

The Clackamas River Water Providers

Drinking Water Protection

Implementation Plan

Serving

Clackamas River Water

City of Estacada

City of Lake Oswego

North Clackamas County Water Commission

South Fork Water Board

Sunrise Water Authority



Background

The Clackamas River Water Providers (CRWP) has completed a Drinking Water Protection Plan which acts as a road map of potential strategies and programs to implement over the next decade to preserve the Clackamas River as a high quality drinking water source and to minimize future drinking water treatment costs. As we take action to protect our drinking water we also act as stewards of the watershed protecting fish and wildlife as well as the health of our customers. By using a proactive approach to addressing water quality issues and potential drinking water impacts we strive to use the Clackamas River on the most sustainable basis possible keeping water treatment requirement at a minimum while ensuring optimum water quality for our communities.

By working together the CRWP is able to jointly fund projects and studies that benefit all the providers but which would be beyond the scope of the individual organizations. It allows us to foster closer relationships with each other as intra-basin water suppliers, and to speak in one voice when working with other stakeholders in the basin such as PGE.

It also allows us to realize the economies of scale by sharing in the costs of staff to manage and coordinate programs that benefit all our member agencies. The Drinking Water Protection Plan helps outline ways we can continue to work together to conserve and protect our natural resources to ensure clean, affordable, drinking water for years to come.

Implementation Plan Goals and Objectives

The Drinking Water Protection Plan includes eight elements which outline management measures, programs and strategies to accomplish the goal of addressing the various threats to water quality and to ensure the long-term viability of the Clackamas River as a drinking water source. There are, however, more strategies, and programs, outlined in this plan than the CRWP will be able to accomplish under current staffing and funding levels.

Therefore the purpose of this Implementation Plan is to discuss the criteria established to prioritize the programs and strategies outlined in the eight elements of the Drinking Water Protection Plan. In addition this Plan will provide a proposed 5 and 10 year implementation schedule as well as an estimated budget for implementation of the Drinking Water Protection Plan. The implementation schedule and estimated budget will help guide the CRWP's annual workplan and budget process but will be flexible enough to allow for changes if drinking water rules and regulations change, and as more watershed data is collected that could shift program priorities. Each year during the development of its annual budget and workplan the CRWP will examine the long term strategies outline in this Implementation Plan to determine if those priorities listed are still relevant to the ultimate goals of the organization.

Criteria for Prioritizing Programs and Strategies

There are a number of additional studies, as well as the use of GIS, and pollutant load modeling, that will help the CRWP better understand the Clackamas River watershed and the potential drinking water threats. Utilizing GIS data, monitoring data, and hydrologic/hydraulic model simulations, conservation, restoration, mitigation scenarios can be investigated, data gaps identified, and proposed efforts can be tested prior to implementation to determine the most cost effective way to achieve CRWP's goals.

The time spent doing this will ensure the long term viability of the conservation, restoration, mitigation efforts and will result in lower maintenance/operations costs and a higher level of project success. Because this work will help inform future decisions on how to better prioritize, or reprioritize resources and mitigation strategies, these tasks have been identified as a high priority to implement in the first few years.

In addition, based on DEQ/DHS's Source Water Assessments and the work done by Eugene Water & Electric Board (EWEB) in the McKenzie River watershed, which has a very similar make up as the Clackamas River watershed, the highest risks to river water quality is stormwater runoff characterized below as:

- urban storm sewer discharges,
- stormwater runoff impacts from increased development (conversion of farm and forest land to urbanized development),
- stormwater runoff from agricultural practices,
- roadside vegetation management,
- commercial and industrial facilities potential spills and stormwater runoff,
- potential domestic wastewater discharges from wastewater treatment plants and septic systems, and
- hazardous material spills from commercial and industrial areas, transportation activities along HWY 212/224 , the railroad line, and the numerous road bridges that cross the Clackamas River and its tributaries.

Because the highest risks all revolve around nonpoint source pollution, this subprogram along with the Basin Analysis subprogram will receive the most attention in the first few years of implementing this Plan.

Proposed Schedule for Implementation

Table 1 summarizes the anticipated dates for implementation of the various components of the drinking water source protection program. The timelines shown in Table 1 reflect how long it would take to implement a subprogram task. The majority of these subprogram activities will be ongoing. The level of effort associated with these subprograms will increase or decrease as new information is collected and watershed priorities are adjusted. The reason for showing only the timeframe for implementation of a subprogram activity is because: 1) it highlights when a subprogram will start, which is also reflected in the source protection budget; and, 2) to illustrate the timing of ongoing activities associated with the numerous different tasks under each subprogram would make Table 1 very confusing. The ongoing nature of these subprogram activities is reflected in the cost estimate information.

Table 1
Schedule/Timeline for implementation

Source Protection Subprograms	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Basin Analysis : Studies, GIS, Modeling, & Comprehensive Monitoring	→				
Education and Research Assistance		→			
Point Source Evaluation and Mitigation	→				
Nonpoint Source Evaluation and Mitigation	→				
Disaster Preparedness	→				
Public Outreach and Information Sharing	→				
Land Use Tracking and Management					
Land Acquisition					
PGE Stored Water Fee		→			

Estimated Budget for Implementation

A range of estimated costs was provided in the discussions for each of the eight subprograms that are outlined in the Drinking Water Protection Plan. Table 2 shows the total cost estimates by subprogram for five years. Table 3 overlays these cost with the schedule (Table 1) to show estimated costs for implementation of the source protection program for the next five years. These cost estimates do not include staff time, overhead costs, and other costs associated with implementation of these subprograms.

The cost estimates provided in Tables 2 and 3 can be compared to the source protection program budget for FY 2010-11 and estimated budgets for future years. The level of funding that is above what CRWP has budgeted or plans to budget for the source protection program would need to be made up from other funding sources (grants, loans, partner contributions, etc.).

The source protection subprograms that have the highest potential to obtain funding from grants or low interest loans are the Disaster Preparedness, Education and Research Assistance, Nonpoint Source Evaluation and Mitigation, and Public Outreach and Information Sharing. The subprograms that have the highest potential for partner contributions include Basin Analysis and Point Source Evaluation and Mitigation.

Table 2
Estimated cost by Subprogram

Source Protection Subprograms	Total Estimated Costs FY 2010-2015
Basin Analysis : Studies, GIS, Modeling, & Comprehensive Monitoring	\$693,000
Education and Research Assistance	\$16,000
Point Source Evaluation and Mitigation	\$8,500
Nonpoint Source Evaluation and Mitigation	\$251,000
Disaster Preparedness	\$65,000
Public Outreach and Information Sharing	\$48,000
Land Use Tracking and Management	\$0
Land Acquisition	\$0
PGE Stored Water Fee	\$32,000
TOTAL ESTIMATED COSTS	\$1,113,500

Table 3
Estimated Subprogram Costs by year for 2010-2015

Source Protection Subprograms	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Basin Analysis : Studies, GIS, Modeling, & Comprehensive Monitoring	\$127,000	\$146,000	\$159,000	\$133,000	\$128,000
Education and Research Assistance	0	\$2,000	\$4,000	\$4,000	\$6,000
Point Source Evaluation and Mitigation	\$500	\$3,500	\$500	\$3,500	\$500
Nonpoint Source Evaluation and Mitigation	\$40,000	\$47,000	\$47,000	\$57,000	\$60,000
Disaster Preparedness	\$0	\$2,000	\$1,000	\$2,000	\$60,000
Public Outreach and Information Sharing	\$8,000	\$8,000	\$10,000	\$10,000	\$12,000
Land Use Tracking and Management	0	\$0	0	0	0
Land Acquisition	0	\$0	0	0	0
PGE Stored Water Fee		\$8,000	\$8,000	\$8,000	\$8,000
TOTAL ESTIMATED COSTS	\$175,500	\$216,000	\$229,500	\$217,500	\$274,500

Table 4 summarizes the source protection staff's level of effort to implement the source protection program over the next two years. These hours are estimated based on subprograms that were implemented during FY 2009-10 and the type of work envisioned during implementation of these activities. As indicated in Table 4, most of the source protection coordinator's time will be involved in implementation of the Nonpoint Source Evaluation and Mitigation subprogram. As additional monitoring data is collected and evaluated it will likely highlight areas that appear to contribute the majority of pollution loads to the Clackamas River, and may shift staffing priorities.

Table 4
Source Protection Staff Level of Effort (hours) for FY 2010-2012

Source Protection Subprograms	FY 2010-11				FY 2011-12			
	WRM Hours	% of time	CPC Hours	% of time	WRM Hours	% of time	CPC Hours	% of time
Basin Analysis: Studies, GIS, Modeling, Water Quality Monitoring Subprogram	104	5%			166	8%		
Education and Research Assistance Subprogram			104	5%			146	7%
Point Source Evaluation and Mitigation Subprogram	166	8%			208	10%		
Nonpoint Source Evaluation and Mitigation Subprogram	500	24%			458	22%		
Disaster Preparedness and Response Subprogram	312	15%			312	15%		
Public Outreach and Information Sharing Subprogram	166	8%	146	7%	166	8%	166	8%
Watershed Land Use Tracking and Management Subprogram								
Land Acquisition Subprogram								
Totals	1248	60%	250	12%	1310	63%	312	15%

WRM = Water Resource Manager

CPC = Conservation Program Coordinator