MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) EPA NPDES PERMIT NO.: IDS-028223 2014 ANNUAL REPORT

IDAHO TRANSPORTATION DEPARTMENT DISTRICT ONE Kootenai County Coeur d'Alene, Idaho

SUBMITTED BY: IDAHO TRANSPORTATION DEPARTMENT DISTRICT ONE

FOR THE REPORTING PERIOD: JANUARY 1, 2014 TO DECEMBER 31, 2014

JANUARY 26, 2015

INTRODUCTION

This Annual Report has been submitted by the Idaho Transportation Department District One (ITD) in response to reporting requirements set forth in Part IV.C of the EPA Permit #IDS-028223. This permit was issued by the Environmental Protection Agency (EPA) in compliance with the National Pollutant Discharge Elimination System (NPDES) regulations covering storm water discharges from ITD's Municipal Separate Storm Sewer System (MS4) located in Coeur d'Alene, Idaho. This report is hereby submitted to EPA and the Idaho Department of Environmental Quality (DEQ) to satisfy the permit reporting requirements for the Annual Report covering the period from January 1, 2014 through December 31, 2014. The purpose of this Annual Report is to document progress toward achieving the minimum control measures associated with the ITD D1 MS4, as identified by ITD D1's Stormwater Management Program (SWMP). The permit and MS4 documentation can be accessed on the ITD website at: http://www.itd.idaho.gov/enviro/storm%20water/ms4/default.htm

MINIMUM CONTROL MEASURES IDENTIFIED BY THE SWMP

A. PUBLIC EDUCATION AND OUTREACH

- 1. <u>ITD Stormwater Training Opportunities</u> ITD offers instructor led training opportunities in stormwater management and sediment and erosion control. These courses satisfy the qualification requirements for stormwater inspectors on ITD projects. In 2014, ITD provided the following statewide training opportunities to ITD personnel, consultants, and construction contractors:
 - There was 1 Environmental Inspector Requalification Course (8 hours) and 13 people were certified in 2014.
 - There were 8 Water Pollution Control Manager Training Courses (16 hours) and 80 WPCMs were certified in 2014.
- <u>ITD Stormwater Management, Sediment and Erosion Control Guidance</u> Ongoing updates were made to ITD's website relative to the subject of stormwater management during the past reporting period. The ITD website is used as the principal tool for disseminating stormwater information, guidance and contract specifications for ITD projects. The ITD website is the best and most current source for downloading stormwater information from ITD.

The RUSLE II Erosion Model is complete for Idaho/ITD customization and ready for implantation on ITD projects and other construction projects in Idaho. ITD stormwater

training staff went to all 6 ITD Districts in 2014 to provide user assistance and roll out information for the RUSLE II model. The model is intended for use on roadway construction projects as a tool for BMP comparison and selection. The RUSLE II model is also a tool that can be used to help prepare "buffer analyses" as described in the 2012 Construction General Permit. The model and its user guide are currently available for downloading from the ITD website.

- 3. <u>ITD Stormwater Newsletters</u> ITD periodically develops and distributes stormwater management newsletters focusing on the latest stormwater, sediment and erosion control news and information applicable in Idaho. Two newsletters were released in 2014 for the summer and winter periods. The newsletters are attached to this report and can also be downloaded from the ITD website.
- 4. ITD stormwater training staff conducted 4 NPDES CGP project audits/field reviews in District 1 in 2014, including 1 LHTAC sponsored project.

B. PUBLIC INVOLVEMENT/PARTICIPATION

- 1. <u>ITD Website</u> ITD continues to maintain a stormwater/MS4 section on its website. The ITD D1 MS4 permit, annual reports, MS4 map, and water quality data are available on the website for viewing. The public can contact ITD with any comments or questions through the website.
- ITD Maintenance Section Public Involvement ITD's Operations Manager and staff are responsible for performing highway maintenance activities on ITD right of way, including maintenance of stormwater infrastructure. Any public or regulatory agency concerns and comments can be directed to the ITD District 1 Operations Manager at any time during normal business hours by calling 208-772-1200, accessing the ITD website or by visiting or writing to the District 1 Office at 600 W. Prairie Avenue Coeur d'Alene, Idaho 83815.
- 3. <u>ITD Transportation Planning Activities</u> ITD routinely participates the Kootenai Metropolitan Planning Organization (KMPO) quarterly meetings. Formed in 2003, KMPO and its technical arm, the Kootenai County Area Transportation Team (KCATT), meet monthly to facilitate its mission. These groups oversee transportation activities within the federally designated urban area boundary, develop the transportation work plan and a transportation demand model. The KMPO consists of several transportation and land use planning organizations that include the following: Cities of Coeur d'Alene,

Post Falls, Hayden, Rathdrum, Kootenai County, Post Falls Highway District, Lakes Highway District, Eastside Highway District and ITD. The KMPO process also helps shape projects that may become incorporated into ITD's Transportation Improvement Program. KMPO meetings include an open public comment opportunity to allow for public involvement in KMPO activities. Stormwater issues or concerns may be raised by the public during KMPO meetings.

4. <u>Adopt a Highway Program</u> – In 2014, 1050 pounds of litter was removed from the I-90 right of way within the MS4 drainage area.

C. ILLICIT DISCHARGE DETECTION AND ELIMINATION

- 1. <u>Dry Weather Screening</u> On August 28, 2014, the I-90 MS4 was visually observed at open ditches and pipe outfalls to satisfy the requirement for dry weather screening in an effort to identify any potential for illicit discharges to the MS4 system. There had been no measureable precipitation in the area for at least two weeks leading up the dry weather screening event. Hard pipe outfalls were observed immediately up gradient from the 15th Street interchange, down gradient from the 15th Street Interchange and at the Sherman Avenue Interchange. As seen in 2013, ponding was again observed in the open ditch at the pipe outfall immediately above the 15th Street Interchange. This observation was further investigated in 2013 by the City of Coeur d'Alene by evaluating conditions of the City's stormwater system above the ITD/City MS4 connections at Government Way, 4th Street, 7th Street and 9th Street. There are no explanations as to why saturation exists that this location during prolonged dry weather periods. The drainage is clear and shows no signs of contamination. There were no signs of illicit discharges to the ITD MS4 system in 2014.
- Spill Response ITD's spill response procedures are identified in the *Transportation Incident Management Plan for the State of Idaho, January 2008.* This document can be obtained from the ITD website at: http://www.itd.idaho.gov/publications/detour/ITD%20TIM%20Plan_Final_2008.pdf
- <u>Complaint Filing</u> ITD has also set up an electronic file folder to record and track any public complaints or information that may be received. Complaints or other information related to MS4 management and operation can be communicated to the District 1 Headquarters office at 208-772-1200. No specific complaints were recorded during the 2014 reporting period.

- 4. <u>ITD MS4 Map</u> ITD has developed a stormwater infrastructure map of the I-90 facility within the city limits of Coeur d'Alene. The map may be modified over time with new information. No changes to the map were made in 2014. The MS4 map is posted on the ITD website for viewing at: http://www.itd.idaho.gov/enviro/storm%20water/ms4/GIS%20Maps/MS4%20Map%20of%20CdA.pdf.
- 5. <u>Illicit Discharge Training</u> As discussed in Control Measure 1, ITD implements an ongoing stormwater education and training program for its employees and interested contractors in the area of NPDES regulations, stormwater management, and sediment and erosion control BMPs. The training program will be maintained, updated, and revised periodically as regulations change and BMP technical support materials are updated.

D. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

No construction projects were undertaken within the MS4 area during 2014.

E. POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

No development or redevelopment projects were undertaken during 2014 within the portion of the MS4 area operated by ITD.

F. POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The principle stormwater pollutant in highway runoff is sediment (sand) from highway sanding operations. Sediment deposits can build up along roadway shoulders, catch basins, and within open ditches along the roadway. Maintenance activities to address sedimentation of the system include periodic shoulder shaping, drop inlet sediment removal, and ditch cleaning to maintain the original line and grade of the stormwater system. In recent years ITD has scaled back on its use of sand for use as anti-skid material and now uses more salt brine than in the past. Less sanding on I-90 generally means less frequent maintenance to remove sand deposits on shoulders and from drop inlets and ditches. Routine roadway brooming and drop inlet maintenance was conducted by ITD in April of 2014.

ITD maintenance personnel inspected the I-90 stormwater conveyance system in August 2014. All of the highway embankment slopes along the facility are currently stable with no signs of erosion. The catch basins, piping and ditches appear to be in proper working condition. Currently ITD has no concerns with the MS4 operation and has no immediate plans to perform ditch maintenance. In the future, if sediment removal from ditches becomes necessary again, the work will be conducted during dry weather periods when the MS4 is dry and the potential for sediment discharge is low.

Operation and maintenance (O&M) of the I-90 MS4 does not require any of the following activities: fleet vehicle maintenance and washing, materials storage, building maintenance, grounds/park maintenance, hazardous material storage, used oil recycling, sand/salt storage, solid waste transfer activities, spill control and prevention measures for refueling facilities, or snow disposal site operation.

G. CONTROL OF THE DISCHARGE OF POLLUTANTS OF CONCERN

Samples were collected per the MS4 permit requirements in 2014 (see updated data log). Sampling events occurred on 4/22/2014, 6/17/2014 and 10/23/2014. It was not possible to sample a runoff event during the designated July/August sampling period due to lack of precipitation.

In 2013 ITD developed a plan to install an automated stormwater sampling equipment at the MS4 sampling point in the MS4 channel downstream from the Sherman Avenue culvert. The equipment was purchased and received by ITD District 1 in 2014. The equipment includes an ISCO sampler/control unit, suction line, 24-bottle configuration temperature controlled sample tray, power pack, submerged velocity/stage probe, temperature sensor, Flowlink 5.1 software, and modem module. An 8' X 8' equipment building that is lighted and heated has been erected at the Sherman Avenue sampling site. A cellular communication line has also been setup to service the sampling station. The automated sampling system is expected to be operational prior to the 2015 sampling season beginning in March.

The site will monitor all of the parameters specified in the MS4 permit at a preprogrammed flow rate threshold so as to optimize sampling of the "first flush" stormwater flow. The system is designed to collect water samples, continuously record flow and temperature, and send a communication signal to the D1 office for each sampling event so that samples can be immediately retrieved for transport to the laboratory.

H. RESULTS OF INFORMATION COLLECTED AND ANALYZED DURING THE PREVIOUS 12 MONTH PERIOD:

See Attached.

I. SUMMARY OF THE NUMBER OF INSPECTIONS, FORMAL ENFORCEMENT ACTIONS AND SIMILAR ACTIONS PERFORMED BY THE PERMITTEE:

No formal enforcement actions or recommendations were filed during 2014.

J. SUMMARY OF NON-EPA RELATED COMPLAINTS AND/OR ENFORCEMENT ACTIONS:

There were no non-EPA related complaints and/or enforcement actions.

K. COPIES OF EDUCATIONAL MATERIALS, ORDINANCES, INVENTORIES, GUIDANCE MATERIALS OR OTHER PRODUCTS:

Refer to ITD website.

L. ACTIVITIES TO BE UNDERTAKEN IN COMING YEAR:

Continue water quality monitoring; bring automated water quality monitoring station on line; conduct dry weather survey.

M. DESCRIPTION AND SCHEDULE FOR IMPLEMENTATION OF ADDITIONAL BMPS THAT MAY BE NECESSARY BASED ON MONITORING RESULTS TO ENSURE COMPLIANCE WITH APPLICABLE WATER QUALITY STANDARDS:

None

N. NOTICE IF THE PERMITTEE IS RELYING ON ANOTHER ENTITY TO SATISFY PERMIT OBLIGATIONS:

None

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FIGURES AND ATTACHMENTS

- Dry Weather Screening Photographs
- ITD 2014 Stormwater Newsletters
- ITD D1 MS4 2014 Water Quality Laboratory Results
- Automated Water Quality Monitoring Station Photographs



Figure 1 - MS4 outlet into open channel up gradient from 15th Street Interchange.



Figure 2 - MS4 outlet into open channel down gradient from 15th Street Interchange.

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Figure 3 - 15th Street outlet into open channel down gradient from 15th Street Interchange.



Figure 4 - MS4 open channel down gradient from Sherman Avenue (MS4 sampling point).

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Promoting Responsible Stormwater Management Practices Throughout the Idaho Transportation Department and Beyond

Water Quality Monitoring Requirements

Four scenarios can dictate turbidity monitoring requirements on ITD projects. These 4 scenarios are:

- 1) DEQ §401 Certification of an Individual 404 Permit
- 2) DEQ §401 Certification of a Nationwide 404 Permit (NWPs)
- 3) DEQ §401 Certification of the Construction General Permit (CGP)
- 4) NMFS/USFWS Biological Opinion based on Endangered Species Act (ESA) requirements

On many ITD projects more than one of these scenarios can exist, in some cases up to 3 scenarios could exist depending on the phase of work occurring. Monitoring requirements for each of these scenarios are as follows.

- DEQ will typically put project specific monitoring requirements in an individual §401 water quality certification. The wording and requirements can differ slightly based on the DEQ regional office issuing the certification. Typically monitoring will be required during in water work, with sampling upstream of the project to establish background readings, and immediately downstream of any point of discharge and within any visible plume.
- 2) DEQ issued a final §401 water quality certification for the 2012 Nationwide Permits (NWPs) in July of 2012. The certification contains turbidity requirements that apply to NWPs. This includes monitoring during inwater work when project activities are disturbing the stream bed or banks below the ordinary high water mark or there are discharges into flowing water. Again, sampling is required upstream of the in-water project disturbances, and immediately down-current from the in-water disturbance or point of discharge, and within any visible plume. If dewatering is taking place during that in-water work and the water is not being pumped to another area (i.e. upland area, engineered basin or other control), then CGP requirements don't come into play. However, if dewatering to an upland area or engineered basin or control is occurring, then that discharge point is governed by CGP 1.3.d and would be a non-stormwater discharge if it makes it back to the project's receiving water. This monitoring is described next in scenario 3.
- 3) DEQ §401 certification of the 2012 CGP is contained in section 9.7.1 of the CGP. Turbidity monitoring requirements are included in section 9.7.1.6, and again call for monitoring upstream of the project disturbances, and immediately downstream from any point of discharge, and within any visible plume. Important to note is that when the project is not discharging stormwater or non-stormwater (dewatering), no monitoring is required per the 401 certification of the CGP, but there still may be monitoring based on scenario 1,2 or 4.
- 4) National Marine Fisheries/US Fish and Wildlife Service include water quality monitoring in their Biological Opinions for ITD projects. NMFS expects turbidity plumes to be low intensity and brief, and affect a small area based on in-water work with appropriate controls in place. They recognize DEQ's 50 NTU above background requirement, but they allow for a mixing zone and typically don't consider a take exceedance unless turbidity readings taken 150 feet downstream of each sediment source exceed 50 NTU above background for more than 60 minutes, or any instantaneous reading exceeds 207 NTU above background.

In some cases, it may be possible to satisfy more than one sampling scenario with the same sample, however meeting the requirements of one is not a justification for noncompliance in another. It is imperative that the Prime Contractor's Water Pollution Control Manager(s) and ITD Inspector clearly understand which scenario governs which discharges on the project. These various requirements and the strategy to meet them should be discussed and clearly understood by all Operators at the preconstruction meeting.

Talk to your District Environmental Planner with any questions about these requirements, or call Brad Wolfinger or Caleb Lakey at Headquarters Environmental to discuss any project specific scenarios.

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Potential Violation/Prohibited Discharge Reporting Requirements

The potential violation reporting associated with the 4 monitoring scenarios discussed on the previous page are:

- DEQ §401 Certification of an Individual 404 Permit if turbidity is exceeded based on in-water work occurring or work being done below the ordinary high water mark based on the 404 permit, notify the DEQ regional office via HQ ENV of a water quality exceedance immediately of 50 NTU above background.
- 2) DEQ §401 Certification of the NWPs if turbidity is exceeded based on in-water work occurring or work below the ordinary high water mark based on the 404 permit, notify HQ ENV immediately of a water quality exceedance. If dewatering is occurring based on in-water work and it's going to an upland area, engineered basin or other control, that discharge point is governed by CGP 1.3.d as a non-stormwater discharge if it makes it back to the receiving water. If that discharge results in a water quality exceedance of 50 NTU above background, notify the DEQ regional office and EPA immediately via HQ ENV as described next.
- 3) DEQ §401 Certification of the CGP EPA & DEQ must receive verbal notification within 24 hours of a discharge that exceeds 50 NTU above background, or a prohibited discharge in accordance with CGP Part 2.3.1. Follow up notification in writing is required within 5 days. Both notifications will be made through HQ ENV. If the project continues to discharge over the course of consecutive days after reporting, as long as corrective action measures are described in the notification and the measures are actively being implemented, a daily notification is not necessary, but EPA would expect a weekly update on the status and effectiveness of the corrective action measures being implemented.
- 4) NMFS/USFWS Biological Opinion If turbidity readings exceed the permit shut down work, immediately report to DEQ and possibly EPA via HQ ENV depending on the source of the exceedance. Contact NMFS for re-consultation. Typically readings are taken 150 feet downstream of each sediment source exceed 50 NTU above background for more than 60 minutes, or any instantaneous reading exceeds 207 NTU above background in which case scenarios 1-3 are also violated.

In any scenario, a legible turbidity log including date, time, location and turbidity readings in NTUs is required.

BMP of the Quarter - Preservation of Existing Vegetation (EC-2)

Description: The key component to long-term permanent erosion control is a diversified stand of well-established perennial vegetation. To achieve this, existing vegetation should be preserved and left undisturbed as much as possible. Established vegetated areas provide buffer strips, stabilize ground surfaces and slopes, reduce runoff, filter stormwater, as well as protect water quality and aesthetics. It is also extremely cost affective as retained established vegetation can often result in significantly less structural controls being required on a project. This BMP applies to all construction and maintenance projects.

General Considerations: Areas that will be established for preserving natural vegetation should be clearly identified and delineated onsite, in the plans and specifications, and shall be incorporated into the project's SWPPP. The Contractor shall ensure that existing vegetation remains healthy and undamaged.

The Contractor and ITD personnel shall keep all construction equipment, materials, and waste out of the designated areas and prevent unauthorized traffic from disturbing the vegetated area.

Whenever possible, existing drainage patterns through or into the natural area shall left unmodified.



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Innovative Bridge Drainage Design

Bridge deck drainage can be a serious maintenance issue both during and post construction. Often times water runs off the deck and down the slope right at the abutments, causing significant erosion and sometimes even slope failure. Rock lined ditches are a common control to address this issue, but even they can fail for various reasons. District 3 recently completed a bridge project where the bridge deck drains to a curbed section with a drop inlet which daylights to a rock lined outlet at the bottom of the slope. The pictures below show the curb and inlet and the rock lined outlet. Based on the performance of these controls, this design may provide an option to consider on future bridge projects.





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RUSLE2 Erosion Model

ITD's customized version of RUSLE2 is complete and will soon be made publically available on the ITD Stormwater website. This is a powerful tool that will help designers, inspectors, and planners make better decisions about appropriate erosion and sediment controls. A brief "Setup Guide" and "User's Guide" is also being developed and will also be available online. The HQ Stormwater section envisions incorporating RUSLE2 into the SWPPP template



to demonstrate compliance in certain key areas (i.e., buffers, steep slopes, and permanent stabilization). Watch for the release in the near future!

BMP Manual Updates

The ITD Best Management Practices (BMP) Manuals are currently being updated for the first time since the major revision and update that took place in 2011. This includes the Temporary and Construction Site BMPs as well as the Permanent and Post Construction BMPs. The goal of the update is to improve and streamline content and therefore simplify usability and readability. If you have any comments or suggestions on a particular BMP based on your experience please contact Brad Wolfinger or Caleb Lakey at Headquarters Environmental before January 31st.

Stormwater Qualifications

Reminders regarding ITD Stormwater Inspector Quals:

- The ITD E. npdes qualification for stormwater inspections is good for 5 years or until the 2012 Construction General Permit expires. Status of these qualifications and others can be reviewed on the ITD Inspector and Technician Qualification Information and Registry website, or contact the ITD Training and Development Section.
- Contractor's Water Pollution Control Manager (WPCM) qualification is valid for the duration of the 2012 CGP unless 2 years lapse without being designated as a WPCM on an ITD project, and as that designated WPCM, personally conduct required inspections, and complete and sign the required forms for at least two (2) ITD 2802 Stormwater Compliance Inspections.
- The ITD 2905, Inspector Qualification Registration Form was updated recently to show reciprocity for the ITD Inspector Qualification based on a WPCM qualification.

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Recognizing SWPPP Management Excellence

Braun-Jensen, Inc. of Payette Idaho constructed the 4.8 million dollar Weiser River Bridge project during the 2013 construction season. This project involved the replacement of a 78-year-old bridge over the Weiser River south of town and reconstruction of more than 500 feet of bridge approaches was completed. During construction, ITD Resident Engineer Shawna King noticed an exceptional level of proactive SWPPP management by Braun-Jensen. This image captures a small piece of that effort and shows site maps that are clean, easily readable, and updated electronically to show controls as they are installed, removed, or phased from temporary to permanent controls, etc. Nice job Braun-Jensen.



BMP of the Quarter Material & Equipment Use Over Water (NS-13)

Description: Material and equipment use over water consists of procedures for the proper use, storage, and disposal of materials and equipment on bridges, barges, boats, temporary construction platforms, or similar locations that minimize or eliminate the discharge of potential pollutants to a watercourse.

Applications: These procedures shall be implemented for construction materials and wastes (solid and liquid) and any other materials that may be detrimental if released or spilled.

Design Considerations:

-Place drip pans under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is expected to be idle for more than 1 hour.

-Ensure that an adequate supply of spill cleanup materials is available at all times. Identify types of spill control measures to be employed, including the storage of such materials and equipment.

-Maintain equipment in accordance with NS-10 (Vehicle and Equipment Maintenance). If leaking equipment cannot be repaired in a timely manner, remove equipment from over the water.

-Provide watertight curbs or toe boards to contain spills and prevent materials, tools, and debris from leaving the barge, platform, dock, etc. -Secure all materials to prevent discharges to receiving waters via wind.

Ensure the timely and proper removal of accumulated wastes.



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District 1 MS4	WQ Result	S		Concent	ration (mg/	L)										
MS4 Outlet	Date	Flow (cfs)	Temp (deg C.)	TSS (mg/L)	Total Nitrogen	Nitrate	Nitrite	TKN	TP	T. Lead	T. Zinc	hardness	Cl	Mg	Ca	PCBs
Below Sherman IC	11/6/2008	NA	NA	10	2.51	1.8	ND	0.62	0.061	ND	ND	112	17	11.1	26.4	ND
	7/1/2009	NA	NA	3	1.59	0.8	ND	0.57	0.126	ND	ND	NA	19	8.6	26.4	ND
	12/22/2009	NA	NA	96	2.37	1.4	ND	1.01	0.23	ND	0.071	77.6	21	18.3	7.75	ND
	3/26/2010	NA	NA	19	0.76	ND	ND	0.4	0.07	ND	0.025	40.6	9.2	3.82	9.98	ND
	6/9/2010	6.92	13	15	0.63	ND	ND	0.29	0.067	ND	0.017	30	NA	2.68	7.6	ND
	10/29/2010	1.66	7	85	2.11	1.2	ND	0.86	0.17	0.012	0.046	90.6	NA	8.76	21.8	ND
	4/11/2011	8.75	12	13	0.59	ND	ND	0.27	0.066	ND	0.019	30.3	NA	2.81	7.51	ND
	6/13/2011	2.19	14	16	0.38	ND	ND	0.38	0.0686	ND	ND	36.3	NA	3.34	8.96	ND
	11/22/2011	13.65	3.3	47	0.51	ND	ND	0.51	0.155	ND	0.039	10.4	NA	1.09	2.35	ND
	1/30/2012	8.87	5	40	0.945	0.51	ND	0.435	0.132	ND	0.02	28.3	NA	2.78	6.68	NA
	4/26/2012	2.36	12.4	106	3.4	ND	ND	3.4	0.186	0.011	0.06	40.2	6.19	4.04	9.36	ND
	6/5/2012	1.2	14.7	8	0.285	ND	ND	0.285	0.046	ND	ND	37.6	5.07	3.12	9.82	ND
	8/22/2012	0	NA	15	2	0.81	ND	1.19	0.119	ND	0.019	54.5	15.7	4.66	14.1	ND
	10/30/2012	0.06	9.8	14	1.22	0.69	ND	0.528	0.121	ND	0.037	66.5	12.7	6.3	16.1	ND
	5/28/2013	1.69	12	54	0.716	ND	ND	0.716	0.119	ND	0.041	33.4	12.1	3.46	7.66	ND
	6/19/2013	0.57	19	21	0.914	ND	ND	0.914	0.161	ND	0.033	29.3	6.71	2.35	7.85	ND
	8/30/2013	1	18.5	30	2.26	0.95	ND	1.31	0.218	0.0049	0.0398	32.5	5.58	2.39	9.07	ND
	4/22/2014	0.56	8.5	11	0.59	ND	ND	0.509	0.055	ND	0.018	44.8	NA	4.09	11.2	ND
	6/17/2014	0.41	12.7	19	0.817	ND	ND	0.817	0.119	ND	0.035	39.2	NA	3.25	10.3	ND
	10/23/2014	4.61	12.6	39	0.613	ND	ND	0.613	0.215	ND	0.04	13.3	1.61	1.08	3.55	ND

Certificate of Analysis

Order No .: 2014100408

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Idaho Transportation Dept 600 W. Prairie Ave Coeur d'Alene , ID 83815		Project: Date Received:	190 IC Sherman Ave		
Sample:	1	Matrix:	Non-Potable Water		
Location:	I90 Exit 15	D/T Collected:	10/23/2014 13:20		
Sample Type:	Grabs	Collected by:	Wally Brown		

Analyte	Result	Unit	Method	PQL	Test Date	Analyst
Calcium	3.55	mg/L	EPA 200.7	0.17	10/30/14	WM
Chloride	1.61	mg/L	SM 4110B	0.5	10/23/14	WM
Hardness, Total (as CaCO3)	13.3	mg/L	SM 2340	0.2	10/30/14	WM
Lead	ND	mg/L	SM 3120B	0.01	10/31/14	WM
Magnesium	1.08	mg/L	EPA 200.7	0.03	10/30/14	WM
Nitrate-N	ND	mg/L	SM 4110B	0.5	10/23/14	WM
Nitrite-N	ND	mg/L	SM 4110B	0.5	10/23/14	WM
Phosphorus, Total	0.215	mg/L	EPA 365.1	0.007	10/30/14	WM
Total Kjeldahl Nitrogen (N)	0.613	mg/L	SM 4500NORG B	0.09	10/31/14	LR
Total Nitrogen (NO2+NO3+TKN as N)	0.613	mg/L	Calculation		10/31/14	WM
Total Suspended Solids	39.0	mg/L	SM 2540D	1	10/29/14	AC
Zinc	0.040	mg/L	SM 3120B	0.01	10/31/14	WM

Sample: 2 Location: 190 Exit 15 Sample Type: Grabs

Matrix: D/T Collected: Collected by:

Non-Potable Water 10/23/2014 13:20 Wally Brown

Analyte	Result	Unit	Method	PQL	Test Date	Analyst
Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	10/31/14	ANA
Aroclor 1016	ND	ug/L	EPA 8082	0.2	10/31/14	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	10/31/14	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	10/31/14	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	10/31/14	ANA

Comments:

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Laboratory Supervisor, Walter Mueller Date: 11/03/14

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Aroclor 1248	ND	ug/L	EPA 8082	0.2	10/31/14	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	10/31/14	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	10/31/14	ANA

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

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Laboratory Supervisor, Walter Mueller Date: 11/03/14

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Idaho Transportation Dept			Project:	ITD MS4 Sa	mpling				
600 W. Prairie Coeur d'Alene	Ave , ID 83815		Date Received: 06/17/2014 10:10						
Sample:	1		Matrix:	Non-Po	otable Wate	r			
Location:	Sherman IC		D/T Collec	ted:	06/17/2	2014 08:00			
Sample Type:	Grabs		Collected I	by:	Mike H	lartz			
Analyte		Result	Unit	Method	PQL	Test Date	Analyst		
Aroclor (PCB, to	otal)	ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1016		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1221		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1232		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1242		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1248		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1254		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Aroclor 1260		ND	ug/L	EPA 8082	0.2	06/24/14	ANA		
Sample:	2		Matrix:		Non-Po	otable Wate	r		
Location:	Sherman IC		D/T Collec	ted:	06/17/2014 08:00				
Sample Type:	Grabs		Collected b	by:	Mike H	lartz			
Analyte		Result	Unit	Method	PQL	Test Date	Analyst		
Calcium		10.3	mg/L	EPA 200.7	0.17	06/20/14	WM		
Hardness, Total	(as CaCO3)	39.2	mg/L	SM 2340	0.2	06/20/14	WM		
Lead		ND	mg/L	SM 3120	0.01	06/24/14	WM		
Magnesium		3.25	mg/L	EPA 200.7	0.03	06/20/14	WM		
Nitrate-N		ND	mg/L	SM 4110B	0.5	06/17/14	WM		
Nitrite-N		ND	mg/L	SM 4110B	0.5	06/17/14	WM		
Phosphorus, To	tal	0.119	mg/L	EPA 365.1	0.007	06/19/14	WM		
Total Kjeldahl N	itrogen (N)	0.817	mg/L	SM 4500NORG B	0.09	06/20/14	AC		
Total Nitrogen (I	N)	0.817	ma/L	Calculation	0.04	06/20/14	WM		

Comments:

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Laboratory Supervisor, Walter Mueller Date: 07/03/14

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Total Suspended Solids	19	mg/L	SM 2540	1	06/19/14	AH
Zinc	0.035	mg/L	SM 3120	0.01	06/24/14	WM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

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Laboratory Supervisor, Walter Mueller Date: 07/03/14

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Idaho Transpo 600 W. Prairie A	rtation Dept ve	Project:	French Gulch
Coeur d'Alene,	ID 83815	Date Received: 04/22/2014 09:25	
Sample: Location: Sample Type:	1 Sherman IC Grabs	Matrix: D/T Collected: Collected by:	Non-Potable Water 04/22/2014 08:55 Mike Hartz

Analyte	Result	Unit	Method	PQL	Test Date	Analyst
Calcium	11.2	mg/L	EPA 200.7	0.17	04/25/14	WM
Hardness, Total (as CaCO3)	44.8	mg/L	SM 2340	0.2	04/25/14	WM
Lead	ND	mg/L	SM 3120	0.005	05/02/14	WM
Magnesium	4.09	mg/L	EPA 200.7	0.03	04/25/14	WM
Nitrate-N	ND	mg/L	SM 4110B	0.5	04/23/14	WM
Nitrite-N	ND	mg/L	SM 4110B	0.5	04/23/14	WM
Phosphorus, Total	0.055	mg/L	EPA 365.1	0.007	04/24/14	WM
Total Kjeldahl Nitrogen (N)	0.509	mg/L	SM 4500NORG B	0.09	04/25/14	AC
Total Nitrogen (N)	0.509	mg/L	Calculation	0.04	04/25/14	WM
Total Suspended Solids	11	mg/L	SM 2540	1	04/24/14	AH
Zinc	0.018	mg/L	SM 3120	0.005	05/02/14	WM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

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Laboratory Supervisor, Walter Mueller Date: 05/02/14

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Idaho Transp	oortation Dept	Project	: Fr	Frech Gulch					
600 W. Prairie Ave Coeur d'Alene , ID 83815 Da				Date Received: 04/22/2014 09:25					
Sample: 1			Matrix:	Non-P	Non-Potable Water				
Location:	Sherman IC		D/T Collec	ted:	04/22/	04/22/2014 08:55			
Sample Type:	Grabs		Collected I	by:	Mike ⊦	lartz			
Analyte		Result	Unit	Metho	d PQL	Test Date	Analyst		
And In (DOD to	4-15								

Aroclor (PCB, total)	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1016	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1221	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1232	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1242	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1248	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1254	ND	ug/L	EPA 8082	0.2	04/23/14	ANA
Aroclor 1260	ND	ug/L	EPA 8082	0.2	04/23/14	ANA

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

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Laboratory Supervisor, Walter Mueller Date: 05/02/14

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Figure 5 - Automated Water Quality Sampler (to be installed in 2015).



Figure 6 - Sample Station Building at Sherman Avenue Interchange.

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Figure 7 - AC Power Installed at Sampling Station.



Figure 8 - MS4 Outlet at Sherman Avenue Interchange Sampling Station.

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