

# 2010 - 11 Gap Analysis & Improvement Plan: Water Quality Core Public Health Program

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**2010-11 Gap Analysis & Improvement Plan:  
Water Quality  
Core Public Health Program**

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In collaboration with the PHSA Centre for  
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## Introduction

In 2005, the BC Ministry of Health released a policy framework to support the delivery of effective public health services. *The Framework for Core Functions in Public Health* identifies 20 core programs that a renewed and comprehensive public health system must provide. Evidence reviews are conducted for each core program to inform Model Core Program Papers, against which each health authority is responsible to perform a gap analysis and develop an improvement plan.

This document contains a gap analysis and improvement plan for the Water Quality core program. The key objectives of the Water Quality core program are:

- To prevent ill health, injury and death.
- To increase public awareness and understanding in order to reduce exposure to water contaminants.
- To ensure compliance with provincially legislated standards and/or recognized guidelines.

The program outlines five core components through which health authorities can support the objectives listed above. These are:

- Prevention
- Advocacy
- Public education and involvement
- Regulatory compliance
- Program surveillance and evaluation

The purpose of this document is to present PHSA's gap analysis and multi-year improvement plan in relation to the Water Quality core program.

## Background

PHSA's Strategic Plan 2010-2013 identifies *Creating Quality Outcomes and Better Value for Patients, Promoting Healthier Populations* and *Contributing to a Sustainable Health Care System* as its three key strategic directions. The PHSA's Population & Public Health initiatives support mainly the *Promoting Healthier Populations* strategic direction.

In 2009, the PHSA Centres for Population & Public Health model was launched as a coordinating mechanism to support the commitment made by PHSA's Executive Leaders Council and Board to advance population and public health in BC. The Centres provide a venue to leverage expertise across PHSA agencies and programs, facilitate knowledge exchange and collaboration, and coordinate PHSA's response to the Core Public Health Functions requirements. The Centres provide a mechanism for PHSA to internally coordinate primordial and primary prevention activities and link with external agencies to address issues across the province. The Centres are responsible for:

- Leveraging expertise and knowledge of key agencies.
- Developing gap analyses and performance improvement plans for Core Public Health Programs and report on progress of the plans.
- Collaborating on planning, implementation and evaluation of population and public health primary prevention projects funded by PHSA.

- Being a point of contact with external groups, including health authorities, government, community groups, aboriginal groups and other stakeholders; offer, and provide support to them in addressing province-wide needs through knowledge synthesis, transfer and exchange, coordination/facilitation of surveillance, consistent messaging, supporting healthy public policy and expert advice.
- Being a point of contact with academic institutions and a venue for coordinating and expanding academic initiatives in population and public health.

A sub-group of the PHSA Centre for Environmental Health has undertaken the responsibility for developing the gap analysis and improvement plan for the Water Quality core program.

## Context

The Provincial Health Services Authority (PHSA) is responsible for ensuring that high-quality specialized services and programs are coordinated and delivered within the regional health authorities. PHSA operates eight provincial agencies including: BC Mental Health & Addiction Services, BC Children's Hospital, BC Women's Hospital, BC Centre for Disease Control, BC Cancer Agency, BC Renal Agency, BC Transplant and Cardiac Services BC.

One of PHSA's four key strategic directions is *Promoting Healthier Populations*, which includes objectives relevant to improving population and public health (PPH), and elements of health promotion and prevention. A steering committee consisting of representation from all PHSA agencies and programs oversees PPH activity across PHSA. Due to the provincial scope of PHSA's mandate, a dual role for PHSA has emerged: improvements aimed at streamlining PPH activities within PHSA agencies and programs, as well as potential provincial coordination in areas such as surveillance, consistent messaging, expert advice, and supporting development of healthy public policy. The role for PHSA could be to: convene and coordinate provincial dialogue; facilitate the identification of common needs and joint problem solving; collaborate with and support regional and provincial partners to meet common needs; and jointly identify available resources for common initiatives.

### PHSA's Role

PHSA's role in the Water Quality Core Public Health Program includes surveillance, knowledge transfer and research which are provided through the BCCDC Environmental Health Services Division and BC Public Health Laboratories. Water quality monitoring is currently under the auspices of the Ministry of Health Services working closely with the Ministry of the Environment.

The Model Core Program Paper specifies that the role of PHSA in water quality is to provide support, expertise and laboratory analysis for the Ministry of Health and the Regional Health Authorities. The following components of the Water Quality Core Program are specific to PHSA:

- Conducting applied research on BC water quality issues
- Providing technical guidance
  - Advising the Provincial Health Officer on approval of microbiological laboratories testing for Public Health purposes including leading quality assurance working groups
  - Supporting outbreak investigations
- Providing microbiological laboratory monitoring programs including public health audits
- Developing public awareness materials on recreational and drinking water issues
- Leading educational initiatives for the health authorities

# Gap Analysis & Improvement Plan

## **Strengths identified for the Water Quality Core Program**

PHSA, BCCDC Environmental Health Services Division and BC Public Health Laboratories have the following strengths with regard to addressing water quality core program:

- Capacity to support Regional Health Authorities on specific water-related projects and ongoing issues
- Stewardship of provincial surveillance of a variety of enteric infections potentially related to water
- Expertise in interpreting microbiological water testing and results from specialized studies
- Ongoing improvements in province-wide laboratory Quality Management approval system (i.e. EQWA Program)
- Expertise to develop public awareness materials
- Academic affiliation to support research on drinking water quality issues
- Development and exploitation of geographic and genetic information tools to support investigations of the links between water and enteric disease
- Interdisciplinary and interinstitutional synergies
- Capacity to conduct epidemiological and laboratory investigations as required

## **Gaps identified for the Water Quality Core Program**

A high level review of current activities against the model core program identified the following gaps:

- Need for a province-wide water quality information management and surveillance system that: 1) identifies all drinking water systems; and, 2) can be used for tracking laboratory analysis results interventions (including recreational water interventions) and regulatory compliance
- Further need for formal structures within PHSA to collaborate on drinking water issues as required

## **Priority Areas for Improvement**

Based on the strengths and gaps articulated, two priority areas of improvement have been identified as follows (see Improvement Plan for more detail re: outcomes, performance targets, timelines and PHSA Lead):

- Develop a province-wide water information management and surveillance system that identifies and tracks:
  - Relational database with results of chemical and microbiological analyses of drinking water systems
  - Alerts and Interventions
  - Drinking water regulatory compliance data
- Develop a group within PHSA that will work collaboratively to coordinate and lead PHSA relevant efforts toward improving drinking water quality

**Water Quality Improvement Plan:**

<b>Component</b>	<b>Priority Areas for Improvement</b>	<b>Outcomes/Objectives</b>	<b>Performance Targets (Indicators)</b>	<b>Timeline</b>	<b>PHSA Lead</b>
Monitoring & Reporting	Information Tracking System: Database of Drinking Water Quality Laboratory Analyses Results for all Drinking Water Systems in BC	Support a framework for an information system	Work conducted with appropriate MOH teams to develop rationale for all 4 activities as appropriate	Sept 2011	Tom, Judy, Eleni, BCCDC
	Information Tracking System: Lab Analysis	Work with MOH and MOE as well as appropriate IMIS/IT teams to make the ILS a priority	Support sought for all 4 activities as appropriate to rationales	Feb 2012	
	Information Tracking System: Interventions	Advocate for development of province-wide relational information management and surveillance system	Where appropriate, work plans developed for relevant activities	July 2012	
	Information Tracking System: Drinking Water Regulatory Compliance				
Developing Public Awareness Materials  Providing Technical Expertise  Monitoring & Reporting	Interdepartmental Structures	Establish a PHSA Drinking Water Group	Participants identified, Group met & TOR approved	Feb 2011	Judy, BCCDC (completed)
			Two further meetings of Group to discuss draft plans	June 2011	
			Multi-year workplan developed	Sept 2011	
			Implementation of 1 <sup>st</sup> year of workplan	Sept 2012	
	Legislative Input	Review enabling legislation	Recommendations made to the new Public Health Act	Mar 2011	Tom, Judy, Eleni, BCCDC

**Appendix A – PHSA CENTRE FOR ENVIRONMENTAL HEALTH  
MEMBERSHIP**

<b>WATER QUALITY CORE PROGRAM (Centre for Environmental Health)</b>	
Tom Kosatsky	BC Centre for Disease Control (BCCDC)
Judy Isaac-Renton	BC Centre for Disease Control (BCCDC)
Bob Brunham	BC Centre for Disease Control (BCCDC)
Eleni Galanis	BC Centre for Disease Control (BCCDC)
Natalie Prystajecy	BC Centre for Disease Control (BCCDC)
Prabjit Barn	BC Centre for Disease Control (BCCDC)
Sonia Lamont	BC Cancer Agency (BCCA)
Ruth Abramson	Facilities & Planning
Leslie Varley	Aboriginal Health
Tannis Cheadle	Population & Public Health (PPH)
Lydia Drasic	Population & Public Health (PPH)