PROJECT EXPERIENCE

Development and Implementation of Comprehensive Plan to Address PCBs in the Spokane River

CLIENT: Spokane River Regional Toxics Task Force
COMPLETION DATE: Ongoing

Project Highlights and Benefits

- Conducted comprehensive data gap assessment
- Designed and led implementation of monitoring programs to collect data to fill data gaps
- Developed and applied mass balance models to identify unmonitored groundwater sources
- Served as primary author of Comprehensive Plan

The Spokane River Regional Toxics Task Force was created in 2012 to lead efforts to find and reduce toxic compounds in the Spokane River, with the goal of developing and implementing a Comprehensive Plan to bring the Spokane River into compliance with water quality standards for PCBs. As primary technical consultant to the Task Force, LimnoTech conducted the necessary studies to support development of the Comprehensive Plan, served as primary author of the Plan, and is now participating in efforts to implement the Plan.

The Washington State Department of Ecology, in lieu of developing a Total Maximum Daily Load for PCBs in the Spokane River, required NPDES permittees to develop an alternative plan via participation in the Spokane River Regional Toxic Task Force. The Task Force represents a broad group of interests including industries, conservation groups, and state, local and Federal government agencies. In 2012, these interests carefully crafted a Memorandum of Agreement that provided the necessary structure to guide towards reaching common goals through consensus decision making. LimnoTech was selected to serve as primary technical consultant to the Task Force, a role that continues to date.

Technical work conducted in this role has included compilation of all data available as of 2013 into an Access database; conducting a data gap assessment to determine the sufficiency of available data to support development of a Comprehensive Plan; development of a field monitoring program for PCBs to fill identified data gaps; and development of homolog-specific mass balance models designed to identify the presence of unmonitored groundwater sources.

In 2016, LimnoTech served as lead author of the "Comprehensive Plan to Reduce Polychlorinated Biphenyls (PCBs) in the Spokane River." The Plan included a thorough source assessment, quantifying the magnitude of PCB in different source categories, as well as the transport mechanisms by which these sources were delivered to the Spokane River. The Plan included a survey of all potentially relevant control actions available to address PCB contamination, and evaluated the cost and effectiveness of each of these actions. The implementation section of the Plan listed specific activities to be conducted to control PCBs, while a final section devoted to future studies intended to assess the effectiveness of implementation activities as well as evaluate potential additional control actions.

LimnoTech's recent work has focused on implementation activities, including the conduct of fingerprinting analyses to identify new groundwater PCB sources and bioaccumulation modeling to identify source pathways most responsible for elevated PCB concentrations in fish.

A review of the Comprehensive Plan development stated: "Six years ago this process faced naysayers on all sides; many people said the challenge before the Task Force—to find ways to reduce PCBs and create a comprehensive PCB reduction plan—was too great and the differences between the stakeholders too large. Yet, when the Task Force approved its Comprehensive Plan to Reduce PCBs in the Spokane River in November 2016, a major milestone was achieved and the seemingly impossible was accomplished."