

10.1 INTRODUCTION

This chapter presents key implementation elements of the *2006 Wastewater Facilities Plan Amendment*. Successful implementation of the recommended plan will require concerted efforts on a number of fronts. The most significant activities are securing an NPDES effluent discharge permit for the discharge to the Spokane River, receiving the Conditional Use Permit from the City of Spokane for the Spokane County Regional Water Reclamation Facility located on the former Stockyards site, and receiving the resource agency permits for construction of the effluent discharge outfall to the Spokane River. At the end of the chapter, an overview schedule is provided that identifies key implementation activities.

10.2 FACILITIES PLANNING AND EIS ADDENDUM

The County's wastewater facilities planning effort culminated in the submittal of the *2006 Draft Wastewater Facilities Plan Amendment* to the Department of Ecology for review in December 2006. It is anticipated that the Department of Ecology will review and approve the plan in 2007. An EIS Addendum was published in December 2006 in conjunction with the *2006 Draft Wastewater Facilities Plan Amendment* to update the environmental analysis to address new water quality requirements for discharge to the Spokane River. The EIS Addendum concluded the environmental analysis for the recommended program.

10.2.1 Spokane County Phosphorus Management Plan

Following approval of the *2006 Wastewater Facilities Plan Amendment* by the Department of Ecology, Spokane County will follow the plan presented in Chapter 11 Phosphorus Management Plan to satisfy the "delta" elimination plan called for in the *Foundational Concepts for the Spokane River TMDL Managed Implementation Plan*. It is anticipated that the County's initial Phosphorus Management Plan (Delta Elimination Plan) will be incorporated into the Managed Implementation Plan (MIP), or Summary Implementation Plan (SIP), prepared by the Department of Ecology for the total maximum daily load (TMDL).

The County's Phosphorus Management Plan will be updated periodically with new information as further detail becomes available on phosphorus loading reduction activities. Phosphorus load reduction activities that may be components of the County's Phosphorus Management Plan include septic tank elimination, advances in treatment technology, water conservation, water reuse, regional phosphorus reduction programs, source control programs and nonpoint source reduction programs. Implementation of these activities will be based on the loading offset required, and an evaluation of cost effectiveness and other factors. .

It is anticipated that the Department of Ecology will incorporate updated information in a more specific document called a Detailed Implementation Plan (DIP) approximately one year after EPA approval of the TMDL.

10.3 WATER RECLAMATION AND REUSE PLAN

Spokane County will initiate preparation of a detailed Reclaimed Water Use Plan in 2007. It is anticipated that a draft plan and EIS supplement will be prepared by the end of 2007 with the final plan published in 2008. Spokane County will consider the cost-effectiveness of reuse opportunities in conjunction with the potential for phosphorus loading reduction when selecting reuse projects for implementation. Implementation of selected reuse opportunities will be linked to the availability of reclaimed water from the SCRWRF upon its completion.

10.4 FINANCING PLAN

Spokane County has undertaken an update to the *Wastewater Rate Study and Financial Plan* in 2007 to identify funding mechanisms and anticipated rate impacts for the wastewater management program. The Spokane County Board of County Commissioners will conduct a public hearing on August 14, 2007 to consider adoption of new rates and charges to fund the wastewater management program. Estimated capital and operations costs for the recommended program were identified in Chapter 9.

10.4.1 Funding Sources

A variety of funding sources may be used to pay for the projected capital and operating costs. Spokane County and the Department of Ecology have developed an agreement for funding the recommended program that includes a loan from the State Revolving Fund (SRF) Loan Program. Under this program, Ecology provides up to 20-year loans to municipal agencies for water quality projects at interest rates that are generally lower than prevailing interest rates for municipal bonds. The County plans to meet the needs beyond the SRF loan with general obligation bonds, or revenue bonds, and other sources including:

- General Facility Charges
- Capital Facilities Rates
- Wastewater Treatment Plant Charges
- Aquifer Protection Area Fees
- Monthly Sewer Service Charges
- Other sources of potential funding, such as the Public Works Trust Fund

10.5 EFFLUENT DISCHARGE PERMITTING

The NPDES effluent discharge permitting process was initiated in October of 2006 with a meeting with the Department of Ecology staff on October 18, 2006. This was followed by a written request from Spokane County to the Department of Ecology to initiate the permit application process. It is anticipated that the permit application will be completed in 2007 with a draft NPDES permit published by late-2007. The County prefers that the discharge permit conditions be defined as early as possible and be available for the

Design-Build-Operate request for proposals to establish performance requirements for the Spokane County Regional Water Reclamation Facility.

10.6 PROJECT DELIVERY APPROACHES

10.6.1 Implementation of Conveyance Facilities

To implement conveyance facilities, the County will use a traditional public works bid method. The conveyance elements consist of the NVI pumping station and force main; the SVI pumping station, force main and gravity sewer extension; and the plant outfall and diffuser.

Preliminary design activities for the NVI and SVI conveyance systems began in 2006. Detailed design is expected to be initiated in 2007 and construction completed prior to the completion of the Spokane County Regional Water Reclamation Facility.

Effluent Outfall

Design and construction of the effluent discharge outfall is anticipated to follow a similar schedule, with design beginning in 2007 and construction completed prior to completion of the water reclamation facility. A significant resource agency permitting process will be necessary for the construction of the outfall in the Spokane River.

Effluent discharge outfall modeling has been conducted for the preferred Rebecca Street location, as well as the secondary Springfield Avenue location. Initial effluent dilution analysis was conducted for the original *2002 Wastewater Facilities Plan* (see *Appendix H Dilution Analysis*). Subsequent effluent dilution analysis was conducted for both sites and published in the *2003 Wastewater Facilities Plan Amendment* (see Appendices A, B, and C). This *2006 Wastewater Facilities Plan Amendment* includes further effluent mixing zone analysis in Appendix D Effluent Mixing Zone Study Report. Appendix D includes an analysis conducted in 2004 of the Springfield Avenue discharge location (N. Hamilton Street Bridge).

The outfall design will be developed to present the configuration and to define technical features such as diameter, number and orientation of diffusers, materials of construction, etc. To support the detailed design of the final outfall, additional analysis may be conducted to define the optimal diffuser design and configuration for the outfall. As part of this effort, a water quality model, such as CORMIX, will be used to predict the outfall's mixing and dilution performance.

10.6.2 Implementation of Spokane County Regional Water Reclamation Facility

Spokane County has elected to use a Design-Build-Operate (DBO) method to implement the SCRWF. The County considered a variety of project delivery techniques in the original facilities planning effort (See *Appendix F Alternative Delivery of the 2002 Wastewater Facilities Plan*). The conventional project delivery approach, referred to as the Design Bid Build, was compared with a variety of other project delivery methods summarized as follows:

- Design Bid Build with County Operation of the Facility
- Design Bid Build with Integration of Prequalified Construction Contractors with County Operation
- Design Build with County Operation
- Construction Manager at Risk (General Contractor/Construction Manager) with County Operation
- Contract Operations
- Merchant Plant
- Design-Build-Operate

Each of these methods was evaluated and ranked according to ten criteria in a workshop session conducted in 2001. This decision to use a Design-Build-Operate method to implement the SCRWRF was affirmed in a workshop held on September 6, 2006 in a session that included County staff, the Department of Ecology, the City of Spokane Valley, County legal counsel, and engineering consultants.

This DBO contract will include design, construction and operation of the water reclamation facility. It will also include management of the industrial pretreatment program and management of the septage receiving program.

It is anticipated that the DBO contract will be for a 20-year period, with the County having the ability to terminate for convenience at any time.

The DBO project will be implemented under the rules of the Water Quality Joint Development Act (WCJDA) (Chapter 70.150 RCW). The Department of Ecology has implemented an approach to allow the use of State Revolving Fund (SRF) loans for DBO projects. Spokane County and Ecology staff have worked together closely to coordinate the steps necessary for successful implementation of the project, and to ensure the needs of both parties are fully met in funding this project.

10.6.3 Refinement of Recommended Facilities

The recommended plan presented in Chapter 9 outlines the approach for managing wastewater generated in the County's service area. More detailed definition of the system components is needed to refine cost estimates, to conduct the detailed design of the conveyance facilities, and to further define the specifics of the technical requirements for the SCRWRF to be implemented in the DBO process.

10.7 ENVIRONMENTAL DOCUMENTATION AND PERMITTING

The environmental review and documentation process for the County's wastewater management program is designed to be consistent with the State Environmental Review Process (SERP), developed by Ecology. To address environmental and community issues, a programmatic Environmental Impact Statement (EIS) was prepared to address the wastewater management concept identified in the *Wastewater Facilities Plan*. This EIS became final in February 2002. In addition, a Supplemental EIS (SEIS) was

prepared to address project specifics and the site selection process for the treatment plant and conveyance facilities. The SEIS became final December 13, 2002. An EIS Addendum was published in December 2006 in conjunction with the *2006 Draft Wastewater Facilities Plan Amendment* to update the environmental analysis to address new water quality requirements for discharge to the Spokane River.

Implementation of the project will require a number of permits and approvals from federal, state and local agencies. These requirements are summarized in Table 10-1 (Summary of Permit Requirements).

10.7.1 City of Spokane Special Use Permit and Shoreline Substantial Development Permit

Spokane County has initiated the City of Spokane Special Use Permit and Shoreline Substantial Develop Permit processes. A neighborhood meeting was held near the SCRWRF site at the former Stockyards on November 1, 2006.

Table 10-1. Summary of Permit Requirements

Permit	Agency	Trigger	Detail Needed for Application	Processing Time	Comments
FEDERAL					
Section 404/ Section 10	Corps of Engineers	Siting a structure, excavating, or discharging dredged or fill material into waters of the US	Joint Aquatic Resource Permits Application (JARPA)	Many permits issued in 30-45 days; may take much longer ,depending upon project complexities	Unless stream crossings are required for conveyance, this permit will apply only to the outfall
Section 106 review for concurrence	National Historic Preservation Act	Federal "nexus": federal funding, license, or permit	Consult Office of Archaeology and Historic Preservation to determine whether the site has been surveyed, identified resources are on-site, and the property is listed or eligible for listing on the National Register of Historic Places (NRHP)	Review typically does not take long	Cultural resources include tribal resource sites – fishing, villages, religious sites, etc.
STATE					
Hydraulic Project Approval (HPA)	Washington Dept. of Fish and Wildlife	Work that uses, diverts, obstructs, or changes the natural flow or bed of state waters	JARPA, general plans for overall project, complete plans and specifications for proposed work within waters of the state; must also include plans for the protection of fish life	Up to 45 days	Applies to outfall
NPDES	Department of Ecology Regional Office	Point-source discharge of pollutants into surface waters		180 days to 1 year	Ecology issues NPDES permits under authority delegated by the U.S. EPA

Permit	Agency	Trigger	Detail Needed for Application	Processing Time	Comments
Baseline General Permit for Stormwater Discharges	Department of Ecology	Stormwater discharge to surface waters or storm sewer	Complete Notice of Intent (NOI) form	Usually processed within 30 days	Required for industrial facilities or construction sites that disturb 1 or more acres
Waste Discharge Permit—Reclaimed Water	Department of Ecology	Using water reclaimed from sewage treatment plants	Similar to Waste Discharge Permit	Permits are generally issued within 90 to 180 days after receipt of complete application	Separate from NPDES permit
Water Quality Modification	Department of Ecology			Not anticipated this will be needed	Short-term exception to water quality standards
Section 401 Water Quality Certification	Department of Ecology	Applying for a federal license or permit for any activity that might discharge dredge or fill material into water or wetlands, or excavation in water/ wetlands		If federal permit is through the U. S. Army Corps of Engineers, certification timing is tied to Corps permit applications	Intended to protect streams, wetlands, or other waters of the state
Statewide General Permit for Biosolids Management	Department of Ecology	Treatment of or change in the quality or character of sewage or sewage sludge (biosolids)	Notice of Intent or complete application	Submit Notice of Intent or complete application at least 180 days before engaging in applicable biosolids management activities	
Emergency Planning and Community Right-to-Know	Department of Ecology	Possessing hazardous substances	No application -- reporting requirement	n/a	Requires reporting type, quantities, storage, and environmental fate of hazardous substances
Notice of Construction	Spokane Co Air Pollution Control Authority	Air emissions - new pump stations, e.g.	Type and quantity of air emissions	Generally processed during construction	Approval needed before operation
LOCAL					
SEPA compliance	Spokane County	“Action” by a public agency – adoption of Facility Plan, issuance of permit, etc.	Completed	Generally 6-12 months	Completed

Permit	Agency	Trigger	Detail Needed for Application	Processing Time	Comments
Special Use Permit	City of Spokane	Proposal for use requiring Special Use Permit by Zoning Code	Specified in application package		Required for SCRWRF located within City boundary
Shoreline Substantial Development Permit	City of Spokane/ Spokane County	Any development valued at \$2500 or more and constructed within 200 feet of river	Project location, site plan, current use of property; details of in-water construction.	Typically 3-6 months	Applies to outfall
Critical Areas Ordinance	City of Spokane/ Spokane County	Alteration of wetland, fish and wildlife habitat, or geologically hazardous area	Must show that project meets performance standards set forth in ordinance	Review occurs in conjunction with other permit approvals	Steep slope, geological hazard, designated critical areas
Construction Permits	Spokane County/ City of Spokane	Application for a variety of development permits (see Comments)	Construction drawings		Building, grading, electrical, mechanical, etc.
Utility	City of Spokane/ Spokane County	Proposed activity			
Street Use	City of Spokane/ Spokane County	Proposed activity			
Franchise Approvals	City of Spokane				Update current sewer franchise agreement (SMC 14.05.030) or initiate new agreement

Section 106 cultural resources requirements are being addressed in the County’s conveyance design project for implementation of the NVI and SVI influent pumping stations and effluent outfall to the Spokane River. Depending upon the conclusions of the Reclaimed Water Use Study, it may be appropriate to conduct further Section 106 evaluations based on the recommended reclaimed water distribution pipeline routes to reuse sites. A determination will be made in the course of the Reclaimed Water Use Study and recommendations made for review of cultural resources, if that is appropriate. If appropriate, detailed assessments of cultural resources will take place in the design phase for implementation of reclaimed water distribution pipeline routes and reuse sites in a manner similar to that currently being undertaken for the design of the NVI and SVI influent pumping stations and effluent outfall.

10.8 IMPLEMENTATION SCHEDULE

Figure 10-1 presents a simplified, overall schedule to implement the County's wastewater management plan. The Spokane County Regional Water Reclamation Facility is targeted to be on-line by the end of 2011. Upon completion and commissioning of the facility, it is anticipated that a period of 2 to 5 years of operation will be required to optimize performance and produce the lowest levels of effluent phosphorus possible. The *Foundational Concepts for the Spokane River TMDL Managed Implementation Plan* identifies a two year period that may be required to achieve normal and routine operation.

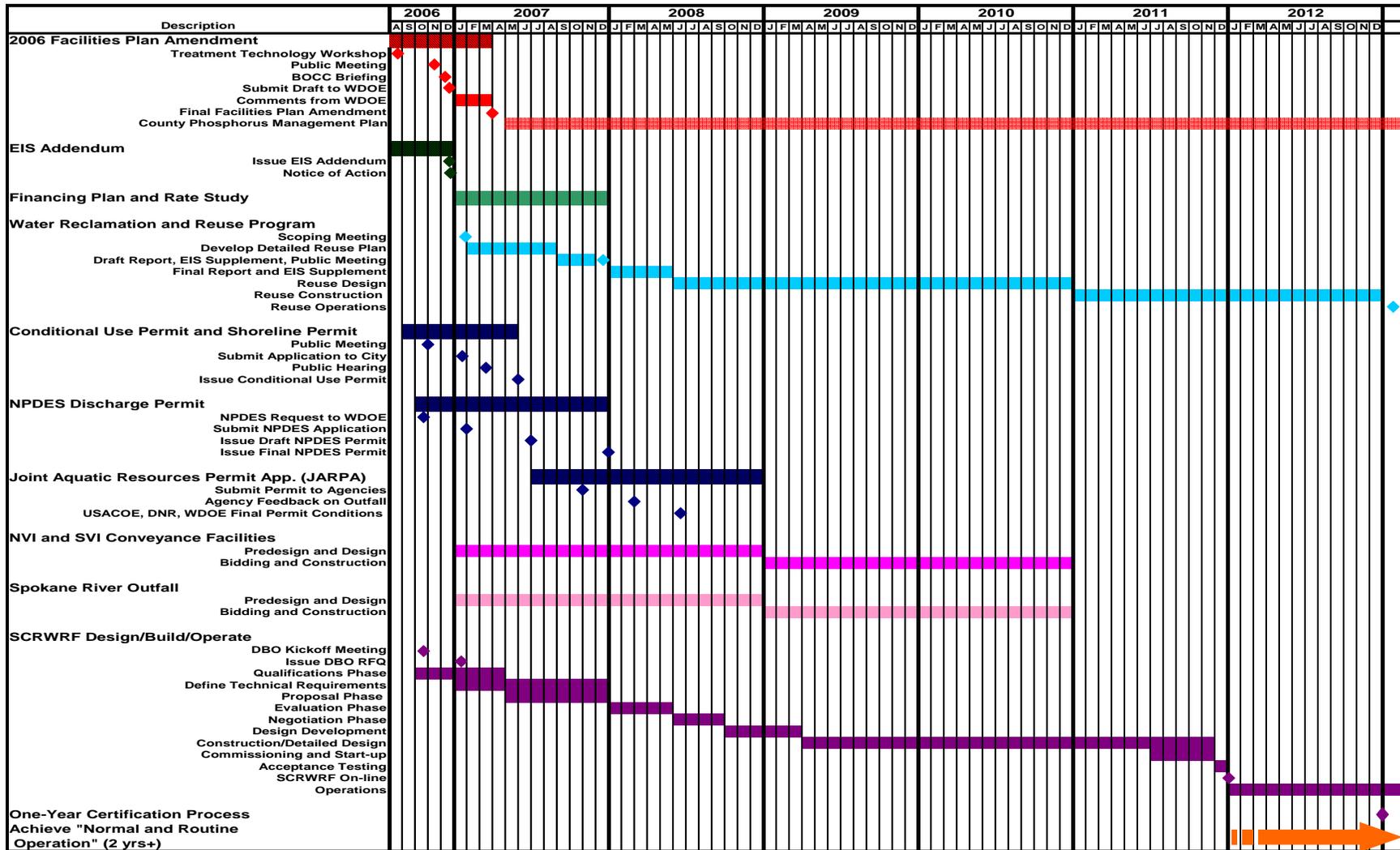


Figure 10-1. Implementation Schedule

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