

**FY2013 Municipal Stormwater Grants of Regional or Statewide  
Significance Proposal**

**A. Cover Sheet**

- 1. **PROJECT TITLE:**      **STORMWATER POLLUTION PREVENTION: PCBs IN MUNICIPAL PRODUCTS**
  
- 2. **LOCAL GOVERNMENT:**    CITY OF SPOKANE
- 3. **TAX ID NUMBER**        91-6001280
- 4. **STAFF CONTACT:**        LYNN SCHMIDT, STORMWATER PERMIT COORDINATOR  
CITY OF SPOKANE WASTEWATER MANAGEMENT DEPARTMENT  
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**SIGNATURE AND CERTIFICATION**

I CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE INFORMATION IN THIS APPLICATION IS TRUE AND CORRECT AND THAT I AM **THE LEGALLY AUTHORIZED SIGNATORY OR DESIGNEE** FOR THE SUBMITTAL OF THIS INFORMATION ON BEHALF OF THE APPLICANT.

DALE ARNOLD  
PRINTED NAME

  
SIGNATURE  
FOR

DIRECTOR - WASTEWATER  
TITLE

9/27/13  
DATE

## B. Abstract

PCBs are a toxic environmental contaminant found ubiquitously in the environment. The Washington 2008 303(d) list has 113 Category 5 listings for PCBs, covering 59 waterbodies (Ecology, 2010). Once thought to be a legacy contaminant, PCBs have been found in numerous commercially available products such as motor oil, hydraulic fluid, pigments, and caulk. These products can easily come into contact with rain water and contribute to PCBs in stormwater runoff. Municipalities are concerned about the presence of PCBs in commonly used products such as yellow road paint, asphalt sealers, and de-icer, for example. However, limited data is available as to the concentration of PCBs in products used for road and facility maintenance. The purpose of this grant proposal is to perform PCB analysis on products commonly used by municipalities. The information will be used to inform permittees and to help them make decisions about pollution prevention measures to prevent PCBs from entering stormwater runoff. Data gathered from this proposal would also be beneficial to statewide efforts to identify and reduce PCB sources. This proposal is supported by the Spokane River Regional Toxics Task Force, the Washington Stormwater Center, Asotin County, the City of Pullman, the City of Spokane Valley, and the City of Pasco, who have a common interest in the identification and reduction of PCBs in the Spokane River watershed and across the State of Washington.

# C. Work Plan

## I. Project purpose

The purpose of this project is to support pollution prevention measures and aid in illicit discharge detection and elimination by identifying PCBs in commonly used municipal products that come into contact with stormwater, such as road paint, asphalt sealers, and de-icer. PCBs are a pollutant of concern in many Washington State watersheds. There were 113 Category 5 listings on the Washington 2008 303(d) list, and PCBs are a priority in many watersheds such as the Spokane River, Lower Duwamish Waterway, the Wenatchee River, and Lake Washington. The Department of Ecology is currently preparing a Chemical Action Plan for PCBs, in part due to the concern over PCBs in new products. Product sampling from this proposal will build on Ecology's growing datasets, such as the recent sampling performed on pigments and caulks. This proposal not only aids municipalities in stormwater pollution prevention, but also helps meet objectives of Toxics Management Plans in the Spokane region's NPDES Waste Discharge permits and pollution identification and reduction efforts of the Spokane River Regional Toxics Task Force. The data will also help identify products where green chemistry may be beneficial to reduce incidental production of PCBs in the manufacturing process.

The Spokane River Regional Toxics Task Force was formed in response to the Category 5 PCB listing in portions of the Spokane River. The Task Force is comprised of NPDES permittees including the City of Spokane, state and local agencies, and environmental advocacy groups that are actively working to identify and reduce sources of PCBs in the Spokane River watershed. Other partners in this proposal include the Washington Stormwater Center, Asotin County, and the Cities of Pullman, Spokane Valley, and Pasco, who have a common interest in identifying PCBs in municipal products. Activities related to this proposal will benefit not only the Spokane River watershed, but also watersheds across the state and beyond as these products are commonly used by many municipalities.

## 2. Project Description

### 2.1 Project objective

The objective of this project is to sample and analyze products commonly used by municipalities that may contain PCBs. City departments will be queried for products they frequently use that have the potential to come into contact with stormwater. Each of the selected products will be sampled and sent to a qualified laboratory for analysis. A report will be prepared detailing these analytical results. The information will be used to help pollution prevention measures. This data can also be used for public education and public involvement activities, informing citizens about PCBs and impacts to water quality and human health.

## 2.2 Project Activities and Tasks

### 2.2.1. Prepare QAPP

A Quality Assurance Project Plan (QAPP) will be prepared prior to sampling activities. The QAPP will detail product sampling procedures and will be written as a guideline to be widely used by other jurisdictions and entities sampling for PCBs in products around the Spokane region and Washington State. The technical advisor to the Spokane River Regional Toxics Task Force, LimnoTech, will prepare the QAPP.

### 2.2.2. Identify Products

City of Spokane departments will be surveyed to identify which products they commonly use that have the potential to come into contact with stormwater. Items may include road paint, asphalt sealers, de-icer, adhesives, caulk, lubricants, pesticides, and vehicle wash soap, for example. Partnering jurisdictions and the Washington Stormwater Center will also be queried to verify if the same products are used, or if additional products should be sampled. The list will be compiled, narrowed down to a maximum of 25 products, and prioritized based on greatest pollution potential. Five duplicate samples will be collected for quality control purposes, bringing the total number of samples to 30.

### 2.2.3. Sample Products

City of Spokane staff will follow QAPP procedures to collect samples of the identified products and ship them to the laboratory for analysis. Staff from the Wastewater Management Department are experienced in the ultra clean sampling procedures necessary for EPA Method 1668 analysis. They have been collecting PCB samples in stormwater, wastewater, and catch basin sediments for several years.

### 2.2.4. Laboratory Analysis

The samples will be sent to a qualified laboratory for PCB analysis. EPA Method 1668 will be used to analyze all 209 PCB congeners. The laboratory will follow quality assurance and quality control procedures outlined in the QAPP and EPA Method 1668 to produce reliable results.

### 2.2.5. Data Review and Reporting

Data received from the laboratory will be reviewed per quality control procedures. A report will be prepared, detailing the findings of this study. The report will include a description of the products tested, total PCB concentration, homologue patterns, and will include the laboratory reports in an appendix.

## 2.3. Project Outcomes

This project will provide jurisdictions and other interested parties around the state with information on the content of PCBs in commonly used products. The QAPP will also provide sampling and analysis procedures that entities across the state can follow for testing PCBs in additional products not listed in this study.

The information gained from this study will enhance the body of stormwater knowledge across the state and beyond. Little is known about the content of PCBs in products, yet they can potentially contribute PCBs to impaired watersheds through contact with stormwater. The first step to reducing PCB contamination in stormwater is to identify its source(s).

## 2.4. Project Schedule

**Table 1. Project Schedule**

<b>ACTIVITY</b>	<b>DEADLINE</b>
Grant Proposal Due	October 1, 2013
Ecology Issues Final Offer and Applicant List	October 20, 2013
Negotiate and Sign Funding Agreements	December 6, 2013
City Council Review and Contracts	March 1, 2014
Identify Potential Samples for QAPP Preparation	March 15, 2014
Prepare and Review QAPP	May 1, 2014
Ecology QAPP Review	May 15, 2014
Identify Specific Products to Sample	June 1, 2014
Collect Samples (Products Available for Summer Use)	July 1, 2014
Laboratory Analysis	September 1, 2014
Collect Additional Samples (Products Available for Winter Use)	November 1, 2014
Laboratory Analysis	January 2, 2015
Data Review and Draft Report	January 30, 2015
Ecology Review Draft Report	February 13, 2015
Final Report Submission	February 28, 2015

## 2.5. Deliverables

There are two major project deliverables. A QAPP will be prepared for the study that can also be used by other municipalities and agencies for PCB product sampling. The second deliverable is the final report, including details of the products sampled, results, and analysis.

### 3. Partnerships

Partners for this proposal by the City of Spokane include the Spokane River Regional Toxics Task force, Washington Stormwater Center, and the Cities of Pullman, Spokane Valley, and Pasco. Spokane County's wastewater utility is involved in the Task Force, and the The City of Spokane will manage the project and perform the majority of the tasks. Partner organizations will provide in kind resources, which may include review of the products list, coordination of access to products for sampling, and report review.

The Spokane River Regional Toxics Task Force is a non-profit organization whose members include the City of Spokane, Spokane County, Liberty Lake Sewer and Water District, Inland Empire Paper Company, Kaiser Aluminum, The Lands Council, Spokane Riverkeeper, Lake Spokane Association, Washington State Department of Health, Spokane Regional Health District, and Ecology. The goal of the Task Force is to develop a comprehensive plan to bring the Spokane River into compliance with PCB water quality standards.

### 4. Project Management

#### 4.1 Project Team Structure

Staff from the City of Spokane Wastewater Management Department will be responsible for this project. The technical consultant to the Spokane River Regional Toxics Task Force, LimnoTech, will prepare the QAPP as a subcontractor.

**Table 2. Project Team**

<b>NAME</b>	<b>TITLE</b>	<b>RESPONSIBILITY</b>
<b>Dale Arnold</b> City of Spokane Wastewater Management	Director	Reviews and Approves QAPP and Project Report
<b>Lynn Schmidt</b> City of Spokane Wastewater Management	Stormwater Permit Coordinator	Project Manager; Reviews QAPP; Coordinates Preparation of Product List and Sampling Activities; Prepares Project Report
<b>Michael Cannon</b> City of Spokane Wastewater Management	Laboratory Supervisor	Reviews QAPP; Laboratory Staff Supervisor
<b>Jeff Donovan</b> City of Spokane Wastewater Management	Chemist	General Contact, Reviews QAPP and Final Report
<b>Gary Bussiere</b> City of Spokane Wastewater Management	Laboratory Technician	Collects Samples
<b>Kyle Arrington</b> City of Spokane Wastewater Management	Laboratory Technician	Collects Samples
<b>Dave Dilks, Ph.D.</b> LimnoTech Ann Arbor, MI	Vice President, LimnoTech	Prepares QAPP

## 4.2. Staff Qualifications and Experience

The City of Spokane began an aggressive PCB monitoring program in 2010 in response to a Consent Decree with the Spokane Riverkeeper. The project has included sampling and analysis of PCBs in catch basin sediments and stormwater performed by Wastewater Management staff. Various motor oils and hydraulic fluid have also been sampled. Over the past three years, nearly two hundred PCB samples have been collected. The project has been coordinated with Ecology's Urban Waters program staff in Spokane for proper sampling procedures and to prevent duplication of efforts. In addition, the City routinely samples for PCBs in the wastewater collection system and treatment plant effluent as a requirement of the NPDES Waste Discharge permit.

### **Dale Arnold, City of Spokane –Director**

Dale is the Director of the Wastewater Management Department, responsible for the stormwater and wastewater collection system as well as the Riverside Park Water Reclamation Facility. Dale oversees the City's PCB sampling and analysis program. He will review final documents and provide guidance as needed (5 hours).

### **Lynn Schmidt, P.E. City of Spokane – Stormwater Permit Coordinator**

Lynn has 7 years of experience in the water resources and environmental engineering field and has been involved in the City of Spokane's PCB sampling efforts for the past two years. She holds an M.S. in Environmental Engineering and a B.S. in Civil Engineering from Washington State University. Lynn will manage the project, including preparation of the product list, coordinating QAPP preparation and sampling efforts, and preparation of the project report (120 hours).

### **Michael Cannon, City of Spokane – Laboratory Supervisor**

Mike is the Laboratory Supervisor at the Riverside Park Water Reclamation Facility (RPWRF), and has been working in this laboratory for 22 years. Mike's experience includes 10 years as a photo processing technician, 2 years in an FDA lab, and 22 years at the City of Spokane, including 9 years as a laboratory technician, 4 years as a chemist, and 9 years as the Laboratory Supervisor. He has a degree in Biology with a minor in Chemistry from Eastern Washington University. Mike will be available as a general contact and will review the QAPP. (5 hours)

### **Jeff Donovan, City of Spokane – Chemist**

Jeff has B.S. in Chemistry from Eastern Washington University and has 4 years of experience working in a wastewater laboratory. Jeff understands the requirements of PCB sampling, testing, and data validation for the various approved test methods (EPA 1668, EPA 608, and EPA 8082) and routinely validates and analyzes PCB data collected by the City of Spokane and tested through contracted laboratories. Jeff will be available as a general contact and will review the QAPP and final report. (5 hours)

### **Gary Bussiere, City of Spokane – Laboratory Technician**

Gary has worked for 41 years as a laboratory technician, including 10 years performing research and development for Radiant Color Co., 12 years at Kaiser Aluminum's research facility in Pleasanton, CA, and 19 years with the City of Spokane RPWRF. He received a degree in Biology from San Francisco State. Gary will collect PCB samples for this project. (20 hours).

### **Kyle Arrington, City of Spokane – Laboratory Technician**

Kyle has three years of PCB sampling experience in various types of wastewater and stormwater with the City of Spokane RPWRF laboratory and has a total of six years of general sampling experience. He received a degree in Biology with a minor in Chemistry from Eastern Washington University. Kyle will collect PCB samples for this project. (20 hours).

### **Partnership Staff**

Partner jurisdictions and organizations will provide in-kind support for the project. They will review the product list, assist in coordination of product sampling if samples are needed from other



jurisdictions, and review the final report. The following partners have expressed their willingness to participate:

Spokane River Regional Toxics Task Force Members and Staff Contacts:

Spokane County, Dave Moss  
Liberty Lake Sewer and Water District, Bijay Adams  
Inland Empire Paper Company, Doug Krapas  
Kaiser Aluminum, Bud Leber  
The Lands Council, Mike Petersen  
Spokane Riverkeeper, Bart Mihailovich  
Lake Spokane Association, Galen Buterbaugh  
Washington State Department of Health  
Spokane Regional Health District, Mike LaScuola  
Washington State Department of Ecology, Adriane Borgias

Washington Stormwater Center, Lisa Rozmyn  
Spokane County Stormwater Utility, Russ Connole and Matt Zarecor  
Asotin County, Cheryl Sonnen  
City of Pullman, Rob Buchert  
City of Spokane Valley, Art Jenkins  
City of Pasco, Teresa Reed-Jennings

## D. Budget

*Table 3. Budget*

BUDGET ITEM	UNITS	UNIT PRICE	AMOUNT
<b>Salaries</b>			
Dale Arnold	5 hours	76.30	381.48
Lynn Schmidt	120 hours	38.19	4,582.61
Michael Cannon	5 hours	52.05	260.27
Jeff Donovan	5 hours	38.65	193.27
Gary Bussiere	20 hours	38.04	760.84
Kyle Arrington	20 hours	34.50	689.98
<b>Contractual</b>			
LimnoTech QAPP	Lump Sum		\$10,000
Laboratory Analysis	30 samples	\$1,000	\$30,000
<b>Other</b>			
Sample Shipping			\$500
Indirect Costs (25%)	Actual Labor Hours	Varies Per Unit Costs	\$1,717.11
<b>TOTAL PROJECT BUDGET</b>			<b>\$49,085</b>

The salary budget item reflects the expected City of Spokane staff time needed to complete the project. Contractual elements include preparation of the QAPP and laboratory analysis. The QAPP will be prepared by a qualified, experienced consultant who is also preparing the QAPP and Sampling and Analysis Plan for the Spokane River Regional Toxics Task Force. Laboratory analysis will be performed by a qualified contract laboratory. Samples will need to be shipped as there are no laboratories qualified to perform EPA Method 1668 analysis in Spokane.

# References

Washington State Department of Ecology, 2010. An Assessment of the PCB and Dioxin Background in Washington Freshwater Fish, with Recommendations for Prioritizing 303(d) Listings. Publication No. 10-03-007