

## Chapter 6 Program Components

### 6.1 INTRODUCTION

The overall objective of this Surface Water Management Plan is to guide the development of a Jefferson County Surface Water Management (SWM) Program. This chapter discusses potential SWM Program components, including recommended components of the National Pollutant Discharge Eliminations Systems (NPDES) Phase II Stormwater Program and the Puget Sound Water Quality Management Plan. It also discusses other potential Program components including program management, urban stormwater management, agriculture and fish & wildlife habitat planning, and flood hazard management.

This chapter also includes planning level expenditure estimates for program components. These estimates are based on information available when this Plan was drafted. They are only intended for program planning purposes and could change significantly.

The information in this Chapter is the basis for three proposed options for implementing a Surface Water Management Program that are presented in Chapter 10 Program Options.

### 6.2 CLEAN WATER ACT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEMS PROGRAM

As discussed in Chapter 5 Policy and Regulation, Jefferson County is not subject to the National Pollutant Discharge Elimination Systems (NPDES) permit requirements. However, the NPDES Best Management Practices (BMPs) provide excellent guidance for developing a menu of surface water management program activities. The following section includes a brief description of the BMPs, their applicability to Jefferson County, and a recommendation regarding whether they should be a component of a Jefferson County Surface Water Management Program.

#### **NPDES BMP#1: Public Education and Outreach**

*This program component is intended to provide public education materials and outreach programs so that citizens are knowledgeable about surface water management issues, aware of the impacts that their activities can have on surface water resources, and can take actions in their daily lives to protect surface water resources.*

#### **Discussion:**

This statement reflects an effective strategy that Jefferson County can adopt for protecting and restoring the County's surface water resources.

Public education and technical assistance program can inform citizens regarding issues such as erosion control and stormwater management, agricultural and livestock best management practices, low impact development techniques, on-site septic system maintenance, proper use and disposal of landscape and garden chemicals, the importance of maintaining forested areas and riparian vegetation, and proper disposal of used motor oil, anti-freeze, and household hazardous wastes. Public outreach is a component of public education. It informs citizens about how to become involved in local surface water management activities.

A public education program should be tailored to local conditions and issues and use appropriate strategies to target specific audiences. Strategies can include distributing brochures and fact sheets, sponsoring speaking engagements, providing public service announcements, conducting community-based projects such as watershed and beach cleanups, conducting pilot projects, and implementing educational programs targeted at groups that can significantly affect surface water management.

## Review Draft - 12/14/2005

These groups can include homeowners, businesses, construction contractors, farmers, gardeners, homebuilders, realtors, and students.

The Jefferson County - WSU Cooperative Extension and the Jefferson County Conservation District have expertise in this area. They have developed and implemented public education and technical assistance activities in conjunction with the development of this Plan. These activities were also discussed in Chapter 4.

### *Jefferson County - WSU Cooperative Extension*

- **Water Watchers** program that trains volunteer watershed stewards;
- **Master Gardeners** who assist County homeowners to use environmentally-friendly gardening techniques;
- **Green Gardening** project that demonstrate alternatives to pesticides, herbicides, and fertilizers for common lawn and garden problems;
- **EnviroScape models** that demonstrate principles of hydrology, pollution control, and stormwater management;
- **Realtor training** regarding issues such as stormwater and surface water management;
- **Welcome to Your Watershed** newspaper inserts that provide information about Jefferson County's water resources and practical advice for protecting them; and
- **Welcome to the Watershed** program that educates new County residents regarding local water issues.

### *Jefferson County Conservation District*

- **Horses, Livestock, and Land workshops** that educate horse and other livestock owners regarding best management practices to protect water quality;
- Chimacum and Quilcene High School **water quality monitoring classes**;
- **Streamside landowner workshops**; and
- **Demonstration projects**: solar-powered livestock pump and manure composting.

Jefferson County has provided funding for public education program development and implementation through a Centennial Clear Water Fund grant from the Washington Department of Ecology. This has enabled WSU Extension and the Conservation District to develop programs that can be continued in the future.

Chapter 9 presents a Surface Water Management Public Education Plan that was prepared by Jefferson County - WSU Cooperative Extension in cooperation with Jefferson County. The Public Education Plan provides an overall strategy for conducting an effective surface water education program and describes specific education activities.

### *Recommendation and Planning Level Cost Estimate:*

Jefferson County's Surface Water Management Program should place a high priority on public education and technical assistance as an effective means to protect surface water resources. WSU Cooperative Extension and the Conservation District should continue to perform the public education functions of the Surface Water Management Program.

A reasonable planning level cost estimate would be to maintain these activities at the level that Jefferson County funded them during 2005 using the Centennial Clean Water Fund grant. WSU Extension and the Conservation District both received approximately \$45,000.

## Review Draft - 12/14/2005

### **NPDES BMP#2: Public Involvement and Participation**

*Involve citizens in developing and implementing a stormwater management program. Activities could include serving on a stormwater management advisory panel, working as citizen volunteers, educating other individuals about stormwater management, or participating in volunteer monitoring efforts.*

#### **Discussion:**

Involving citizens will increase the community's support for a Surface Water Management Program. It will also increase the Program's effectiveness by mobilizing the commitment and talents of citizens.

#### **Recommendation and Planning Level Cost Estimate:**

Jefferson County's Surface Water Management Program should include a public involvement component. The Program Manager would perform this function. The expenditure for this component would be included in the overall expenditure for the Surface Water Program Manager.

### **NPDES BMP#3: Illicit Discharge Detection and Elimination**

*Detect and eliminate illicit discharges to municipal storm sewer systems.*

#### **Discussion:**

With the exception of the system centered on the Port Hadlock commercial core, Jefferson County does not have an extensive storm sewer system. Illicit discharges to storm sewers have not been identified as a significant surface water management problem.

This BMP, however, should be considered from the broader perspective of the need to identify and correct all significant sources of pollutants that affect surface waters. For example, Kitsap County's Storm and Surface Water Management Program has a Pollution Identification and Correction (PIC) component that focuses on fecal coliform pollution that affects commercial shellfish areas

#### **Recommendation:**

While developing an illicit discharge detection and elimination component focused on discharges to storm sewers is not a high priority for Jefferson County, having the more general capacity to identify and correct pollutant sources should be included in the Program.

### **NPDES BMP#4: Construction Site Runoff Control**

*Require construction site runoff control for projects with more than one acre of land disturbing activity.*

#### **Discussion:**

Jefferson County already regulates this through the Unified Development Code administered by the Department of Community Development (DCD). It requires developers to prepare and implement a construction stormwater pollution prevention plan. The *Stormwater Management Manual* requires contractors to have a certified erosion control professional on site during development.

DCD provides information regarding construction site runoff control requirements. DCD also inspects runoff control measures for smaller projects such as single-family residences. The Public Works Department is responsible for inspecting runoff control BMPs for subdivisions and commercial developments. In order to ensure that this activity is effective, Jefferson County should provide construction site runoff control training for building inspectors and should require contractors to have a certified erosion control professional on site during development.

#### **Recommendation:**

Construction site runoff control is already addressed through UDC requirements. It does not need to be a component of the Surface Water Management Program.

## Review Draft - 12/14/2005

### **NPDES BMP#5: Post-Construction Runoff Control**

*Require developers to control post-construction stormwater runoff.*

#### **Discussion:**

Jefferson County already regulates this through the Unified Development Code. It requires developers of subdivisions and commercial developments to prepare and implement a stormwater site plan that includes appropriate stormwater runoff control facilities. The County also requires developers to enter into an agreement with the County to maintain the stormwater runoff control facilities constructed to serve their development. Jefferson County does not currently inspect these facilities or conduct maintenance and repair activities.

#### **Recommendation:**

Reviewing stormwater site plans and inspecting their implementation is already addressed through UDC requirements. It does not need to be a component of the Surface Water Management Program. Facility inspection should be a component of the Program. This issue is discussed in Section 6.3, Maintenance of Permanent Facilities.

### **NPDES BMP#6: Pollution Prevention and Good Housekeeping Minimum Control Measures for County Operations**

*Properly developed and implemented operation and maintenance programs can reduce the risk of water quality problems. The NPDES program requires local governments to develop and implement an operation and maintenance program to minimize polluted runoff from roads, municipal parking lots, maintenance and storage yards, fleet maintenance shops, waste transfer stations, and buildings; park maintenance activities; new construction and land disturbance; and stormwater management facilities. The program should include appropriate training for municipal workers.*

#### **Discussion:**

Jefferson County Central Services, Public Works, and Parks Departments currently conduct pollution prevention and good housekeeping minimum control measures for their operations. These activities are discussed in Chapter 4. These activities should remain the responsibility of individual County Departments. The Departments should review their operations periodically to ensure that standards, practices, and technologies are current, that employees receive appropriate training, and that appropriate supplies and equipment are provided.

#### **Recommendation:**

These activities are already addressed through operations activities conducted by County departments. They do not need to be components of the Surface Water Management Program.

Additional information regarding the NPDES program components can be found at

<http://cfpub.epa.gov/npdes/stormwater/menuofbmeps/menu.cfm>

### **6.3 PUGET SOUND WATER QUALITY MANAGEMENT PLAN STORMWATER PROGRAM**

The PSWQM Plan Stormwater Management Program components also provide a good list of potential surface water management program components. The following section includes a brief description of the PSWQM Plan program components (PS Plan BMP), a discussion of their applicability to Jefferson County, and a recommendation regarding whether they should be a component of a Jefferson County Surface Water Management Program.

#### **PS Plan BMP#1: Stormwater Controls for New Development and Redevelopment**

*Require best management practices (BMPs) to control and treat stormwater and prevent erosion and sedimentation from development projects and adopt the Department of Ecology's Stormwater Management Manual.*

## Review Draft - 12/14/2005

### ***Discussion:***

Jefferson County already requires stormwater controls through the Unified Development Code administered by the Department of Community Development. Jefferson County has adopted the *Stormwater Management Manual for Western Washington*.

### ***Recommendation:***

This activity does not need to be a component of a Surface Water Management Program.

### **PS Plan BMP#2: Stormwater Site Plan Review**

*Review development project plans to ensure that stormwater control measures are adequate.*

### ***Discussion:***

Jefferson County already regulates this through the Unified Development Code using the standards from the *Stormwater Management Manual*.

### ***Recommendation:***

This activity does not need to be a component of a Surface Water Management Program.

### **PS Plan BMP#3: Inspection of Construction Sites**

*Adopt an ordinance that requires maintenance of BMPs and authorizes inspection of construction sites and enforcement of violations. Regularly inspect construction sites. Train inspectors in erosion and sediment control BMPs.*

### ***Discussion:***

Jefferson County already regulates this through the Unified Development Code.

### ***Recommendation:***

The Department of Community Development should provide adequate training for Department staff to administer this activity. This activity does not need to be a component of a Surface Water Management Program.

### **PS Plan BMP#4: Maintenance of Permanent Facilities**

*Require all permanent stormwater management facilities to be regularly maintained. Develop maintenance agreements for private facilities. Train maintenance personnel.*

### ***Discussion:***

Jefferson County requires developers to construct stormwater management facilities to serve their developments. In order to ensure that these facilities continue to function as designed during the life of the development, Jefferson County requires developers to enter into a Stormwater Management Facility Maintenance Agreement with the County. The Agreement commits them to operating and maintaining their facilities according to approved plans. This obligation is binding on subsequent owners. Jefferson County does not currently have a means to monitor this requirement. This is a critical stormwater management deficiency.

There are two basic options for correcting this. First, the County could conduct facility inspections. This would require it to amend its Stormwater Management Facility Maintenance Agreement to authorize access by County staff to conduct inspections. The County would also need to hire personnel who would conduct inspections and adopt a fee schedule. As an alternative, the facility owner could provide certification by a qualified professional, such as a licensed engineer, that their facility had been inspected, that appropriate maintenance and repair activities had been conducted, and that the facility was functioning correctly.

## Review Draft - 12/14/2005

In addition to inspecting facilities, Jefferson County could also perform the maintenance and repair of stormwater management facilities. This would require amending the Stormwater Maintenance Agreement, hiring maintenance personnel, purchasing the necessary equipment, and adopting a fee schedule.

This approach would be particularly appropriate for residential subdivisions where homeowners may lack the expertise to conduct appropriate maintenance. In order to do this, the County would need to develop a procedure to accept inspection and maintenance responsibility. For a subdivision, this would typically require that:

- Homes have been constructed on 80% of the subdivision lots;
- The stormwater management facilities have been operating for a minimum of two years;
- The stormwater management facilities have been inspected by the County to ensure that they are functioning as designed;
- A majority of the lot owners petition the County to assume maintenance responsibility; and
- All necessary access easements are granted to the County.

When these conditions have been met, the Surface Water Management Program staff would submit a resolution to the Board of County Commissioners with a recommendation that the County accept maintenance responsibility for the stormwater management facility. If the Board approves the resolution, the County would assume maintenance responsibility for the facility.

In order to conduct facility inspections, it is necessary to maintain an inventory of stormwater management facilities. The Jefferson County Public Works Department maintains an inventory that is updated when new developments come on line. (**See Appendix A: Stormwater Management Facility Inventory**) This inventory would need to be expanded to include inspection dates, comments on condition, and types of maintenance and/or repair needed and performed.

### *Recommendation and Planning Level Cost Estimate:*

Ensuring that private stormwater management facilities are inspected and maintained should be a component of a Surface Water Management Program. In order to implement this component, the decision would need to be made whether Jefferson County or private contractors would perform inspections and facility maintenance and repair activities. If Jefferson County were to perform these tasks, this would require additional staff and revenue.

The Port Hadlock UGA Stormwater Management Plan estimated that conducting inspections of stormwater management facilities in the UGA would cost \$10,000 per year in 2004. There are approximately 25 facilities located in the UGA. This is approximately 50% of the facilities in Jefferson County, excluding facilities located within the Port Ludlow Drainage District. Extrapolating from the projected UGA expenditure, the annual expenditure for conducting inspections of private stormwater management facilities would be approximately \$20,000. Estimating the cost of conducting maintenance and repair work would require additional analysis that is outside of the scope of this Plan.

## Review Draft - 12/14/2005

### **PS Plan BMP#5: Source Control**

*Implement a pollutant source control program for development projects and for existing development.*

#### **Discussion:**

Jefferson County addresses this through the Unified Development Code. It requires applicants for new developments to prepare and implement a stormwater site plan that addresses source control of pollutants. Source control for existing development has not been identified as a significant surface water management issue.

#### **Recommendation:**

This activity does not need to be a component of a Surface Water Management Program.

### **PS Plan BMP#6: Illicit Discharges and Water Quality Response**

*Prohibit dumping and illicit discharges. Implement a program to detect and prevent illicit discharges and respond to spills and water quality violations.*

#### **Discussion:**

With the exception of the system centered on the Port Hadlock commercial core, Jefferson County does not have an extensive storm sewer system. Illicit discharges have not been identified as a significant surface water management problem.

#### **Recommendation:**

Developing an illicit discharge detection and elimination component is not a high priority for Jefferson County. This activity is not recommended for inclusion in the Program.

### **PS Plan BMP#7: Identification and Ranking of Problems**

*Identify and rank surface water problems. Conduct hydrologic analysis and map stormwater drainages, outfalls and impervious surfaces by watershed. Develop plans and schedules and identify funding to fix identified problems.*

#### **Discussion:**

This Plan provides appropriate information and analysis of surface water management issues necessary for Jefferson County to develop a Surface Water Management Program that will address the County's surface water management problems.

### **PS Plan BMP#8: Public Education and Involvement**

*Educate and involve citizens, businesses, elected officials, site designers, developers, builders and other members of the community to build awareness and understanding of stormwater and water quality issues. Provide practical alternatives to actions that degrade water quality and aquatic resources.*

#### **Recommendation:**

See the discussion and recommendation of Public Education and Outreach in the NPDES BMP#1 Public Education and Outreach above.

### **PS Plan BMP#9: Low Impact Development (LID) Practices**

*Encourage low impact development practices that infiltrate stormwater on-site in order to reduce runoff, recharge aquifers, maintain in-stream flows, and enhance habitat functions.*

#### **Discussion:**

Jefferson County has worked with the Puget Sound Action Team to review its Unified Development Code to ensure that the County's Unified Development Code does not create impediments to implementing LID. The County could also actively support LID by including it in public education activities and by developing pilot projects that would incorporate LID techniques, such as permeable pavement and rain gardens, when developing or redeveloping County facilities.

## Review Draft - 12/14/2005

### ***Recommendation:***

The public education component of Jefferson County's Surface Water Management Program should include educating the public about LID practices. Jefferson County should also consider opportunities for incorporating LID techniques as pilot projects when developing or redeveloping County facilities.

### **PS Plan BMP#10: Watershed Planning**

*Participate in watershed planning processes in order to coordinate efforts, pool resources, ensure consistent methodologies and standards, maintain and restore watershed health, and protect and enhance natural hydrologic processes.*

### ***Discussion:***

Jefferson County is the lead entity for the Water Resource Inventory Area 17 Quilcene - Snow planning process and has been involved in watershed planning for WRIAs 16 Skokomish - Dosewallips, 20 SolDuc - Hoh, and 21 Queets - Quinault.

Jefferson County has adopted the WRIA 17 Watershed Management Plan. The Plan recommends actions that local governments should take actions related to water quality and quantity, conservation, monitoring and data collection, public education, and habitat protection and restoration. The Plan recommends that Jefferson County adopt a surface water management plan. The Plan also recommends that Jefferson County consider funding options to implement the Watershed Plan, including collecting a natural resource conservation assessment and forming a surface water management district. Chapter 7 discusses these revenue options.

There is disagreement among WRIA 17 Planning Unit members regarding the adequacy of existing geo-hydrologic data and models for characterizing surface water and groundwater interactions. There was not consensus regarding appropriate instream flows and the availability of groundwater resources for domestic and agricultural use.

The Department of Ecology has begun the process of adopting Washington Administrative Code (WAC) Chapter 173-517 that would set instream flows for rivers and streams in WRIA 17. Due to the significant controversy that the draft rule generated among many rural residents, including farmers who could be affected by the rule, Ecology decided to reassess its approach.

Jefferson County has adopted a policy statement committing the County to implementing recommendations of the WRIA 17 Plan. It expresses both procedural and substantive concerns regarding the Department of Ecology's initial proposal for setting instream flows, particularly the failure to allocate a groundwater reserve for agriculture. The policy states that Jefferson County supports developing a comprehensive water management strategy that protects salmon, ensures water supply, and supports local food production through an agricultural trust water right or other measures that would make available new, reserved, conserved, or transferred water sources.

A draft WRIA 16 Plan has been developed and is under consideration by Jefferson County.

### ***Recommendation and Planning Level Cost Estimate:***

Watershed planning and plan implementation should be a component of Jefferson County's Surface Water Management Program. Jefferson County should continue its participation in the watershed planning process. The County should develop a schedule, priorities, and cost projection for implementing the recommendations of the WRIA 17 Watershed Management Plan and for plans that are subsequently adopted. Jefferson County should work with the Department of Ecology and other

## Review Draft - 12/14/2005

WRIA 17 Planning Unit members to develop adequate data to characterize surface water and groundwater interactions and model instream flows. The County should continue to work with WRIA 17 Planning Unit members and Ecology to ensure that there is adequate instream flow for fish populations and adequate water for County residents, businesses, and agriculture. **[NOTE: Since an in-stream flow rule for WRIA 17 is currently under development, this section may need to be updated prior to Plan adoption.]**

### **PS Plan BMP#11: Funding**

*Create adequate local funding capacity.*

#### **Discussion:**

Revenue sources to fund surface water management activities are discussed in Chapter 7 Revenue. Chapter 10 Program Options recommends revenue sources to fund program components.

#### **Recommendation:**

This Plan provides information and analysis regarding revenue sources to fund a Jefferson County Surface Water Management Plan.

### **PS Plan BMP#12: Monitoring**

*Monitor program implementation and environmental conditions and trends to measure program effectiveness.*

#### **Discussion:**

On-going monitoring provides data to determine whether policies, program components, and projects are achieving their objectives. If monitoring indicates that this is not occurring, policies, program components, and projects can be reviewed and revised appropriately. This process of monitoring, evaluation, and program revision is referred to as adaptive management.

A monitoring and adaptive management program component of the Jefferson County Surface Water Management Program would enable the County to monitor surface water conditions and related environmental factors and use the results to adjust the Program to achieve its objectives. Having the capacity to conduct analysis, monitoring, and evaluation and to revise policies and activities should be an important component of a Jefferson County Surface Water Management Program.

The Jefferson County Natural Resources Division (NRD) has maintained stream gauges on several rivers and streams in the County for several years. This activity should be expanded to include gauges on the Dosewallips and Duckabush Rivers. NRD has also conducted studies regarding Jefferson County's surface water resources and assisted the County Community Development Department (DCD) to develop regulations that will protect surface water resources.

The Jefferson County Conservation District currently conducts water quality monitoring on 8 stream systems in east Jefferson County. The District monitors temperature, dissolved oxygen, conductivity, pH, total suspended solids, turbidity, nitrogen, phosphorus, and fecal coliform. The number of parameters and frequency of monitoring vary for different streams. The Conservation District recommends that this program should be expanded to include 18 additional streams, primarily in the Hood Canal watershed. This would provide data that would help to assess the factors leading to low dissolved oxygen levels in Hood Canal. **(See Appendix B: Jefferson County Conservation District Water Quality Monitoring Plan.)** The District also conducts baseline assessments and post-project monitoring to determine the effectiveness of habitat restoration projects.

## Review Draft - 12/14/2005

Jefferson County conducted a baseline assessment of forest cover and total impervious area (TIA) in 2002. This information has been incorporated into the analysis in Chapter 2 Existing Conditions. In order to determine whether the goals of maintaining forest cover and minimizing impervious surface coverage are being achieved, this activity should be repeated at regular intervals corresponding to Comprehensive Plan updates required by the GMA.

These activities and the agencies that perform them provide the basis for creating a monitoring component of the Jefferson County Surface Water Management Program.

### ***Recommendation and Planning Level Cost Estimate:***

Jefferson County's Surface Water Management Program should have a monitoring and adaptive management program that includes the following activities:

- **Water quality monitoring** conducted by the Jefferson County Conservation District: The annual cost of the existing program is \$123,000. The cost of the expanded program would be an additional \$18,000. The District receives funds from the State Conservation Commission and Jefferson County that are used for the existing monitoring. A new revenue source would be needed for the expanded monitoring or to replace funding from the Conservation Commission or Jefferson County, if they were no longer available.
- **Monitoring stream flows** by Jefferson County Natural Resources Department is funded by an annual grant of \$20,000 from the Department of Ecology.
- **Project effectiveness monitoring** is typically included in the overall cost of habitat enhancement and water quality improvement projects.
- **Monitoring forest cover and total impervious area (TIA)** to determine whether the goal of maintaining forest cover is being achieved would be conducted in conjunction with Comprehensive Plan updates required by the GMA. The cost in 2002 was \$20,000.
- **Developing policy recommendations** to adjust the surface water management program to meet program goals would be conducted in conjunction with Comprehensive Plan updates required by the GMA. The cost of this program component would vary depending on the specific program area.

Implementing a monitoring and adaptive management program would require compiling, managing, and analyzing data regarding surface water conditions. This would be an important activity performed by the Program Manager in cooperation with the Jefferson County Inter-departmental Data Management System (IDMS).

### **PS Plan BMP#13: Schedule for Implementation**

*Develop an implementation schedule with specific target dates and funding sources to help plan program activities.*

#### ***Discussion:***

A Five-Year Surface Water Management Strategic Plan would establish program priorities, objectives, and an implementation schedule and identify the strategies and resources to achieve them. This Surface Water Management Plan would guide development of the Strategic Plan.

### ***Recommendation and Planning Level Cost Estimate:***

Jefferson County's Surface Water Management Program should develop a Surface Water Management Strategic Plan. The Program Manager would develop the Strategic Plan with assistance from a consultant. The consultant expenditure is estimated to be \$10,000.

## Review Draft - 12/14/2005

Additional information regarding the Puget Sound Water Quality Management Plan Stormwater Program can be found at:

[http://www.psat.wa.gov/Programs/GMA/ll\\_faq\\_web.pdf](http://www.psat.wa.gov/Programs/GMA/ll_faq_web.pdf)

### **6.4 OTHER SURFACE WATER MANAGEMENT PROGRAM COMPONENTS**

In addition to the program components recommended by the NPDES Program and the Puget Sound Water Quality Management Program, the following should be considered as potential components of a Jefferson County Surface Water Management Program.

#### **Urban Stormwater Management Program**

Urban stormwater management is discussed in Chapter 3. The Port Hadlock UGA Stormwater Management (SWM) Plan discusses providing urban stormwater management capital facilities and program activities, including inspection of private stormwater management facilities, public education and outreach, and water quality monitoring.

#### ***Recommendation and Planning Level Cost Estimate:***

Jefferson County's Surface Water Management Program should implement the recommendations of the UGA SWM Plan. The Plan projects one-time expenditures for capital improvements to the Port Hadlock intersection storm sewer system. This includes \$10,000 for providing a water quality treatment vault and \$144,000 for replacing the conveyance system from the Port Hadlock intersection to the outfall. The Plan also projects annual expenditures of \$10,000 for facility inspections and \$15,000 for public education and monitoring.

The UGA Plan recommends that these expenditures be funded through a stormwater control fee as authorized by RCW 36.89. Stormwater control fees are assessed based on a parcel's area of impervious surface. Stormwater control fees are discussed in Chapter 7 Revenue.

In addition to providing the capital improvements identified in the Port Hadlock UGA SWM Plan, the UGA SWM Program should conduct capital facility planning for additional stormwater management facilities needed to serve the UGA. This could include regional facilities. It would also include facilities to serve roadways that are converted from a rural standard with ditches to an urban standard with storm drainage facilities. The Public Works Department would conduct capital facility planning for improvements to the Port Hadlock storm sewer system and for road facilities. The Program Manager would coordinate capital facility planning for regional stormwater management facilities.

#### **Flood Hazard Management Program**

Chapter 4 discusses the numerous flood hazard management activities that Jefferson County has conducted, primarily on the Big Quilcene River. These activities have included dike removal, property acquisition, developing a Comprehensive Lower Big Quilcene River Flood Hazard Management Plan, and a Big Quilcene River Linger Longer Reach Feasibility Study. These studies provide engineering and cost analysis for flood hazard management activities on the Lower Big Quilcene River.

Jefferson County does not have a flood hazard management program or a designated revenue source for funding one. The County has not developed comprehensive flood hazard management plans for the Dosewallips and Duckabush Rivers.

## Review Draft - 12/14/2005

### *Recommendation and Planning Level Cost Estimate:*

Jefferson County's Surface Water Management Program should include a Flood Hazard Management Program that:

- Implements the Big Quilcene River Flood Hazard Management Plan,
- Develops and implements Flood Hazard Management Plans for the Dosewallips and Duckabush Rivers,
- Works with State and Federal agencies and regional salmon enhancement groups to address flood issues on the Little Quilcene River, and
- Implements the National Flood Insurance Program Community Rating System.

It is difficult to estimate the cost of developing a flood hazard management plan without first developing a detailed scope of work. However, considering the County's experience in developing flood hazard management plans for the Big Quilcene River, an estimate of \$80,000 per plan for the Dosewallips and Duckabush Rivers is reasonable. Assuming that this work would qualify for a grant from the State's Flood Control Assistance Account Program (FCAAP) with a 25% local match, the local cost for each plan would be approximately \$20,000. The flood hazard management plans would recommend actions for managing flood hazards and develop cost estimates of these actions.

Conducting these activities would require identifying a stable revenue source to match funds that are available through FCAAP. Revenue sources to fund a flood management program are discussed in Chapter 7 Revenue. They include flood zone assessments and grants

### **Management of On-site Septic Systems**

Jefferson County's system for regulating on-site septic systems includes the following activities:

- Permitting, design, and installation inspection by the Jefferson County Environmental Health Department (EHD);
- Evaluation of alternative systems by the Jefferson County Public Utility District (PUD);
- Evaluation of existing systems by a certified inspector when there is a property sale, prior to issuing building permits, and at regular intervals depending on the parcel size and type of system;
- Certification and licensing by the EHD for installers, operation and maintenance inspectors, and pumpers;
- Professional certification of septic system designers by the Washington Department of Licensing; and
- Repair of failing systems that have the potential to harm public health through a revolving loan program administered by the EHD.

These activities ensure that the systems continue to function adequately or are repaired if they do not.

### *Recommendation and Planning Level Cost Estimate:*

Jefferson County provides adequate management of on-site septic systems with one exception. The EHD does not have adequate staff to monitor compliance with the requirement to evaluate on-site systems at regular intervals. Conducting this task would require additional database management by the EHD and notification to property owners. The property owner pays for the cost of the actual evaluation.

The EHD estimates that the annual expenditure for this task would be approximately \$25,000. While this could be funded out of Surface Water Management Program revenue, it would be more appropriate to fund it with a fee paid by property owners with on-site septic systems. This could be accomplished through a fee on effluent collected by septic system pumpers. Assume for planning

## Review Draft - 12/14/2005

level purposes that there are approximately 8,000 residences in unincorporated Jefferson County with on-site septic systems and that 1,000 gallons of effluent are pumped from each system on an average of every 6 years. This yields approximately 1,330,000 gallons pumped annually. A fee of \$0.02 per gallon could fund this activity. The fee would be approximately \$20 per servicing.

### **Agriculture and Fish & Wildlife Habitat Protection Plans**

Based on the settlement agreement with the Washington Environmental Council, Jefferson County is obligated to develop and implement Agriculture and Fish & Wildlife Habitat Protection Plans for east Jefferson County watersheds with designated agricultural lands of long-term commercial significance. The Plans will establish voluntary measures to protect fish and wildlife habitat that are compatible with maintaining existing agriculture. They will address the following areas:

- Livestock and dairy management,
- Nutrient and farm chemical management,
- Erosion and sediment control,
- Agricultural drainage operation and maintenance,
- Riparian management, and
- Fish and wildlife habitat improvement.

The Jefferson County Conservation District has developed a Plan for the Chimacum Creek watershed. A Plan covering the remaining County watersheds is scheduled for completion by the end of 2006. Because implementation of the Plans is required by the settlement agreement, Jefferson County must ensure that this work is carried out within a reasonable timeframe. The Conservation District is the appropriate agency to conduct this work.

The Plan anticipates that implementation will be eligible for funding from several of the grant programs discussed in Chapter 7, including the Conservation Reserve Enhancement Program, Salmon Recovery Funding Board, WDFW Landowner Incentive Program, USDA Environmental Quality Incentives Program, the NRCS Wildlife Habitat Incentives Program, and the National Fish and Wildlife Foundation Community Salmon Funds.

Jefferson County has applied for a \$358,000 Centennial Clean Water Fund grant for the Chimacum Creek Clean Water Project. This is a three-year project that would implement some, but not all, of the agricultural best management practices identified in the Chimacum Creek Agriculture and Fish & Wildlife Plan. It would not fully implement the Chimacum Creek Plan. It would also not implement agricultural BMPs in other County watersheds. The Project would be managed by the Environmental Health Department and also involve the Conservation District and the North Olympic Salmon Coalition. Jefferson County has committed \$119,000 as the local match for the Project.

### ***Recommendation and Planning Level Cost Estimate:***

Jefferson County's Surface Water Management Program should implement the Agriculture and Fish & Wildlife Habitat Protection Plans for east Jefferson County watersheds. A significant portion of this work would be implemented through the Chimacum Creek Clean Water Project. However, to fully implement agricultural BMPs, it would also be necessary for Jefferson County to provide additional funding to the Conservation District as the local match for cost-share grants for agricultural BMPs. The Conservation District estimates that an annual expenditure of \$30,000 over five years would provide adequate funding to implement agricultural BMPs.

## Review Draft - 12/14/2005

### **Surface Water Management Program Management**

In order to implement the components identified in this chapter, Jefferson County would need to establish a Surface Water Management Program and hire Program staff. There would need to be at minimum a full-time Program Manager and part-time support staff. Depending on the number and types of activities that the Program conducted, it would be necessary to hire an additional Program Specialist.

#### *Program Manager*

The Program Manager would conduct Program activities and perform management and administrative functions, including coordinating Program implementation with other County departments and the County's surface water management partners - the Conservation District and WSU Extension. This Plan strongly recommends that public education, technical assistance, and water quality monitoring continue to be conducted by WSU Extension and the Conservation District, rather than transferring those activities to Jefferson County. However, overall responsibility and accountability for Program management would remain with the Program Manager. This would require developing inter-departmental and inter-local agreements and monitoring them to ensure that they are appropriately implemented.

The Program Manager would also develop a Five-Year Surface Water Management Strategic Plan. The Strategic Plan would establish program priorities, objectives, and an implementation schedule and identify the strategies and resources needed to achieve them. This Surface Water Management Plan would guide development of the Strategic Plan. The County Commissioners would review the Strategic Plan prior to developing the 2007 Program budget. It is anticipated that the Program Manager would hire a consultant to assist in developing the Strategic Plan. A planning level estimate of the one-time consultant cost is \$10,000.

The Program Manager would conduct a detailed analysis of new revenue sources, in particular a stormwater control fee and a natural resource conservation assessment. This information would assist the County Commissioners in determining whether to implement these revenue sources. The Program Manager would also be responsible for applying for and administering grants that would be necessary to fund components of the Program.

Finally, the Program Management staff would be responsible for administering the Flood Hazard Management Program.

#### *Management Structure*

It would be necessary to determine which County Department should manage the Surface Water Management Program would be managed. The decision should be based on the mission, expertise, and organizational capabilities of the Departments. The options are:

***Department of Community Development:*** Its mission is to conduct comprehensive planning and to implement development regulations. While some of its planning and regulatory functions are related to surface water management, DCD's mission, expertise, and capabilities are not particularly suited to managing the Program.

***Environmental Health Department Natural Resources Division:*** Its mission is to protect and enhance Jefferson County's natural resources, including surface waters. It has expertise in conducting research, developing natural resource policies, providing technical assistance, project management, and long-range planning. Natural Resources is the County's liaison to the Hood Canal Coordinating

## Review Draft - 12/14/2005

Council and the watershed planning units. This is clearly compatible with managing the Program. Natural Resources is a division of the Environmental Health Department that is itself under the overall management of the County Health Department. The Environmental Health Department has scientific, operational, and managerial expertise that is applicable to surface water management, but its primary mission has been focused on public health and food safety. The Health Department's primary mission and expertise are focused on delivering health care and public health services. Neither is particularly compatible with managing the Surface Water Management Program.

**Public Works Department:** Its primary missions are to manage the County's transportation, solid waste, parks, and recreation programs. These functions are not particularly compatible with surface water management. Public Works has expertise in engineering, stormwater management, capital facility planning, operations management, flood hazard management, and project management that would be valuable Program capabilities.

### ***Public Works Department Utility Division***

An additional option should be considered – creating a Public Works Department Utility Division to manage the Surface Water Management Program and the design, construction, and operation of the Port Hadlock UGA sanitary sewer system. This would create a management structure with engineering, financial, and management expertise that would benefit both programs. This system would be similar to Kitsap County's where the Public Works Department Utility Division manages the Kitsap Storm and Surface Water Management Program.

### ***Recommendation and Planning Level Cost Estimate:***

Depending on the extent of the Program components that are implemented and the management option that is chosen, managing the Surface Water Management Program would require the following staff and estimated expenditures:

- **Utility Division Manager:** \$16,000 (0.2 FTE. Salary and benefits)
- **Program Manager:** \$70,000 (One FTE; Wages and benefits)
- **Program specialist:** \$60,000 (Percent FTE would vary depending on the option. Option 1: 0.0 FTE; Options 2 and 3: 1.0 FTE, \$60,000; Wages and benefits)
- **Support staff:** \$45,000 (Percent FTE would vary depending on the option. Option 1: 0.2 FTE, \$9,000; Options 2 and 3: 0.33 FTE, \$14,850; Wages and benefits)
- **Indirect Program expenditures** (Office rent and equipment, automobiles, etc.): 30% of wages and benefits.