

Technical Memorandum Summary and Analysis of Stormwater Regulations and Programs

PREPARED FOR: Stormwater Policy Advisory Committee
PREPARED BY: John Hoey, CH2M HILL
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This memo serves as a summary and analysis of regulations and programs in Washington State that are either directly or indirectly related to stormwater management. This information was compiled from federal or state agency publications, or through interviews with the “program owners” (those agencies in charge of administering and/or enforcing the regulations).

Summary of Stormwater Regulations and Programs

The following regulations or programs are summarized in this document:

- National Pollutant Discharge Elimination Systems (NPDES)
- Total Maximum Daily Load (TMDL) or Water Cleanup Plans
- Section 401 Water Quality Certifications
- Hydraulic Project Approval (HPA)
- Underground Injection Control (UIC)
- Endangered Species Act
- Growth Management Act

A summary of each of these is provided below, identifying program goals, implementation, “customers” (affected jurisdictions, agencies, and stakeholders) and services provided, and existing stormwater outreach, education, and technical assistance programs. More detailed summaries will be included in the Appendices of the Final Report of the Stormwater Management Study.

National Pollutant Discharge Elimination System (NPDES)

Program Goals

The NPDES permitting mechanism requires the implementation of controls designed to carry out the objective of the Clean Water Act (CWA), which is to restore and maintain the chemical, physical and

biological integrity of the Nation's waters. NPDES regulations are intended to manage discharges that are defined as point source discharges under the CWA, such as municipal and industrial wastewater sources, and since 1987, stormwater sources. Mandated by Congress under the Clean Water Act, NPDES regulations are delegated to the state of Washington for implementation. The Department of Ecology (Ecology) is responsible for issuing NPDES permits for municipal stormwater discharges, as well as for construction and industrial-related discharges.

Program Implementation

The NPDES Phase 1 stormwater program requires permits for stormwater discharges from municipal separate storm sewer systems (MS4s) generally serving areas with populations of 100,000 or more people, industrial activities, and construction activities disturbing more than 5 acres of land. Ecology has issued 5-year, Phase 1 NPDES general permits to King, Pierce, and Snohomish Counties; the Cities of Seattle and Tacoma; and the Washington Department of Transportation (WSDOT). In July 1999, Ecology issued an individual municipal stormwater NPDES permit to Clark County. These permits require development and implementation of comprehensive stormwater management programs to reduce the discharge of pollutants to the maximum extent practicable and achieve compliance with water quality standards. Ecology is planning on re-issuing the Phase 1 municipal permits in 2001. Re-issuance of the industrial and construction permits has been delayed by an appeal process.

The NPDES Phase 2 rule regulates "small" MS4s (any MS4 not already covered by the NPDES Phase 1) located in "urbanized areas," or outside of urban areas if Ecology determines that stormwater discharges into a local water body cause, or have the potential to cause, water quality problems. Phase 2 also regulates construction activities disturbing between 1 and 5 acres of land. The NPDES Phase 2 rule outlines a stormwater management program that includes the following six required program elements:

1. Public Education and Outreach
2. Public Participation and Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

Phase 2 will apply to approximately 95 municipalities in Washington. Phase 2 will also apply to Federal and State facilities within urbanized areas, such as military bases and public universities. Phase 2 permit coverage is required by March 2003. Ecology is the agency charged with implementing the EPA Phase 2 rule and is still in the process of developing a strategy to implement the rule.

Future Program Vision

NPDES Phase 1 permits will be re-issued with changes resulting from “lessons learned” during the initial 5-year permit period. Ecology has not finalized its approach to the NPDES Phase 2 regulations, but will implement the U.S. Environmental Protection Agency’s (EPA’s) Phase 2 rule.

Program Customers

NPDES customers include local governments, developers, and industrial entities that are directly regulated by the NPDES stormwater permit requirements.

Education, Outreach, and Technical Assistance

EPA has information about the NPDES program on its website, including specific information on the Phase 1 and Phase 2 requirements. A series of detailed fact sheets are available on the Phase 2 program. Ecology has written materials available to help local governments and other permittees meet the NPDES program requirements, and Ecology staff are available for compliance and technical assistance on NPDES program issues.

Total Maximum Daily Load (TMDL)

Program Goal

The TMDL or Water Cleanup Plan process is established by section 303(d) of the Clean Water Act (CWA). Federal law requires states to identify sources of pollution in waters that fail to meet state water quality standards, and to develop Water Cleanup Plans to address those pollutants. The first purpose of the TMDL process is to determine the amount of pollution loading a water body can receive and still remain healthy for its intended uses, such as industrial and agricultural uses, drinking, recreation, and fish habitat. The second purpose is to allocate that allowable load among various point and nonpoint sources. The allocation loads are then reflected in NPDES permits to ensure the TMDL is met.

Program Implementation

The CWA requires states to regularly prepare a list of water bodies that do not meet water quality standards (referred to as the 303(d) list). Ecology is responsible for preparation of the 303(d) list in Washington. Ecology uses data collected by agency scientists, Indian tribes, other state agencies, local governments, industries, and others to develop a list of impaired water bodies. Ecology identified 666 such water bodies in 1996. A Water Cleanup Plan must be developed for each.

Since 1988, EPA has approved more than 300 Water Cleanup Plans developed either by Ecology, local governments, or planning councils.

Under the terms of a lawsuit settlement, Ecology prepared a 15-year schedule to develop plans to clean up the 666 water bodies. All TMDL plans must be approved by the EPA. Ecology is developing methods to streamline the development of Water Cleanup Plans.

Water Cleanup Plans have five main components:

1. Identification of the type, amount, and sources of water pollution in a particular water body or segment.
2. Determination of the capacity of the water body to assimilate pollution and still remain healthy.
3. Allocation of how much pollution each source will be allowed to discharge.
4. A strategy to attain the allocations.
5. A monitoring plan to assess effectiveness.

Ecology oversees implementation of TMDLs for point sources by placing necessary limits in the NPDES discharge permits. For pollution from nonpoint sources, Ecology works with other agencies, local governments, and citizens to identify and implement specific best management practices (BMPs) to control nonpoint pollution.

EPA published final rules to revise the TMDL regulations on July 13, 2000. However, implementation of this new rule has been delayed. EPA is reviewing this final rule and is expected to make revisions before the rule becomes effective.

Future Program Vision

Municipalities and industries must take active roles in ensuring sound technical approaches to limiting pollution in stormwater discharges. Ecology will be working with stakeholders to create and implement economically achievable Water Cleanup Plans.

Stormwater is a significant component of pollution and, therefore, the successful allocation of allowable loads must be based on realistic expectations for managing stormwater pollution. The allocations will not be implementable if unrealistic expectations of stormwater management are assumed. The effectiveness of various BMPs in different locales will need to be tested. EPA and Ecology need to determine what degree of stormwater and nonpoint source pollutant reduction is practicable prior to establishing allocations.

Ecology is in the process of revising its surface water quality standards. The proposed changes to the standards would require adjustments to monitoring programs, the 303(d) listing process, and development of TMDLs or Water Cleanup Plans. Monitoring is essential to development of a TMDL and is used in updating the 303(d) list for development of

TMDLs. Monitoring is also essential to the success of TMDL implementation, and should therefore occur throughout implementation as is necessary to track the success of efforts to meet TMDLs.

Program Customers

TMDL customers are its various stakeholders, including local governments, conservation districts, health districts, and other agencies (such as Washington Department of Natural Resources [DNR] for forest practices). For strictly non-point source plans, the general public is a very important stakeholder (as they need to implement good “housekeeping” practices).

Education, Outreach, and Technical Assistance

EPA maintains information on the national TMDL program (including copies of the regulations, policy updates, technical assistance materials, and program guidance materials) at its website. Ecology has an overview of the TMDL program on its website, including fact sheets on Water Cleanup Plans. Ecology also publishes a list of Washington’s 303(d) water bodies, including information on the 2002 updated list.

Section 401 Water Quality Certifications

Program Goals

Section 401 of the federal Clean Water Act allows states to review proposed projects requiring a federal permit. The state’s review, known as “water quality certification” or “Section 401 certification,” is meant to determine whether a proposed project will meet state water quality standards and other relevant federal and state aquatic protection regulations. In Washington, the Department of Ecology provides Section 401 review as part of the Clean Water Act authority delegated to the state by the EPA.

Program Implementation

Section 401 review is a key tool to help avoid and minimize water quality impacts and prevent impairment of the state’s waters. Section 401 review is required only when a proposed project requires a federal permit. These projects often have the potential for significant adverse effects to water quality or salmon habitat if not done properly. The state can approve, add conditions, or deny proposed projects. A Section 401 certification to meet water quality standards usually includes specific BMPs, notification and monitoring requirements, and performance measures. Section 401 review is the state’s primary, and in some cases only, regulatory handle on many types of projects. Without Section 401 authority, the state would have very limited ability to regulate some dredging projects, dam relicensing proposals, and other projects in which the state has a strong interest in protecting water quality.

Education, Outreach, and Technical Assistance

In addition to issuing water quality certifications, Ecology's 401 staff also provides technical expertise to local, state, and federal initiatives on flood management strategies, mitigation banking, salmon recovery, watershed planning and coordination, streambank protection methods, and other aquatic resource-related initiatives.

Hydraulic Project Approval (HPA)

Program Goals

The Washington Department of Fish and Wildlife (WDFW) has the authority to enforce the Washington Hydraulic Code for preserving, protecting, and perpetuating all fish and shellfish resources of the state. The law requires any construction activity that would affect the bed or flow of state waters to obtain an HPA permit to ensure construction is done in a manner to prevent damage to fish, shellfish, and their habitats. HPA permits are issued on a project-by-project basis. Stormwater is one potential condition to be considered in an HPA permit application. However, HPAs are related to several other regulations that affect stormwater management because of their common goals of protecting clean water and fish habitat.

Program Implementation

Construction activities that have the potential to kill or affect fish or shellfish directly, or that indirectly alter the habitat that fish and shellfish require, or that will use, divert, obstruct, or change the natural flow or bed of any of Washington's waters, including many wetlands, require an HPA permit. By following the provisions of the HPA permit, most construction activities around water can be allowed with little or no adverse impact on fish or shellfish.

The preferred form to apply for an HPA is called a Joint Aquatic Resource Permit Application (JARPA). JARPA is also used to apply for Water Quality Certifications or Modifications from Ecology, Aquatic Resource Use Authorizations from the Department of Natural Resources, Army Corps of Engineers permits, and Shoreline Management Act permits from local city or county agencies. Copies of the JARPA form must be submitted to all participating agencies that require a permit, including WDFW. HPAs are an effective tool to protect fish and fish habitat from stormwater runoff originating from construction sites and other development sites, especially in conjunction with other stormwater management regulations and the other permits covered in the JARPA. If a proposed project will adversely affect fish habitat, it may be approved with conditions attached, such as timing and construction methods. An HPA application may be denied if WDFW determines that the project will be directly or indirectly harmful to fish life and acceptable mitigation cannot be provided.

Program Customers

WDFW's "customers" with regards to stormwater are the same as for any project that affects the bed and flow of a stream. Any projects that directly discharge to a stream, lake, or bay via an outfall would need a permit, so those applicants would be "customers."

Future Program Vision

WDFW does not have a direct mandate for implementation or enforcement of stormwater management programs. Generally, WDFW desires to coordinate with Ecology and local governments to address the impacts of stormwater. WDFW has authority over any stormwater project that affects the bed and flow of a water body. Unfortunately, it is not always clear whether a project falls under this regulation. There are several unanswered stormwater policy questions in the future of the HPA program, especially in relation to recent ESA listings in the state. WDFW has been negotiating with NMFS and USFWS on an ESA response strategy that would contribute to salmon recovery through protection of the listed species and their habitat. One approach is to develop a Habitat Conservation Plan for the HPA program.

Education, Outreach, and Technical Assistance

WDFW has information on the HPA program available on its website. WDFW has no educational materials that specifically address stormwater. They would reference any stormwater materials from Ecology or the Puget Sound Action Team that might also apply to the goal of protecting fish. WDFW, in cooperation with other state and local agencies, has published several educational materials and fact sheets related to protection of fish and fish habitat through water quality management.

Underground Injection Control (UIC) Program

Program Goals

The UIC program, authorized by the Safe Drinking Water Act, is designed to prevent contamination of underground sources of drinking water from the use of injection wells. The state of Washington classifies all of its groundwater as potential sources of drinking water, which is the highest designated use. Ecology has been delegated authority by EPA to administer the UIC program.

Program Implementation

Washington is a "Primacy State" with primary enforcement responsibility for UIC regulations. The UIC program's two main requirements are as follows:

1. A non-endangerment performance standard prohibiting injection that allows the movement of fluid containing any contaminant into underground sources of drinking water.

2. A well registration program requiring that well owners provide inventory information.

Class 5 injection wells, the most common in Washington, are generally simply constructed, shallow wells used to discharge fluids such as stormwater into or above an underground source of drinking water under the force of gravity. Urban stormwater runoff wells and sanitary wastewater disposal wells (multi-family and large commercial septic systems) are by far the most common Class 5 injection wells. Class 5 wells that conform to BMPs and that are used to inject uncontaminated stormwater or other fluids deemed appropriate by Ecology are allowed in Washington.

The UIC program requires all Class 5 injection wells to be registered, whether or not they are used, but wells do not require a permit. Registration designates the location and use of the well, and is especially important if the well is located in a Wellhead Protection Area, Critical Aquifer Recharge Area, or other sensitive water quality protection area. It is the responsibility of the site owner or designee to keep Ecology informed of the status of the well (for example, active, closed, change in ownership or change in use).

Stormwater drainage wells are generally vulnerable to spills or illicit discharges of hazardous substances, as they are often located in close proximity to roadways, parking lots, and commercial/industrial loading facilities. Many activities can reduce the likelihood of groundwater contamination, including siting, design, and operational BMPs, as well as education and outreach to prevent misuse, and finally, proper closure and abandonment.

Future Program Vision

Ecology has only recently started to implement the UIC program. EPA recently added new requirements, and Ecology's UIC program will need to be consistent with the new EPA requirements. Ecology plans to re-write the UIC regulation, but this could take up to 3 years. The public and affected stakeholders (local jurisdictions, WSDOT, etc.) will need to be involved in the process.

One issue that needs to be resolved is the ambiguous definition of "waste fluid." Another area of potential conflict is the movement to reconnect urban stormwater to the pervious soil and reestablish natural shallow movement of water to receiving streams. Current UIC regulations can be interpreted to discourage this process in an attempt to protect groundwater.

Program Customers

The UIC program regulates owners of Class 5 injection wells, including local governments, private entities, and agencies (for example, WSDOT) that own, operate, and/or maintain stormwater dry wells.

Education, Outreach, and Technical Assistance

EPA and Ecology web sites and fact sheets describe specific UIC requirements and programs. Several Ecology staff are familiar with the UIC program requirements and are available for technical assistance.

Endangered Species Act (ESA)

Program Goal

The ESA is the federal statute that requires the National Marine Fisheries Service (NMFS) (for marine species) or the U.S. Fish and Wildlife Service (USFWS) (for all other species) to list species that are determined to be endangered or threatened, and to subsequently protect those species and their habitats. There is no regulatory delegation to the states for enforcement of ESA, although there are provisions for recognizing and relying on state programs to conserve species. State and local governments must meet the requirements of the Act; failure to comply could result in agency enforcement or third-party lawsuits.

Program Implementation

Section 9 of the Act prohibits “take” of listed species. “Take” is broadly defined to include actions that kill, injure, harm, or harass a listed species; modify its habitat; or disrupt its behavior. Certain types of take may selectively be allowed for threatened species by certain protective regulations for threatened species issued under Section 4(d) of the Act. These regulations are referred to as a 4(d) rule. NMFS recently implemented a 4(d) rule governing take of salmonids in seven Evolutionarily Significant Units (ESUs), including large parts of Washington. The rule broadly applies the take prohibitions, and proposes exceptions to the take prohibitions, where entities are performing actions in accordance with the standards in the rule. One such exception applies to developing ordinances that adequately avoid stormwater discharge impacts to water quality and streamflow.

Section 7 of the Act requires federal agencies to ensure, through a consultation process with NMFS or USFWS, that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of their critical habitat. In cases where listed marine species (including anadromous fishes) might be affected, federal agencies must consult with NMFS regarding the effect of their actions.

Section 10 of the Act provides for permits and exemptions for otherwise prohibited activities. This includes authority for NMFS or USFWS to permit incidental taking when it is the result of carrying out an otherwise lawful activity, as allowed by the development and implementation of a Habitat Conservation Plan (HCP). To issue the permit, NMFS or USFWS must find that the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

Future Program Vision

NMFS and USFWS do not have a specific role in stormwater management; they are regulating agencies with administration of the ESA as their primary responsibility. However, stormwater is a component of NMFS' activities for salmon recovery, including the 4(d) rule. NMFS has reviewed and supports the new Ecology stormwater management manual for Western Washington, but believes that the manual by itself is not enough to mitigate the impacts of development on salmonid habitat. Basin planning and better land use planning are necessary to minimize loss of native vegetation and reduce impacts on salmonids.

Program Customers

NMFS' and USFWS' customers are federal agencies (for example, Corps of Engineers, Federal Highway Administration) who have responsibility for consultations under Section 7 of the ESA, and local governments or private entities who want to get a exemption on take under the 4(d) rule or an HCP under Section 10.

Education, Outreach, and Technical Assistance

NMFS does not have any specific education or outreach materials on stormwater at this time, but has plans to prepare a white paper on the relationship between stormwater and ESA. NMFS has published a Citizen's Guide to the 4(d) Rule, a guide to Section 7 implementation for actions affecting salmonid habitat, and a "Matrix of Pathways and Indicators" for evaluating the effects of human activities on salmonid habitat. These publications are available on the NMFS Northwest Region web site.

Growth Management Act (GMA)

Program Goals

The intention of Washington's GMA is to manage growth in the state's fastest growing counties through the adoption of local comprehensive land use plans and development regulations. The GMA attempts to bring regional consistency and coordination to long-range planning by reforming the decision-making processes that have been often unpredictable and disjointed. Comprehensive land use planning under the GMA, including designating urban growth areas, assigning zoning

and densities, and protecting critical areas and natural resource lands, is critical to managing stormwater and protecting water resources.

Program Implementation

The planning goals of the GMA focus on issues such as urban growth, transportation, housing, and economic development, as well as natural resource lands preservation and environmental protection issues. The environmental planning goals specifically address critical areas including wetlands, critical aquifer recharge areas, fish and wildlife habitat, frequently flooded areas, and geologically hazardous areas. GMA requires affected counties to adopt development regulations that preclude land uses or development deemed incompatible with those critical areas. Critical areas, including aquifer recharge areas and wetlands, need to be designated and protected by all local governments. In addition, GMA local jurisdictions are to consider water quality and quantity when planning goals are developed and carried out. Drainage, flooding, and stormwater runoff are required to be considered in the land use element of local comprehensive plans. Corrective measures and mitigation for stormwater problems are to be included in local development regulations.

Every city and county required to plan under the GMA should review and revise 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. Cities and counties should also incorporate provisions for managing stormwater into updates of their local shoreline master programs, and should designate appropriate land for future stormwater mitigation purposes. This review should be completed according to GMA amendment timelines using the best available science.

The GMA recognizes that capital investments in infrastructure, including stormwater facilities, are needed to provide for growth. GMA authorizes capital facilities plans to be developed with local officials deciding appropriate financing methods and revenue sources. Communities throughout the state are facing huge infrastructure needs. Fully planning communities under the GMA have been able to prepare 6-year detailed capital facilities plans, while others are collecting the information they need to make tough choices on infrastructure services they can afford to deliver. The Washington State Office of Community Development (OCD) recently completed a study of local government infrastructure needs. OCD will work with local governments to identify capital investment planning goals and funding options to pay for infrastructure services.

Future Program Vision

To meet the needs of a growing population, local communities will continue to examine their water needs and water quality issues, including

stormwater management, as comprehensive plans and development regulations are revised. In addition, the listings and potential listings of native fish under the Endangered Species Act is throwing a new light on the state's water resources issues. The Watershed Planning Act of 1998 (ESHB 2514; RCW 90.82) sets out a process that elected officials and citizens can use to examine water issues on a watershed basis. Funds also are being made available to local governments to aid in salmon enhancement projects.

Education, Outreach, Technical Assistance

OCD maintains general information and fact sheets on the GMA and the Growth Management Program on its web site, including fact sheets related to the relationship between GMA and stormwater, capital facilities, development regulations, and watershed planning. Under the GMA, technical and financial resources are available from OCD to help local governments develop county-wide policies, comprehensive plans, and development regulations.

Analysis/Interpretation of Stormwater Regulations and Programs

One of the goals of the SWPAC process is to identify opportunities for improvement in existing stormwater management programs. This might include opportunities for:

- Integrating compliance with multiple laws and regulations into one efficient process.
- Increasing program effectiveness.
- Managing program implementation funding and costs.
- Increasing public support for program implementation.

There are several regulatory programs that are working toward integration of stormwater program requirements. Effective coordination in this direction will result in regulatory streamlining, more efficient permitting processes, and increased compliance with multiple stormwater regulations. Examples of integration and regulatory coordination follow:

- In drafting their version of the NPDES Phase 2 requirements, Ecology will try to use similarities between the NPDES Phase 1 general stormwater permit requirements for a comprehensive stormwater management program and the stormwater elements included in the Tri-County ESA 4(d) rule and the Puget Sound Water Quality Management Plan. Phase 1 and Phase 2 regulations may be developed to be consistent for cities and counties within the same watershed.
- Ecology is developing methods to streamline the development of TMDLs or Water Cleanup Plans. NPDES permit requirements could

be adapted by Ecology to include specific stormwater discharge requirements, waste load allocations, and monitoring protocols to be consistent with TMDLs for specific impaired water bodies.

- Ecology will also work to integrate NPDES regulations with other programs consistent with the federal Clean Water Act, state water quality standards, ESA, and any additional applicable federal, state, and local regulations. One approach to this could utilize opportunities presented by watershed planning through the Watershed Planning Act.
- Section 401 review not only determines if proposed projects will meet state water quality standards, but is one of the main tools available to the state connecting Clean Water Act requirements with the ESA by allowing Ecology to condition projects to provide salmon habitat protection or to require mitigation for loss of habitat. Ecology's Section 401 review also ensures that proposed projects are in compliance with the State Environmental Policy Act (SEPA), local shoreline requirements, and fish protection measures included in WDFW HPA permits.
- The JARPA forms used to apply for an HPA can also be used for several other stormwater-related permitting processes, including Section 401 Water Quality Certifications, Army Corps of Engineers permits, and Shoreline Management Act permits.
- WDFW has been working with NMFS to obtain programmatic coverage (possibly under an HCP) for HPA permits to meet the requirements of the Hydraulic Code and the ESA.
- Through implementation of the UIC program, Ecology is trying to link the requirements of the Clean Water Act and the Safe Drinking Water Act. One approach to this integration is to incorporate language that would meet the objectives of both regulations into the new stormwater management manuals for Western and Eastern Washington.
- Cities and counties that are required to conduct comprehensive planning under GMA and adopt development regulations can integrate water quality and stormwater control concepts into their codes and permitting processes. For example, NMFS and Ecology are encouraging better land use planning to meet stormwater requirements and to protect fish habitat. Watershed planning could be used as an effective tool to coordinate and integrate GMA land use planning with stormwater management.

The establishment of a standing coordination group at the state level would be a catalyst for regulatory integration and permit streamlining by facilitating inter-agency efforts to reduce redundant and/or conflicting stormwater management requirements.

Streamlining regulatory conflicts or inconsistencies will allow integration of stormwater programs and acceptance of innovative stormwater practices. For example, there may be potential conflicts between UIC regulations and the recent emphasis on stormwater management BMPs that encourage infiltration, or between local building codes and “low-impact” stormwater solutions, that include storage and reuse of roof runoff. These potential conflicts should be eliminated by collaborative processes that include regulatory program “owners,” local jurisdictions, and other stakeholders to meet common goals for comprehensive stormwater management approaches.

There are currently several variations of stormwater management technical manuals for jurisdictions to use in projects and in designing stormwater programs (for example, Ecology Stormwater Management Manual, WSDOT Highway Runoff Manual, local stormwater manuals, ordinances and development codes). Each must demonstrate equivalency with Ecology’s minimum requirements. The use of jointly developed technical manuals (by multiple agencies, including Ecology, WSDOT, WDFW, etc.) would ensure consistent requirements and design standards to meet hydrology, water quality, and fish habitat protection objectives. This could still allow individual regions and watersheds to have flexibility in their approach to meet minimum requirements and address local conditions.

Watershed management plans (either formal planning efforts as established in RCW 90.82 or informal collaborative stakeholder-based planning) can be effective tools to meet a variety of water resources objectives, including compliance with multiple stormwater-related regulations. Watershed planning efforts can collectively address the issues in a specific basin by gathering technical data; laying the foundation for consistent stormwater management programs and Water Cleanup Plans/TMDL implementation plans; conducting water quantity/instream flow planning (including stormwater flow requirements); and determining habitat needs for ESA and HPA requirements. Public involvement and participation is key in developing watershed planning goals and objectives

Jointly establishing goals that are consistent among programs ensures that compliance with stormwater regulations meets the objectives of multiple programs. For example, NPDES, TMDLs, and 401 certifications all have the common goals of preventing harmful stormwater discharges to surface water bodies and meeting water quality standards. Stormwater management programs and permits to achieve compliance with these regulations should be consistent with not only the goals of the other similar programs, but also with the processes and standards to achieve compliance with them. The ESA and HPA permit programs share common goals of protecting critical fish habitat by prohibiting activities that would harm that habitat. NFMS, USFWS and WDFW have the

opportunity to achieve efficiency in the HPA permitting process with an HCP or other similar mechanism to protect individual projects or activities from ESA liability. Regulatory program “owners” should look for opportunities to establish these types of stormwater management efficiencies by identifying or establishing common goals with other agencies or jurisdictions.

Monitoring is a common tool to compare stormwater program results with established baselines, benchmarks, and measures of effectiveness. Several stormwater regulatory programs can require monitoring, including some NPDES stormwater permits, TMDLs, Section 401 certifications, and HPA permits. Monitoring of specific water bodies could be coordinated across multiple regulatory requirements to evaluate BMP effectiveness, adapting stormwater program approaches, and reducing program costs.

Individual stormwater regulatory programs have dedicated staff for program development, implementation, compliance, and technical assistance activities. Sharing staff across programs within agencies or even across agencies in a watershed-based structure could increase efficiency and reduce program implementation costs. Training program staff in multiple program areas would potentially eliminate duplicate staff needs in separate agencies. Evaluating inter-agency opportunities to share data collection, record-keeping, permit processing, public involvement and education responsibilities among programs may reveal potential for reducing staffing costs.

Stormwater regulatory programs have a wide variety of public education and outreach materials available for use by stormwater program “customers” and the general public. Common approaches include agency web sites with fact sheets, in addition to local education materials for citizens. Some materials are more technical while others are targeted for a wide, general audience. Stormwater programs should create common and consistent agency messages and public information materials. A “clearinghouse” for stormwater technical assistance and education programs could be created, with one agency taking the lead on coordinating the content and the distribution of these materials.