring or education/outreach activities

**Implementation Schedule of Activities – 17.2.7:**

Regulated communities must show an implementation schedule of activities or frequency of activities that will be done as part of the stormwater management program. An example might include the following entries:

Sweep City streets	X times per year
Vacuum storm drain inlets	Y times per year
Conduct classroom stormwater education	Z times per year

**Entity Responsible for Implementation – 17.2.8:**

Regulated communities must also indicate who is responsible for the stormwater management program. There must be one entity or person responsible for the entire program.

The Phase II regulations are amenable to creative implementation strategies, as they encourage communities to take a watershed or cooperative approach. Communities may also be covered under a neighboring Phase I community, or allow another entity, such as a county, to implement certain minimum control measures or portions of minimum control measures. The regulated entity, however, is still responsible for complying with the requirements of the permit.

**Phase II Process – Small MS4 Communities – 17.2.9:**

A general permit will most likely be issued by Ecology to cover Phase II MS4s in Washington, although the timeframe is currently unknown. Permittees will need to submit a permit application to Ecology to be covered under a general permit. As part of this application, an applicant may be required to identify and submit the following information:

- The BMPs that will be implemented
- The measurable goals for the minimum control measures

- The month and year in which each BMP will be started and completed or the frequency of action if it is ongoing
- The person(s) responsible for implementing or coordinating the stormwater management program.

### **Phase II Regulated Construction Site – 17.2.10:**

Under the Phase I program, for land-disturbing activities greater than five acres, a Notice of Intent (NOI - also known as construction stormwater general permit) was required for coverage under a general construction permit. For the Phase II Rule, EPA is not specifying NOI requirements for construction sites of between one and five acres applying for coverage under a general permit. While EPA recognizes the benefit of NOIs—which allow for better outreach and dissemination of information—federal regulators are sensitive to the burden being placed on the regulated community and on the NPDES regulators. Therefore, it is up to Ecology, as the NPDES permitting authority, to determine whether it will require NOI submission for construction sites disturbing less than five acres. Ecology is currently revising its construction stormwater general permit and is expected to require an NOI for sites disturbing one to five acres. Ecology has not announced a date on which the permit will be reissued. The NOI for construction projects disturbing greater than five acres can be used to obtain coverage for smaller projects in the interim.

### **Phase II Industrial Stormwater Permit – 17.2.11:**

Industrial sites requiring permits, as determined by standard industrial classification (SIC) codes, are required to obtain an NPDES permit for industrial activities.

### **Phase II Ongoing Requirements – 17.2.12:**

Under the Phase II rule, regulated communities must conduct periodic evaluations and assessments of their stormwater management practices, maintain records, and prepare required reports. These requirements are summarized in 17.2 below:

**Table 17.2  
NPDES Phase II Minimum Reporting Requirements**

<b>Evaluation and Assessment Requirements</b>	<b>Recordkeeping Requirements</b>	<b>Reporting Requirements</b>
<ul style="list-style-type: none"> <li>▪ Evaluate program compliance</li> <li>▪ Evaluate the appropriateness of identified BMPs</li> <li>▪ Evaluate progress toward achieving measurable goals</li> <li>▪ The NPDES permitting authority may determine monitoring requirements appropriate to your watershed. EPA encourages participation in a group monitoring project.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Keep records required by the NPDES permitting authority for at least three years.</li> <li>▪ Submit the records when requested by the permitting authority.</li> <li>▪ Make records and stormwater management plan accessible to the public during regular working hours               <ul style="list-style-type: none"> <li>– A reasonable copying fee may be charged</li> <li>– Advance notice of up to two days for copying may be requested</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Submit annual reports to the permitting authority for the first permit term. In subsequent terms, submit reports in years two and four or more frequently as required</li> <li>▪ Reports should include:               <ul style="list-style-type: none"> <li>– Status of permit condition compliance</li> <li>– Appropriateness of identified BMPs</li> <li>– Progress toward achieving measurable goals for each measure</li> <li>– Results of data collected and analyzed during the reporting period</li> <li>– A summary of the activities that will take place during the next reporting period</li> <li>– Any changes in measurable goals</li> </ul> </li> </ul>

**Clean Water Act Section 303(d) – 17.2.13:**

Section 303(d) of the federal Clean Water Act requires NPDES-authorized states, such as Washington states to develop a list of polluted water bodies every two years. For each of those waterbodies, the law requires states to develop Total Maximum Daily Loads (TMDLs). A TMDL is the amount of pollutant loading that can occur in a given water body (river, marine water, wetland, stream, or lake) and still meet water quality standards. TMDLs are implemented through permits to point source dischargers and through non-regulatory programs for nonpoint sources. Local entities are responsible for implementing programs to address the water quality problems.

Tennant Creek, Silver Creek, Tenmile-Deer Creek, and the Nooksack River are all listed as water quality impaired water bodies on the 303(d) list. TMDLs have not been established for the creeks, but in 2000 a TMDL plan was established for the Nooksack River, to limit bacteria loading. Ferndale's sewage treatment plants must meet waste load allocation (WLA) in the Nooksack TMDL plan. Ferndale's permit will be reopened in December 2004 and reissued with new bacteria limits reflecting the WLA. Therefore to abide by the TMDL plan the City of Ferndale is already adhering to the stricter fecal coliform limits in regards to their sewage treatment facilities.

According the TMDL plan Ferndale must incorporate stormwater management meeting the guidelines of the Puget Sound Action Team 2001-2003 work plan and reflect the new Ecology Stormwater Guidance Manual. The Nooksack Bacteria TMDL Plan requires the City of Ferndale to monitor implementation, conditions, budget needs and resources, and environmental trends over time. Implementation of this Comprehensive Plan will meet the guidelines set forth in the Nooksack River TMDL plan.

# State Regulations

## Puget Sound Water Quality Management Plan (PSWQMP)

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17.3

The 2000 PSWQMP renews the original 1987 requirement for local governments in the Puget Sound region to implement municipal stormwater management programs. All jurisdictions in the Puget Sound basin are now required to adopt comprehensive stormwater programs, whereas in the previous PSWQMP smaller communities were only required to implement a pared-down version called the *basic* stormwater management program. The goal of the PSWQMP is to restore and protect the biological health and diversity of Puget Sound by:

- preserving and restoring wetlands and aquatic habitats and the natural processes and functions that created them;
- preventing increases in the introduction of pollutants to the Sound and its watersheds;
- and reducing and ultimately eliminating harm from the entry of pollutants to the waters, sediments and shorelines of Puget Sound.

### **Puget Sound Water Quality Action Team – 17.3.1:**

The Puget Sound Water Quality Protection Act, passed during the 1996 Legislative session, creates a new approach to water quality protection in the Puget Sound Basin. A 17-member Puget Sound Action Team and 12-member Puget Sound Council now lead water quality protection efforts in the Puget Sound Basin. The Action Team assumed responsibility for implementing the 1994 Puget Sound Water Quality Management Plan, which had previously been the responsibility of the Puget Sound Water Quality Authority (PSWQA). The Action Team, with guidance from the Puget Sound Council, must also develop biennial work plans that identify both state and local actions necessary to correct regional water quality problems.

The Puget Sound Water Quality Management Plan (PSWQMP) establishes a comprehensive plan to protect and improve water quality and aquatic resources in Puget Sound. The PSWQA was directed to identify water quality problems and corresponding pollution sources affecting marine life and human health, and to develop effective pollution control and management programs that could be implemented in a comprehensive multijurisdictional manner throughout the Puget Sound Basin.

As noted above, the Puget Sound Action Team replaced the PSWQA during the 1996 Legislative session. While the PSWQA no longer exists, the intent of the Puget Sound Action Team is to guide the implementation of the many elements of the 1994 Puget Sound Plan (and subsequent plans). A number of programs regarding stormwater management were included in the 1994

plan. State authority to require jurisdictions to implement the provisions contained within the 1994 Puget Sound Plan is inherent in the 1996 Puget Sound Water Quality Protection Act, discussed previously.

**Comprehensive Municipal Stormwater Programs – 17.3.2:**

According to the PSWQMP each municipality must develop and implement a comprehensive stormwater management program in order to:

- Control erosion and manage the quantity and the quality of stormwater runoff from public and private activities
- Protect and enhance water quality, and achieve water quality and sediment quality standards
- Reduce the discharge of pollutants to the maximum extent practicable within the constraints of federal and state laws
- Protect beneficial uses, as described in Chapter 173-201 WAC Achieve the four items above in a manner that makes efficient use of limited resources to address the most critical problems first.

The specific elements to be addressed by municipal stormwater programs have been modified in the 2000 Plan. The updated program elements, described in 17.3 below, are both preventative and corrective in nature.

Table 17.3 2000 Puget Sound Water Quality Management Plan Stormwater Program Elements	
Element	Description
Stormwater controls for new development and redevelopment	<ul style="list-style-type: none"> <li>▪ Adopt ordinances that require the use of best management practices (BMPs) to control stormwater flows, provide treatment, and prevent erosion and sedimentation from all new development and redevelopment projects.</li> <li>▪ Adopt and require the use of Ecology’s stormwater technical manual (or an alternative manual) to meet these objectives</li> </ul>
Stormwater site plan review	<ul style="list-style-type: none"> <li>▪ Review new development and redevelopment projects to ensure that stormwater control measures are adequate and consistent with local requirements</li> </ul>
Inspection of construction sites	<ul style="list-style-type: none"> <li>▪ Regularly inspect construction sites and maintain temporary BMPs.</li> <li>▪ Adopt ordinances to ensure clear authority to inspect construction sites, to require maintenance of BMPs and to enforce violations.</li> <li>▪ Provide local inspectors with training on erosion and sediment control practices.</li> </ul>
Maintenance of permanent facilities	<ul style="list-style-type: none"> <li>▪ Adopt ordinances that require that all permanent stormwater facilities be regularly maintained according to approved guidance.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Develop provisions as necessary, such as agreements to maintenance contracts, to ensure that facilities on private land are maintained.</li> <li>▪ Provide training for professionals who maintain stormwater facilities.</li> </ul>
Source control	<ul style="list-style-type: none"> <li>▪ Develop and implement a program to control sources of pollutants from new development and redevelopment projects and from existing developed lands.</li> </ul>
Illicit discharges and water quality response	<ul style="list-style-type: none"> <li>▪ Adopt ordinances to prohibit dumping and illicit discharges.</li> <li>▪ Carry out activities to detect, eliminate and prevent illicit discharges, and respond to spills and water quality violations.</li> </ul>
Identification and ranking of problems	<ul style="list-style-type: none"> <li>▪ Identify and rank existing problems that degrade water quality, aquatic species and habitat, and natural hydrologic processes.</li> <li>▪ Conduct a hydrologic analysis and map stormwater drainages, outfalls and impervious surfaces by watershed.</li> <li>▪ Develop plans and schedules and identify funding to fix problems.</li> </ul>
Public education and involvement	<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ Provide practical alternatives to actions that degrade water quality and biological resources.</li> </ul>
Low impact development practices	<ul style="list-style-type: none"> <li>▪ Adopt ordinances that allow and encourage low impact development practices.</li> </ul>
Watershed or basin planning	<ul style="list-style-type: none"> <li>▪ Participate in watershed or basin planning processes such as planning under Chapter 400-12 WAC or Chapter 90.83 RCW.</li> </ul>
Funding	<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>▪ Monitor program implementation and environmental conditions and trends over time to measure the effectiveness of program activities.</li> </ul>
Schedule for implementation	<ul style="list-style-type: none"> <li>▪ Develop an implementation schedule with specific target dates and funding sources to help plan program activities.</li> </ul>

Each urban stormwater program shall seek to control the quality and quantity of runoff from public facilities and industrial, commercial, and residential areas, including streets and roads. Each program shall cover both new and existing development. Early action by urbanized areas that are prepared to implement stormwater control programs is encouraged. Emphasis shall be placed on controlling stormwater through source controls and BMPs. Where local programs are not effectively solving stormwater problems, ecology shall ensure compliance through its oversight role. Each municipality shall have the flexibility to design its own program, but the

content, priorities, and deadlines for compliance shall be subject to review by Ecology for consistency with the Puget Sound Plan.

In some cases, significant stormwater problems may be originating in urbanized areas outside of a local jurisdiction. In those situations, the sequencing of areas for urban stormwater programs may be modified to address problems in shared watersheds. The neighboring jurisdictions will develop local coordination mechanisms to cooperatively resolve the identified problems. Where joint programs are not developed, Ecology shall ensure consistency in programs through its oversight role.

Stormwater quality in public stormwater systems in commercial and industrial areas shall have a high priority in the municipal programs. Ecology shall determine, in compliance with U.S. Environmental Protection Agency (EPA) regulations and in consultation with local governments, the appropriate approach to controlling stormwater discharges from industrial and commercial facilities that are not currently required to have stormwater National Pollutant Discharge Elimination System (NPDES) or point source discharge permits.

Stormwater controls are included in NPDES permits for discharges of stormwater from commercial and industrial point source facilities, which are addressed in the Industrial Discharges Program.

Ecology shall have oversight responsibilities for the urban stormwater programs. Ecology shall review each urban stormwater program every two years to ensure consistent and adequate implementation and report to the Action Team.

### **Municipality Development Standards and Operations and Maintenance – 17.3.3:**

The provisions within the PSWQMP for achieving the program's goal of controlling pollution from stormwater is to implement best management practices (BMPs), assess their effectiveness, and, as necessary, require further water quality controls that may include treatment. This includes a requirement for jurisdictions to adopt a stormwater management ordinance (or ordinances) with minimum standards for new development and redevelopment. The ordinances are to be substantially equivalent to the EPA and Ecology's model ordinances. **See Appendix A for the City of Ferndale Stormwater Control Ordinance.**

These ordinance address: (1) the control of water quality and quantity impacts from new development and redevelopment sites; (2) the use of source control best management practices and treatment best management practices; (3) the effective treatment, using best management practices, of the 6-month design storm for proposed development; (4) the use of infiltration, with appropriate precautions, as the first consideration in stormwater management; (5) the protection of stream channels and wetlands; (6) erosion and sedimentation control for new construction and redevelopment projects; and (7) local enforcement of these stormwater controls. In addition, each municipality shall also develop and enforce operation and maintenance programs and ordinances for new and existing public and private stormwater systems.

Consistent with the Growth Management Act, each local jurisdiction in the Puget Sound Basin is expected to cooperate with neighboring jurisdictions in growth management, stormwater planning, and stormwater basin planning.

Ecology will monitor compliance with these requirements, reviewing the status of municipality operation and maintenance and runoff control programs every two years to ensure consistent and adequate implementation. Ecology's oversight role shall pertain only to compliance with the objectives of the plan's stormwater program and appropriate rules and statutes and technical suggestions to improve implementation. This should ensure maximum flexibility and creativity for local governments to resolve site-specific stormwater problems in accordance with their land use and other local policies.

**Department of Ecology Stormwater Manual – 17.3.4:**

The PSWQMP also requires that in conjunction with the runoff control ordinances for new development and redevelopment, each jurisdiction shall adopt a stormwater management technical manual containing state-approved BMPs. To add consistency and help local jurisdictions with this requirement, the plan directed the Department of Ecology to develop minimum standards for controlling stormwater discharges. Ecology’s minimum requirements shown in table 17.4 below are contained in the *Stormwater Management Manual for Western Washington*.

Table 17.4 2001 Ecology Stormwater Manual Minimum Requirements for Controlling Stormwater Discharges	
<b>Minimum Requirements</b>	
1. Preparation of Stormwater Site Plans	
2. Construction Stormwater Pollution Prevention	
Element 1: Mark Clearing Limits	
Element 2: Establish Construction Access	
Element 3: Control Flow Rates	
Element 4: Install Sediment Controls	
Element 5: Stabilize Soils	
Element 6: Protect Soils	
Element 7: Protect Drain Inlets	
Element 8: Stabilize Channels and Outlets	
Element 9: Control Pollutants	
Element 10: Control Dewatering	
Element 11: Maintain BMPs	
Element 12: Manage the Project	
3. Source Control of Pollution	
4. Preservation of Natural Drainage Systems and Outfalls	
5. On-Site Stormwater Management	
6. Runoff Treatment	
7. Flow Control	
8. Wetlands Protection	
9. Basin/Watershed Planning	
10. Operation and Maintenance	
<b>Optional Guidance</b>	
1. Financial Liability	
2. Off Site Analysis and Mitigation	

Ecology’s manual provides a commonly accepted set of standards and technical guidance on measures necessary to control the quality and quantity of runoff from new development and redevelopment so that runoff from those activities will comply with water quality standards and protect beneficial uses. The manual also contains design standards for state approved best management practices (BMPs) that can be used to meet the minimum standards.

A local government may adopt Ecology's technical manual or prepare its own technical manual as long as it has technical standards equivalent to those included in Ecology's 2001 *Stormwater Management Manual for Western Washington*. The first version of this manual was published in 1992; it was updated in September 2001 and is currently being updated again in 2004 to correct errors, clarify statements, update design criteria and procedures, and apply recent research.

Many local governments, including the City of Ferndale, have based their development design standards on the 1992 Stormwater Management Manual. To meet PSWQMP, ESA, NPDES Phase II, and other environmental permit requirements the City of Ferndale will convert to new Ecology Manual-equivalent standards. The key changes to Ecology's Stormwater Management Manual from the 1992 to the 2001 include the following:

- The manual was originally written for the Puget Sound area, although it has been used for construction and industrial activities statewide since it was written. The revised manual is more appropriate and useful for application throughout western Washington.
- The format of the manual has been updated from four volumes to five. It is available in print, on compact disks, and on the Internet.
- Thresholds for the selection of best management practices (BMPs) are written to allow for the most appropriate sizing and placement of flow control and treatment BMPs. Fewer projects will require engineered structures, but all projects will be required to use appropriate BMPs.
- Runoff flow control requirements will now address problems of both increased peak flow and the duration of high flows. This will require the use of more sophisticated stormwater runoff models and will generally result in the construction of larger runoff control facilities.
- Higher levels of treatment will be required to remove and reduce pollution from runoff to lakes and smaller streams to provide more assurance that the treated stormwater runoff is not harmful to fish and other aquatic life and is protective of the environment.
- New BMPs have been added for controlling runoff from construction sites and for preventing stormwater pollution at the source. These BMPs will help to further remove contaminants from runoff.
- Ecology proposes to establish a Technical Review Committee to evaluate new treatment technologies and to maintain an updated list of approved treatment technologies.

### **Local Government Stormwater Assistance Service – 17.3.5:**

The intent of the 2000 PSWQMP and subsequent Puget Sound Water Quality Work Plans is to provide technical assistance to local governments through staff who have hands-on experience with (1) the design and implementation of stormwater programs at the local level, (2) current BMPs for stormwater, and (3) local basin characteristics. Ecology shall assist the municipality with current stormwater expertise to establish a technical assistance service.

This service will support the exchange of technical information and assistance on stormwater among local governments, will train Ecology and local government staff in current practices and real world application and problems in stormwater technology, and will operate as an integral part of the state technical assistance program. The service will have the goal of acting as an in-the-field branch of Ecology's technical assistance program.

### **Guidance and Model Ordinances – 17.3.6:**

Ecology will prepare and update guidance and model ordinances for stormwater programs for all municipalities and for comprehensive urban stormwater programs. All municipalities will adopt stormwater programs that include minimum requirements for new development and redevelopment set by the plan and in guidance developed by Ecology.

The guidance shall include:

- Procedures for developing local programs, including procedures for review and approval of programs
- Minimum requirements for runoff controls and system maintenance required in local ordinances
- Minimum requirements for control of private sector maintenance of private drainage systems
- Minimum requirements for operation and maintenance programs, including record keeping requirements for drainage systems and facilities
- Methods for assuring practical and appropriate disposal procedures for decant water, solid, and other substances from drainage system cleanout and maintenance.

Methods shall address catch basins, oil/water separators, pipelines, wells (wells?), detention/retention basins, and other appropriate drainage elements.

Additionally, the guidance for the comprehensive urban stormwater programs will include:

- Procedures for identification and ranking of significant pollutant sources and their relationship to the drainage system and water bodies
- Procedures for source tracing investigations, including sampling of problem storm drains
- Procedures for investigations, implementation of spill-control measures, enforcement, and remedial actions
- Methods for assuring adequate local funding for the urban stormwater program
- Provisions for agreements with neighboring jurisdictions when stormwater and watersheds do not follow jurisdictional boundaries
- Requirements for public education programs
- Requirements for retrofitting and/or treatment measures, if necessary
- Procedures for inspection, compliance, and enforcement measures
- Requirements for implementation schedules
- Methods to coordinate stormwater management with other watershed habitat protection and growth management activities.

The guidance will lay out acceptable approaches to control stormwater from new development and redevelopment, such as water quality policies for use in SEPA, NPDES, and other permit decisions; density controls to limit development in sensitive areas; development standards to limit the amount of impervious surfaces; regional detention ponds; oil separators or other treatment facilities; grading and drainage ordinances; erosion control programs; buffers next to waterways; preservation of wetlands; and other appropriate elements.

## **Hydraulic Project Approval (HPA)**

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**17.4**

The Washington Department of Fish and Wildlife (WDFW) requires a Hydraulic Project Approval (HPA) for construction activities that use, divert, obstruct, or change the natural flow or bed of any waters of the state (RCW 75.20.100). The purpose of the requirements, which are administered through the HPA permit process, is to protect fish habitat in stream channels, to prevent erosion, and to protect freshwater and nearshore marine aquatic life.

Any construction activity such as channel widening or culvert improvements within the ordinary high water mark of any stream would fall under the HPA permit requirements. In some instances, WDFW is also extending its permitting authority to include developments creating new impervious surfaces in excess of 5,000 square feet even if the project does not include work within the ordinary high water mark. The rationale for extending its permit authority is that such a project will affect the hydrologic regime of downstream stream habitats.

## **Growth Management Act**

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**17.5**

Enacted on July 1, 1990, the Growth Management Act (GMA) is intended to manage growth in Washington's fastest-growing counties through the adoption of local comprehensive land use plans and development regulations. A 1995 GMA amendment requires all counties and cities in Washington to include the best available science in developing policies and development regulations to protect the functions and values of critical areas. The City of Ferndale's Critical Areas Ordinance and other Planning Department actions comply with the GMA.

## **State Floodplain Regulations**

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**17.6**

Chapter 86.16 RCW establishes statewide authority through regulations promulgated by Ecology for coordinating the floodplain management regulation elements of the National Flood Insurance Program (NFIP). Under Chapter 173-158 WAC, Ecology requires local governments to adopt and administer regulatory programs compliant with the minimum standards of the NFIP. Ecology provides technical assistance to local governments for identifying the location of the 100-year (base) floodplain.

Ecology also establishes land management criteria in the base floodplain area by adopting the federal standards and definitions contained in 44 CFR Parts 59 and 60 as minimum state standards. In addition to adopting the federal standards, the state regulations provide for additional regulation of residential development in the floodplain.