

## Memorandum

**From:** Tim Towey, Kat Ridolfi, Dave Dilks      **Date:** June 19, 2013  
**To:** Spokane River Regional Toxics Task Force      **Project:** SRRTTF  
**CC:**  
**SUBJECT:** Status Report on Data Gathering Activities

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### *Summary*

LimnoTech was hired to provide technical support to the Spokane River Regional Toxics Task Force (SRRTTF) in their work to identify and reduce PCBs and dioxins at their source in the watershed. Initial tasks in this support consist of identification and collection of available data to define existing PCB and dioxin sources, loads and sinks. An April 17 memorandum, "Data Request Memorandum in Support of PCB and Dioxin Control," identified potential data sources. Our recent work has consisted on contacting the data sources identified in that memorandum and collecting relevant data.

This data gathering task is scheduled to run through the end of June. This memorandum serves to provide a status update on data collection. Appendix A describes the progress associated with each category identified in the Data Request Memorandum. Data sources have been contacted for each category, and the large majority of available data has already been obtained. We are waiting for a few sources to provide the data that we requested of them, and expect to have the data in hand by the end of June and remain on schedule.

## Appendix A. Progress Details

Data Category	Known and Potential Data Sources	Contacts for Obtaining Data	Progress
<p>Wastewater Treatment Plant Loads</p> <ul style="list-style-type: none"> <li>– WWTP daily flow design flow,</li> <li>– effluent PCB,</li> <li>– effluent dioxin,</li> <li>– influent PCB influent dioxin, total suspended solids</li> </ul>	<p>Municipalities;                      Inland Empire Paper;                      Kaiser Aluminum;                      Ecology;                      IDEQ;                      EPA Region 10;                      Discharge Monitoring Reports;                      Annual Toxics Management Plan Reports;                      Environmental Assessment Program projects;                      Urban Waters Reports;                      PARIS database                      City of Post Falls</p>	<p>Ellie Key, Permit Manager, Spokane                      Liberty Lake Sewer and Water District (LLSWD),                      Spokane County WWTP,                      City of Spokane WWTP,                      Pat Hallinan, Permit Manager, Spokane                      Inland Empire Paper Company, Kaiser Aluminum                      Dale Norton, Environmental Assessment Program, Lacey                      Arianne Fernandez, Urban Waters, Spokane                      Dan Redline, IDEQ, Coeur d’Alene, ID                      Brian Nickel, USEPA, Seattle, WA                      Sandra Phillips, Spokane Regional Health District                      Mike Neher, City of Post Falls</p>	<p>Received data from Kaiser, Post Falls, City of Spokane, Spokane County and Liberty Lake.</p> <p>Possible additional data from Arianne Fernandez.</p> <p>Contacted Idaho DEQ but PCBs and dioxin are not monitored in effluent. New permits do require this monitoring but new data unavailable.</p>

<b>Data Category</b>	<b>Known and Potential Data Sources</b>	<b>Contacts for Obtaining Data</b>	<b>Progress</b>
Stream Flow Information for Spokane River and Tributaries	USGS; Ecology; Spokane County Conservation District; River/Aquifer and In-stream flow studies; DO and other TMDL studies for Spokane River Hangman/Latah; Creek, and Little Spokane River; Washington Water Science Center; National Water Information System	Guy Gregory, Water Resources, Spokane; Jim Ross, Environmental Assessment Program, Spokane; Elaine Snouwaert, Water Quality, Spokane; Greg Perry, USGS	Downloaded USGS data
Water column measurements of PCB and dioxin concentrations for Spokane River and tributaries	Ecology, USEPA, STORET, IDEQ, River/Aquifer and In-stream flow studies; DO and other TMDL studies for Spokane River; Hangman/Latah Creek, and Little Spokane River, Environmental; Information Management System, Project Quality Assurance Project Plans; Ecology PCB study for fish hatcheries (Little Spokane River Tributary); EIM database	Arianne Fernandez, Urban Waters, Spokane Dale Norton, Environmental Assessment Program, Lacey	Downloaded EIM data.  Expecting additional data from Arianne Fernandez.

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<p>Stormwater loads</p> <ul style="list-style-type: none"> <li>– discharge flow,</li> <li>– PCB concentration,</li> <li>– dioxin concentration,</li> <li>– total suspended solids</li> </ul>	<p>Stormwater NPDES for City of Spokane, Spokane County, City of Spokane Valley;                      WSDOT;                      Urban Waters Report for LLSWD                      City of Post Falls</p>	<p>Dave Duncan, Municipal Stormwater Permit Manager, Spokane;                      Lynn Schmidt, City of Spokane;                      Greg Lahti, WSDOT;                      Mike Neher, City of Post Falls</p>	<p>Received Spokane data from Lynn Schmidt.</p> <p>Received available data from Post Falls.</p> <p>DOT data will not be available until October, but does not include PCBs.</p> <p>No additional data found in STORET or available from IDEQ.</p> <p>Expecting additional data from Arianne Fernandez.</p>
<p>Soil Characteristics and Erosion Studies</p>	<p>Soil Survey Geographic Database (SSURGO);                      Municipal Planning Departments;                      Spokane River Watershed NPS Reduction Plan;                      GIS Inventory</p>	<p>Arianne Fernandez, Urban Waters, Spokane;                      Dave Moore, Wetlands, Spokane;                      Rob Lindsay, Spokane County</p>	<p>Downloaded SSURGO data.</p> <p>Possible additional data from Arianne Fernandez.</p>
<p>PCBs in stormwater catch basins</p>	<p>City of Spokane;                      Annual Toxics Management Plan Report;                      Urban Waters Reports</p>	<p>Arianne Fernandez, Urban Waters, Spokane;                      Brandy Lubliner, Environmental Assessment Program, Lacey;                      Lynn Schmidt, City of Spokane;                      Dave Duncan, Municipal Stormwater Permit Manager, Spokane</p>	<p>Downloaded data from EIM. Lynn Schmidt provided data for Spokane.</p> <p>Expecting additional data from Arianne Fernandez.</p>

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Atmospheric gas phase PCB Concentrations	Universities, scientific literature; Ecology White Paper on Atmospheric Deposition; Washington Department of Ecology for Kaiser Aluminum; Spokane Regional Clean Air Source Testing; Reports (Waste to Energy Plant, Inland Empire Paper, Area sources such as oil burners, yard waste)	Arianne Fernandez, Urban Waters, Spokane; Brandee Era-Miller, Environmental Assessment Program, Lacey; Greg Flibbert, Air Quality Program, Spokane; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	Obtained white paper from Brandee Era-Miller – Atmospheric gas-phase PCB measurements were identified as data gap.
Measured atmospheric deposition rates for dioxin	Universities, scientific literature; Ecology White Paper on Atmospheric Deposition; Washington Department of Ecology for Kaiser Aluminum; Spokane Regional Clean Air Source Testing; Reports (Waste to Energy Plant, Inland Empire Paper, Area sources such as oil burners, yard waste)	Arianne Fernandez, Urban Waters, Spokane; Brandee Era-Miller, Environmental Assessment Program, Lacey; Greg Flibbert, Air Quality Program, Spokane; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	Obtained white paper from Brandee Era-Miller – Atmospheric dioxin measurements were identified as data gap.
Number and size of smelters	Toxics Release Inventory; Facilities SITES database	Bill Dameworth, Spokane Regional Clean Air Agency	April Westby looking into former smelter.  Ecology Facility/Sites database only showed Kaiser Aluminum.

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Yard waste burning studies	USEPA dioxin source inventory; Possible Regional EPA air quality studies; Possible USFS dioxin studies	Greg Flibbert, Air Quality Program, Spokane	Yard waste burning is not allowed in City of Spokane.  Permit required elsewhere in state – possibility of querying DNR system for permit numbers, but wouldn't cover city or private lands (e.g., orchards, grass burning).
Number of vehicle registrations	Department of Motor Vehicles; Studies associated with the SRCAA indirect source rule	Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	Obtained registrations for Stevens, Lincoln and Spokane counties (broken down by county) for passenger vehicles and personal use trucks.
Fire fighting reports	Local Fire Departments; List of Fire Departments from SRCAA; Ecology Spill reports; TSCA Spill Database; Kootenai County Fire & Rescue	Ted Hamlin, Emergency Response Spill Team, Spokane; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency; Warren Merrit, Kootenai County Fire & Rescue	Ecology has a statewide spill response database. Mike Hepp has provided example queries.
Soil PCB and dioxin concentration	Site specific measurements, scientific literature; Kaiser Aluminum Clean Up project; Other past PCB clean ups; Avista Clean-ups; Possible USFS dioxin studies; ISIS database; <a href="http://www.ecy.wa.gov/programs/tcp/mtca_gen/hazsites.html">http://www.ecy.wa.gov/programs/tcp/mtca_gen/hazsites.html</a> ; Ecology EIM	Arianne Fernandez, Urban Waters, Spokane; Ginny Darrell, Dave George, Patty Carter, Toxics Cleanup Program, Spokane; Mike LaScuola, SRHD (historic WW discharge sites)	Downloaded data from EIM.  Downloaded hazardous sites list.  No additional data found in STORET or available from IDEQ.  Expecting additional data from Arianne Fernandez.

Data Category	Known and Potential Data Sources	Contacts for Obtaining Data	Progress
PCB and Dioxin emissions from incineration activities	EPA Dioxin inventory, scientific literature; Spokane Regional Clean Air Source Testing Reports (Waste to Energy Plant, Inland Empire Paper, Area sources such as oil burners, yard waste)	Greg Flibbert, Air Quality Program, Spokane; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	Downloaded EPA dioxin inventory document.  April Westby may be able to provide additional information regarding municipal incinerator.
Number and size of petroleum refineries	Toxics Release Inventory; Local petroleum facilities; Spokane Aquifer Joint Board (SAJB) Potential Containment Source Inventory (PCSI)	SITES database; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency; Mike Hermanson, Spokane County	No refineries have been identified in Spokane County.
Number and size of incinerators	Toxics Release Inventory; Testing of ash for dioxin; Oil sources at local facilities; Spokane Regional Clean Air Source Testing Reports (Waste to Energy Plant, Inland Empire Paper, Area sources such as oil burners, yard waste); SAJB-PCSI	Arianne Fernandez, Urban Waters, Spokane; Greg Flibbert, Air Quality Program, Spokane; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	County has one municipal incinerator.  April Westby may be able to provide additional information regarding municipal incinerator.
Number and size of demolition sites	Local government demolition records; Spokane Regional Clean Air Agency for asbestos notifications	Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	Demolition permits may be available, but not likely to have building age information.

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Number of commercial buildings constructed between 1950 and 1980	US Census Bureau; Other Washington Toxics Assessment reports	Holly Davies, Chemical Action Plan for PCB, Lacey	Submitted query to US Census Bureau. Census librarian provided link to statistical abstracts, which have the annual value of all construction for City of Spokane and the annual number of dwelling units constructed.
Land Use Maps for 1950-1980	Municipalities; USDA, GISDATA Map Studio; Local GIS data; Sanborn Maps; Spokane County Assessor Database	Mike Cuttle, Water Quality, Spokane; Richard Darnell, Water Resources, Spokane; Arianne Fernandez, Urban Waters, Spokane; Sandra Phillips, Spokane Regional Health District; Mike Hermanson, Spokane County	Downloaded relevant aerial photos dating back to 1946.  Contacted Spokane County GIS dept. Shauna Ernst looking into availability of older zoning/land use maps.
PCB content of caulk on commercial buildings	Scientific Literature	Holly Davies, Chemical Action Plan for PCB, Lacey; Sandra Phillips, Spokane Regional Health District <a href="http://www.epa.gov/pcbsincaulk/">http://www.epa.gov/pcbsincaulk/</a>	Downloaded EPA reports on PCBs in caulk.  Holly Davies also compiling data on issue.



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<p>Numbers and sizes of auto dismantlers, computer and electronics recyclers, transfer stations, landfills, metal recyclers, and white goods recyclers</p>	<p>Local government listings Waste Management Spokane, City of Spokane, Spokane County, Washington Ecycle program; Inland Empire Paper (paper recycling); Pacific Steel Washington Ecycle database InfoUSA (Spokane County)</p>	<p>Ted Hamlin, Water Quality/Urban Waters, Spokane; Mike LaScuola and Sandy Phillips, Spokane County Regional Health District; Doug Krapas, Inland Empire Paper; Mike Hermanson, Spokane County</p>	<p>Downloaded name and address of relevant facilities from Ecology Facility/Sites database.</p> <p>No size or production figures obtained.</p> <p>Contacted Spokane County GIS dept. Shauna Ernst looking into availability of querying GIS database for this info.</p>
<p>Results of survey of industrial practices</p>	<p>Spokane River Urban Waters Team; Source control studies and activities; WWTP Toxics Management Plans and reports</p>	<p>Arianne Fernandez, Urban Waters, Spokane Ellie Key, WWTP Permit Manager, Spokane; Pat Hallinan, Industrial Permit Manager, Spokane; Dave Duncan, Municipal Stormwater Permit Manager, Spokane; Dale Norton and Lynn Schmidt, City of Spokane; Mike LaScuola and Sandy Phillips, Spokane County Regional Health District</p>	<p>Arianne Fernandez does not have survey results, but has knowledge of industrial practices.</p> <p>Will follow up with Sandy Phillips regarding Ecology LSC database.</p>

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Large Scale Transformers and capacitors	EPA Database; Avista, Inland Power, Modern Electric, Vera Water & Power	Holly Davies, Chemical Action Plan for PCB, Lacey; Kevin Booth, Avista	Downloaded EPA database information.  Holly Davies has submitted data request to Avista.  We followed up with recent call to Avista.
Illegal dumping reports/arrests	Local Police Departments; Ecology Spills and Emergency Response Team Reports; Post Falls Police Department	Ted Hamlin, Urban Waters/Spill Team/Water Quality Spokane; Scott Haug, Post Falls Police Department	Received report from Post Falls police department.  Mike Hepp has provided results of example queries and we can follow-up with additional queries.
Number and size of pesticide manufacturing, pulp bleaching, PVC manufacturing operations	Toxics Release Inventory and local government listings; SITES database; Panhandle Health District SAJB PCSI	Lora Whalen, Panhandle Health District Mike Hermanson, Spokane County	Downloaded name and address of relevant facilities from Ecology Facility/Sites database.  No size or production figures obtained.

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Dam Release Information	Avista; USGS; FERC FEIS for Spokane and Post Falls; 401 Water Quality Certification documents and reports	Guy Gregory, Water Resources, Spokane; Meghan Lunney, Avista; Steve Ashe, Avista; Kevin Booth, Avista	Meghan Lunney indicated that USGS has relevant flow data, but could set up a meeting with Steve Ashe if we need to get a better feel for how dams are operated. Avista also has Spokane River information here: <a href="http://www.avistautilities.com/environment/spokaneriver/Pages/default.aspx">http://www.avistautilities.com/environment/spokaneriver/Pages/default.aspx</a>
Spokane River and tributary water column measurements: – temperature, – suspended solids, – and particulate and dissolved organic carbon concentrations	Ecology, Region 10, STORET, IDEQ Spokane River and tributary Assessment reports for toxics, metals, and dissolved oxygen  Dissolved Oxygen Use Attainability Analysis EIM Database	Arianne Fernandez, Urban Waters, Spokane; Dale Norton, Environmental Assessment Program, Lacey; Jim Ross, Environmental Assessment Program, Spokane;	Downloaded data from EIM database.  Expecting additional data from Arianne Fernandez.
Tributary watershed boundaries	National Hydrography Dataset WRIA Webpages Spokane River Water Resource Inventory Areas 54, 55, 57  City of Spokane GIS stormwater database	Adriane Borgias, Water Quality, Spokane; Arianne Fernandez, Urban Waters, Spokane;	Downloaded from NHD.
USGS (2007) groundwater flow/model	Already obtained In-stream flow studies, historic datasets	Guy Gregory, Water Resources, Spokane;	Already obtained.

Data Category	Known and Potential Data Sources	Contacts for Obtaining Data	Progress
Other groundwater flow information/models	Literature, site specific investigations	Guy Gregory, Water Resources, Spokane;	Guy Gregory provided additional reports related to surface-water/groundwater interface.
CE-QUAL-W2 water quality model	Already obtained		Already obtained.
Other hydrodynamic and/or water quality models	Ecology, IDEQ DO TMDL water quality model modifications; Environmental Assessment Program reports; Toxics Clean up reports (Kaiser Aluminum and others)	Guy Gregory, Water Resources, Spokane; Dave Moore, Spokane; Dale Norton, Environmental Assessment Program, Spokane; Ginny Darrell, Dave George, Toxics Cleanup Program, Spokane; Andy Dunau, Spokane River Forum	Guy Gregory provided a number of reports related to Spokane River flows (surface-water/groundwater interface, instream flows)
River/Lake bed sediment properties (density, porosity, organic carbon content)	Site specific measurements, model calibration reports scientific literature; 401 Water Quality Certification documents and reports relating to Lake Spokane; Fish studies and bass model; IDEQ	Arianne Fernandez, Urban Waters, Spokane; Meghan Lunney, Avista for Lake Spokane; Andy Dunau, Spokane River Forum, Daniel Redline, IDEQ	Meghan Lunney indicated Ecology has data.  Downloaded EIM data.
River/Lake bed sediment PCB and dioxin concentration	Ecology EIM; USEPA Region 10; STORET; IDEQ; Core sediment data from Lake Spokane; Upriver Dam Clean up	Dale Norton, Environmental Assessment Program, Lacey; Ginny Darrell, Dave George, Toxics Cleanup Program, Spokane; Daniel Redline, IDEQ	Downloaded data from EIM.  No additional data found in STORET or available from IDEQ.  Possible additional data from Arianne Fernandez.

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Sediment Trap measurements	Ecology; USEPA Region 10; STORET; IDEQ; Spokane River studies; EIM Database; Stormwater studies	Dale Norton and Brandee Era Miller, Environmental Assessment Program, Lacey; Arianne Fernandez, Urban Waters, Spokane; Daniel Redline, IDEQ	Downloaded data from EIM database.  Possible additional data from Arianne Fernandez.
Climate data (precipitation, air temperature, solar radiation, wind speed)	NOAA-NCDC Local weather patterns, studies associated with agricultural burning and forest fire air quality MesoWest; Bureau of Reclamation	National Weather Service, Spokane does local weather models and forecasts; Bill Dameworth, April Westby, Spokane Regional Clean Air Agency	Downloaded data from NCDC.
Sediment isotope profiles	Ecology EIM; USEPA Region 10; STORET; IDEQ; Core sediment data from Lake Spokane	Dale Norton, Environmental Assessment Program, Lacey; Daniel Redline, IDEQ	Downloaded data from EIM. (Cesium)
Pollutant specific degradation rates in bed sediments	Scientific literature	Dale Norton, Environmental Assessment Program, Lacey; Holly Davies, Chemical Action Plan for PCB, Lacey	Downloaded several relevant papers.
PCB/dioxin concentrations in groundwater	EIM database	Ginny Darrel, Ecology Toxics Cleanup Program; Guy Gregory, Ecology Water Resources Program	Downloaded data from EIM database.  Received information sheet on PCBs in groundwater related to submersible pumps.

Data Category	Known and Potential Data Sources	Contacts for Obtaining Data	Progress
Railroad locations	USDA, GISDATA Map Studio; Local GIS data; Sanborn Maps		Downloaded Spokane County data.  Contacted Spokane County GIS dept. Shauna Ernst looking into availability of older railroad locations (e.g., if converted to trails).
City of Spokane Combined Sewer Overflow Events	<a href="http://www.spokanewastewater.org/csouupdate.aspx#Monthly">http://www.spokanewastewater.org/csouupdate.aspx#Monthly</a>	Lynn Schmidt, City of Spokane	Lynn Schmidt provided GIS files for catchment delineation in addition to reports available on website.
Identified contaminated sites, cleaned up sites with residual concentrations	Ecology Toxics program	Ginny Darrel, Ecology Toxics Cleanup Program	Downloaded hazardous sites list.  Submitted request to Ginny Darrel based on state clean-up and superfund site extraction from Ecology Facility/Sites database.