

**TECHNICAL CONSULTANT SUPPORT TO SPOKANE RIVER REGIONAL TOXICS TASK FORCE**  
**PREPARATION OF COMPREHENSIVE PLAN**  
**SCOPE OF WORK**

**November 10, 2015 DRAFT**

This document describes the activities to be conducted by LimnoTech in support of preparing a comprehensive Plan for addressing PCBs in the Spokane River for the Spokane River Regional Toxics Task Force (SRRTTF) satisfying all elements specified by the SRRTTF in their 2012 Work Plan. The work plan is divided into sections corresponding to: 1) Technical Scope and Deliverables, 2) Budget, and 3) Schedule.

**TECHNICAL SCOPE AND DELIVERABLES**

Work will be conducted through five tasks:

1. Develop Inventory of PCB Sources and Pathways
2. Evaluate Best Management Practices to address PCB Sources and Pathways
3. Attain Consensus on Alternatives to Be Included in Plan
4. Develop Comprehensive Plan
5. Project Management and Coordination

Each task is described below.

**Task 1: Develop Inventory of PCB Sources and Pathways**

LimnoTech will compile a detailed inventory of known PCB sources (i.e. how PCBs are introduced into the watershed) and pathways (i.e. how PCBs are delivered to the river) by source category and location. Work will begin with a technical memorandum defining the range of sources and pathways to be considered. This inventory will be based on the conceptual model of PCBs in the Spokane River watershed developed during Phase I, review of PCB literature generated after the development of the conceptual model, additional data collected by the Task Force, and input from SRRTTF members. Once the inventory of known sources and pathways is finalized, LimnoTech will estimate the magnitude of load associated with each source. These magnitudes will be estimated based upon observed Spokane River-specific data wherever possible, and supplemented with literature values for sources where site-specific data are unavailable. Loading magnitude estimates will be expressed in terms of ranges, to reflect the uncertainty inherent in each loading estimate. In addition, the magnitude of known sources will be compared to magnitude of “unknown” sources identified by the mass balance assessment.

Deliverables:

- Draft memorandum defining inventory of known sources and pathways to be considered.
- Final memorandum defining inventory of known sources and pathways to be considered.
- Draft memorandum defining magnitude of loading from each source and pathway.
- Final memorandum defining magnitude of loading from each source and pathway.

**Task 2: Evaluate Best Management Practices**

Similar to Task 1, this work will begin with an inventory of Best Management Practices (BMPs) to be considered, followed by an assessment of the cost and PCB removal efficiency of each BMP. The range of Best Management

Practices to be considered will include institutional BMPs implemented throughout the watershed such as such as education and outreach, product bans/product replacement, and street sweeping; remediation of specific contaminated areas; stormwater treatment controls located either prior to PCBs passing into a storm drains or prior to discharge to the Spokane River; and additional treatment of continuous point sources.

Under the first part of this task, LimnoTech will define the range of BMPs available for addressing PCBs from the sources and pathways identified in Task 1. The BMP inventory will be based upon input from SRRRTF members, review of the scientific literature, and existing PCB control plans developed for other watersheds. Once the inventory of BMPs is finalized, LimnoTech will estimate the cost of implementation and expected pollutant removal efficiency for each BMP. The pollutant removal efficiency estimate will include both the expected percent reduction and the magnitude (i.e. mass per time) of reduction on PCBs entering the river. It is expected that SRRRTF members will be the primary source of information related to costs of BMPs that they are considering for implementation. For cases where no local information is available to assess costs of specific BMPs, these costs will be estimated based upon the costs associated with their use in other watersheds. This memorandum will also identify the specific parties (if any) most likely to be responsible for implementation of each BMP.

Deliverables:

- Draft memorandum defining inventory of BMPs to be considered.
- Final memorandum defining inventory of BMPs to be considered.
- Draft memorandum defining cost of implementation, expected pollutant removal efficiency, and responsible party (if any) for each BMP.
- Final memorandum defining cost of implementation, expected pollutant removal efficiency, and responsible party (if any) for each BMP.

**Task 3: Attain Consensus on Alternatives to Be Included in Plan**

The objective of this task is to define the specific BMPs to be included in the Comprehensive Plan, and the schedule for their implementation. This will be accomplished in a consensus-based manner among SRRRTF members. This task will include a mid-project workshop, where all alternatives under consideration will be discussed. Prior to the workshop, LimnoTech will conduct a rough prioritization of the BMPs identified in Task 2, in terms of total amount of PCBs removed, cost per gram of PCB removed; and presence of a suitable party to take responsibility for implementing each BMP. The outcome of the workshop will be a draft consensus of specific BMPs and schedules to be included in the Comprehensive Plan. Following this workshop, it is expected that Task Force members will hold subsequent small group meetings to work through outstanding issues from initial workshop. The final list of BMPs and schedules will be defined at a subsequent SRRRTF meeting, allowing any unresolved issues at the workshop to be addressed.

It is expected that a separate party will be engaged to provide workshop facilitation services.

Deliverable:

- Workshop defining draft consensus of specific BMPs and schedules to be included in the Comprehensive Plan

**Task 4: Develop Comprehensive Plan**

LimnoTech will develop a Comprehensive Plan that satisfies all elements specified by SRRTTF in their 2012 Work Plan. The plan will include:

- Summary of the available data for PCBs in Spokane River water, fish tissue, and sediments.
- Analysis of data to provide a detailed inventory of PCB sources by source category, by watershed geographic area, and by river segment.
- A range of BMPs expected to reduce or eliminate PCBs for each source or category of sources.
- Recommendations for BMP implementation and schedule.
- Recommendations for future studies to address remaining data gaps.

The comprehensive plan will be problem- and waterbody-specific, containing sections on:

- **Watershed Characterization:** Describes the environmental setting (e. g. population, land use, surface and groundwater hydrology), available data, and impairment status.
- **PCB Source Assessment:** Defines all PCB sources and pathways and their respective magnitudes, along with key data gaps.
- **PCB Best Management Practices:** Defines the PCB management practices under consideration, and the expected costs and removal efficiency of each option.
- **Information/Education:** Describes activities designed to inform the public about the existing health advisories, effects of PCBs on human health, and on measures that the average citizen can adopt to reduce the amount of PCBs in our environment. It is expected that a separate party will be engaged to identify public information/education activities.
- **Recommended Implementation Plan:** Defines the specific PCB management practices recommended for implementation, the recommended schedule for their implementation and a monitoring program with measurable milestones to assess implementation effectiveness. The plan will establish reasonable time limits for correcting the specific problem, including load reduction or interim targets when appropriate. The plan will include an adaptive management component to allow for course corrections if necessary.
- **Future Studies:** Describes future monitoring activities designed to assess implementation effectiveness and to fill identified data gaps. The implementation effectiveness section will include a description of the specific methods to be used to determine loading reductions achieved over time.

Deliverables:

- Draft comprehensive plan
- Final comprehensive plan

**Task 5: Project Management and Coordination**

This task covers all project management and coordination activities, including monthly project status reports and routine phone participation in all SRRTTF and TTWG meetings. In addition, LimnoTech will participate in one in-person meeting with the SRRTTF and Ecology staff.

Deliverable:

- Meeting presenting the draft comprehensive plan, to solicit and discuss comment prior to preparation of the final plan.

## Budget

The budget is currently estimated as \$145,000, divided by task as follows:

1. Develop Inventory of PCB Sources and Pathways: \$40,000
2. Evaluate Best Management Practices: \$30,000
3. Attain Consensus on Alternatives to Be Included in Plan \$12,000
4. Develop Comprehensive Plan: \$40,000
5. Meetings and Coordination: \$23,000

It is recognized that completion of this scope will require budget for parties other than LimnoTech to conduct Task 3 workshop facilitation and identification of public information/education activities.

## Schedule

The period of performance of this scope of work is expected to be January 2016 through December 2016. The completion dates associated with each task and deliverable are tabulated below, assuming a January start date.

Table 1

<b>Task: Deliverable</b>	<b>Completion Date</b>
1: Draft memorandum defining inventory of known sources and pathways to be considered	January 22, 2016
1: Final memorandum defining inventory of known sources and pathways to be considered	February 19, 2015
1: Draft memorandum defining magnitude of loading from each source and pathway.	March 28, 2016
1: Final memorandum defining magnitude of loading from each source and pathway.	May 18, 2016
2: Draft memorandum defining inventory of BMPs to be considered	February 19, 2016
2: Final memorandum defining inventory of BMPs to be considered	May 18, 2016
2: Draft memorandum defining cost of implementation and expected pollutant removal efficiency for each BMP.	June 1, 2016
2: Final memorandum defining cost of implementation and expected pollutant removal efficiency for each BMP.	July 14, 2016
3: Workshop to prioritize alternatives, and identify implementing parties	July 22, 2016
3: Additional meetings or small work groups.	July 23 - August 17.
4: Draft comprehensive plan	September 15, 2016*
5: Meeting to Present Draft Comprehensive Plan	September 22, 2016
4: Final comprehensive plan	December 16, 2016

\*This schedule assumes that the SRRTTF will attain final consensus on the BMPs and schedules to be included in the final plan by August 17, 2016.