Stormwater Management Program

NPDES Permit #IDS028207

Eric Shanley, P.E., Director of Highways
11341 N. Ramsey Road
Hayden, Idaho 83835
(208) 772-7527
http://www.lakeshighwaydistrict.com

Contents

ACRONYMS

AHDS Associated Highway District Standards
BMP Best Management Practice
CFR Code of Federal Regulations
CGP Construction General Permit CWA Clean Water Act
EPA Environmental Protection Agency
ERP Enforcement Response Policy
ESHD East Side Highway District
GIS Geographic Information System
IDDE Illicit Discharge Detection & Elimination
IDEQ Idaho Department of Environmental Quality
LHD Lakes Highway District
µg/L Micrograms per Liter
mg/L Milligrams per Liter
MEP Maximum Extent Practicable
MS4 Municipal Separate Storm Sewer System
NPDES National Pollutant Discharge Elimination System
O&M Operations & Maintenance
ORI Outfall Reconnaissance Inventory
PCB Polychlorinated Biphenyls
PFHD Post Falls Highway District
SEEP Stormwater & Erosion Education Program
SWMP Storm Water Management Program
TMDL Total Maximum Daily Load
US United States
USACE United States Army Corps of Engineers
WLA Wasteload Allocations
WOTUS Waters of the United States
WQS Water Quality Standards

DEFINITIONS

Best Management Practice (BMP): Schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also mean treatment requirements operating procedures, and practices to control, runoff, spillage, or leads, sludge, or waste disposal, or drainage from raw material storages. See 40 CFR 122.2 and 122.44(k). For the purposes of the NPDES Permit, BMP broadly refers to any type of structural or non-structural practice or activity undertaken by the Permittee in the course of implementing its SWMP.

Code of Federal Regulations (CFR): The official annual compilation of all regulations and rules promulgated during the previous year by the agencies of the United States government, combined with all the previously issued regulations and rules of those agencies that are still in effect.

Construction General Permit (CGP): The current available version of EPA's MPDES General Permit for Stormwater Discharges for Construction Activities in Idaho, Permit No. IDR12-0000. EPA's CGP is posted on EPA's website at www.epa.gov/npdes/stormwater/gcp.

Construction Activity: Includes, but is not limited to, clearing, grading, excavation, and other site preparation work related to the construction of residential buildings and non-residential buildings, and heavy construction (e.g., highways, streets, bridges, tunnels, pipelines, transmission lines, and industrial non-building structures).

Coeur d'Alene Urbanized Area (NPDES Permit Area): Defined by the decennial census data from Year 2000 and Year 2010. An urbanized area is the densely settled core of census tracts and/or census blocks that have a population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of Census to determine the geographic boundaries of the most heavily developed and dense urban areas. Once a small MS4 is designated into the program based on the UA boundaries, it cannot be waived from the program if in subsequent UA calculation the small MS4 is no longer with the UA boundaries. The following websites are for the Census 2000 and Census 2010 UA maps, respectively:
http://www2.census.gov/geo/maps/urbanarea/uaoutline/UA2000/ua18451/ua18451_01.pdf
http://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua18451_coeur_dalene_id/

2020 Census Bureau maps are expected to be available December 2022.

Clean Water Act (CWA): (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, 33 U.S.C. § 1251 et seq. [40 CFR §122.2].

Discharge of a Pollutant: any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person

which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger" [40 CFR §122.2].

Erosion: The process of carrying away soil particles by the action of water.

Hazardous Materials: Defined at IDAPA 58.01.02.010.47 and means a material or combination of materials which, when discharged in any quantity into state waters, presents a substantial present or potential hazard to human health, the public health, or the environment. Unless otherwise specified, published guides such as Quality Criteria for Water (1976) by EPA, Water Quality Criteria (Second Edition, 1963) by the state of California Water Quality Control Board, their subsequent revisions, and more recent research papers, regulations and guidelines will be used in identifying individual and specific materials and in evaluating the tolerances of the identified materials for the beneficial uses indicated.

Impaired Waters: Any water body that does not meet applicable water quality standards for one or more beneficial uses by one or more pollutants. For the purposes of this Permit, impaired water includes any water body that IDEQ includes in its 2014 Integrated Report, as a "Category 4a" water of the state for which a total maximum daily load has been completed and approved; as a "Category 4b" water of the state that have pollution control requirements in place other than a TMDL and are expected to meet standards; and/or as a "Category 5" water of the state where a TMDL is necessary. The term impaired water also includes any interstate surface water body that originates in Idaho and flows into Washington that the Washington Department of Ecology categorizes as Category 4a, 4b, or 5 in its latest Water Quality Assessment 305(b) Report and 303(d) List as approved by EPA on July 22, 2016.

Illicit Connections: Include, but are not limited to, pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4.

Illicit Discharge: Any discharge to a municipal storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from firefighting activities. See 40 CFR 122.26(b)(2).

Interconnection: The point (excluding sheet flow over impervious surfaces) where the Permittee's MS4 discharges to another MS4 or other storm sewer system, through which the discharge is eventually conveyed to a water of the United States. Interconnections shall be treated similarly to outfalls throughout the Permit.

MS4 (Municipal Separate Storm Sewer System): Is used in the NPDES Permit to refer to 'Small Municipal Separate Storm Sewer System' as defined in 40 CFR 122.26(b)(16). The term, as used in the context of the NPDES Permit, refers to those portions of the municipal separate storm sewer systems owned and/or operated by the entities named herein. See also Municipal Separate Storm Sewer and Small MS4.

Municipality: A city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA.

Municipal Separate Storm Sewer: Defined in 40 CFR §122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

National Pollutant Discharge Elimination System (NPDES): The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA [40 CFR §122.2].

Outfall: Defined at 40 CFR §122.26(b)(9) means a point source (see definition below) at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

Permanent Stormwater Controls, or Practices, Permanent Controls, and/or Post-Construction Stormwater Management Controls: Structural and non-structural controls that are designed to treat or control pollutants in stormwater runoff on a permanent basis.

Permit: For the purposes of this document, means North Idaho Highway Districts MS4 NPDES Permit.

Pollutant: Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials [except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. § 2011 et seq.)], heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water [40 CFR §122.2].

Pollutant(s) of Concern: For the purposes of the NPDES Permit, any pollutant identified by IDEQ or WDOE as a cause of impairment of any water body that receives MS4 discharges authorized under the NPDES Permit. See also “impaired water.”

Post-Construction Stormwater Management Controls or “Permanent Stormwater Controls”: Controls designed to treat or control runoff on a permanent basis once construction is complete.

Redevelopment: For the purposes of the NPDES Permit, the alteration , renewal or restoration of any developed land or property that results in land disturbance of one acre or more, or less than one acre that is part of a common plan of development of sale that exceeds one acre, and that has one of the following characteristics: land that currently has an existing structure, such as buildings or houses; or land that is currently covered with an impervious surface, such as a parking lot or roof; or land that is currently degraded and is covered with sand, gravel, stones, or other non-vegetative covering.

Storm Event: For the purposes of the NPDES Permit, means a precipitation event that results in an

actual discharge from the outfall, and which follows the preceding measurable storm event by at least 48 hours (2 days).

Stormwater and Storm Water Runoff: As used in the NPDES Permit, means stormwater runoff, snow melt runoff, and surface runoff and drainage, and is defined at 40 CFR §122.26(b)(13). "Stormwater" means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility.

Stormwater Control Measure or Stormwater Management Program Control Measure: The physical, structural, and/or managerial measures that, when used singly or in combination, reduce the downstream quality and quantity impacts of storm water runoff. Also, stormwater control measures means a permit term or condition used to prevent or control the discharge of pollutants. This may include a schedule of activities, prohibition of practices, maintenance procedures, or other management practices. Stormwater control measures may include, but are not limited to, treatment requirements; operating procedures; practices to control plant site runoff, spillage, leaks, sludge, or waste disposal; or drainage from raw material storage. See best management practices (BMPs). Minimum stormwater control measures are defined 40 CFR §122.34(b).

Stormwater Management Practice or Stormwater Management Control: Practices that manage stormwater, including structural and vegetative components of a storm water system.

Stormwater Management Program (SWMP): A comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system. For the purposes of the NPDES Permit, the SWMP consists of the actions and activities conducted by the Permittees as required by the NPDES Permit and described in the Permittees' SWMP Document. A "SWMP Document" is the written summary describing the unique and/or cooperative means by which an individual Permittee or entity implements the specific stormwater management control measures required by the NPDES Permit within their jurisdiction.

Small Municipal Separate Storm Sewer System or Small MS4: Defined at 40 CFR 122.26(b)(16) and (17), respectively, and means all separate storm sewers that are: (i) owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) not defined as "large" or "medium" municipal separate storm sewer systems pursuant to 40 CFR 122.26(b)(4) and (b)(7), or designated under paragraph 40 CFR 122.26(a)(1)(v); and (iii) includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Total Maximum Daily Load (TMDL): the sum of the individual wasteload allocations for point sources, load allocations (LAs) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality [IDAPA 58.012.02.010.100].

Toxic Substance: Defined at IDAPA 58.01.02.010.102, and means any substance, material or disease-causing agent, or a combination thereof, which after discharge to waters of the State and upon exposure, ingestion, inhalation or assimilation into any organism (including humans), either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, malignancy, genetic mutation, physiological abnormalities (including malfunctions in reproduction) or physical deformations in affected organisms or their offspring. Toxic substances include, but are not limited to, the one hundred twenty-six (126) priority pollutants identified by the EPA pursuant to Section 307(a) of the federal Clean Water Act.

Treatment: The reduction and removal of pollutants from stormwater.

Uncontaminated: For the purposes of the NPDES Permit, means that the MS4 discharge does not:

- result in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or
- result in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or
- contribute to a violation or exceedance of an applicable Idaho Water Quality Standard.

Waters of the United States or Waters of the US:

- All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters, including interstate “wetlands;”
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
    - Which are or could be used by interstate or foreign travelers for recreational or other purposes;
    - From which fish or shellfish are or could be taken and soldi n interstate or foreign commerce; or
    - Which are used or could be used for industrial purposes by industries in interstate commerce;
- All impoundments of water otherwise defined as waters of the United States under this definition;
- Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- The territorial sea; and
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition [40 CFR §122.2].

1. BASIC SWMP INFORMATION

This Storm Water Management Program (SWMP) Document was developed originally by Ruen-Yeager & Associates, Inc. on behalf of the Lakes, Post Falls, and East Side Highway Districts (North Idaho Highway Districts) and updated by Welch Comer Engineers to describe the activities and control measures conducted to meet the terms and conditions of NPDES Permit # IDS028207.

1.1. Staff Organization

This document contains information pertaining to a Storm Water Management Program for the Lakes Highway District. The personnel responsible for implementing the SWMP are the respective Highway District Director of Highways. Lakes Highway District Director of Highways is Eric Shanley, PE.
The Associated Highway Districts of Kootenai County consist of the East Side, Lakes, Post Falls, and Worley Highway Districts. The East Side, Lakes, and Post Falls Highway Districts are joint permittees under NPDES Permit #IDS028207. However, each Highway District is independently responsible for MS4 permit compliance, operates independent of the other, and has established mapped boundaries, with individual elected Board of Commissioners.

This SWMP was developed under agreement between the participating Associated Highway Districts of Kootenai County to be adopted as a management program tool to provide guidance and track progress of respective Highway District MS4s under the joint NPDES permit.

1.2. Receiving Waters

The waterbodies identified in Table 1 receive storm water discharges from the Lakes Highway District MS4.

Table 1 Receiving Water Summary

Receiving Waterbody Segments	WQS Classification	Impairment or Pollutant of Concern	TMDLs? (Yes/No)	Applicable WLAs (Yes/No)	No. of Discharging Outfalls
Hayden Lake	Category 4A (Not supporting)	Total Phosphorus	Yes	No	**24**
Avondale Lake	Not assessed	N/A	N/A	N/A	**5**

1.3. SWMP Information and Statistics

Lakes Highway District will track the following information to set priorities and assess permit compliance:

Public Education and Outreach – Events performed in respect to Public Education and Outreach will be documented. Any questionnaires administered during outreach will be recorded and analyzed for effectiveness.

Illicit Discharge Detection and Elimination – Lakes Highway District is always monitoring for illicit discharges in its district as they make daily travel through the District.

- MS4 Maps and Outfall Inventory have been developed and refined for Lakes Highway District to more accurately depict point source discharges to Lakes Highway District MS4 jurisdiction.

- Dry Weather Outfall Screening – All outfalls were observed during July through September dry season and any outfalls with flows were tested for pH; total chlorine; surfactants; total phenols; E. coli; total phosphorus; turbidity; temperature and suspended solids. Test results are documented and will provide a baseline for future identification or investigation of recurring illicit discharges.

- Annual training is documented and performed for the staff of each Highway District to identify and respond to illicit discharges and for good housekeeping and best management practices.

Construction Site Stormwater Runoff Control – Lakes Highway District requires erosion control, sediment control, and waste material management controls for any projects within their MS4 jurisdiction. Any projects disturbing one or more acres are required to obtain NPDES coverage under the current Idaho Construction General Permit.

- Lakes Highway District will log the nature and number of inspections, follow up actions, and subsequent enforcement actions.

Post-Construction Stormwater Management for New Development and Redevelopment – Lakes Highway District will require the installation and long-term maintenance of permanent stormwater controls at new development and redevelopment project sites within their MS4 boundary that result in land disturbance of greater than or equal to one (1) acre.

- The Highway Districts will perform plan reviews and approval of permanent stormwater controls.

Pollution Prevention/Good Housekeeping for MS4 Operations – Lakes Highway District does not have any facilities, yards, or material stockpile areas within the MS4 boundary. However, they do still adhere to and require best management practices within their facilities.

- Lakes Highway District will maintain records reflecting their catch basin and inlet inspection and cleaning.

- Lakes Highway District will maintain a schedule for street sweeping in the MS4 area streets every spring as soon as weather permits.

- Lakes Highway District began a spring reminder in 2021 to all registered trash pick-up groups to schedule their trash pick-ups in the months of May.

- Lakes Highway District conducts and documents annual staff training sessions concerning pollution prevention, proper BMP's, good housekeeping practices, and illegal discharge and detection information.

- Lakes Highway District also performs public outreach, including workshops, fliers, and media, etc. These outreach methods are detailed throughout this SWMP.

- Lakes Highway District maintains a website containing information on their MS4.

Street Sweeping – Lakes Highway District completed street sweeping each spring and logs when the sweeping occurs. A map of the street sweeping schedule for 2022 is in the appendix.

1.4. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation

There are no Transfers of Ownership, Operational Authorities, or responsibilities for SWMP implementation. Each permitted Highway District is responsible for its own MS4 jurisdiction.

2. MAP OF THE SEPARATE STORM SEWER SYSTEM

The Lakes MS4 Outfall Map is in the appendix. The LHD maintains twenty-nine (29) MS4 Outfalls within the Coeur d'Alene Urbanized Area. The primary receiving water is to the northwest and southeast shoreline of Hayden Lake and Avondale Lake, with many pipe outlets (Outfalls) located on private property, at or near the waterline. Where possible, outfalls on private property were examined from within the public right of way, particularly if no runoff was present. In a few locations with runoff, the private property owners were contacted to gain permission to take a water sample. The full dry weather inspection memo, inspection reports, and additional photos are in the appendix.

2022 Dry Weather Monitoring Photos

Outfall 1

Outfall 2

Outfall 3

Outfall 4

Outfall 5

Outfall 6/7

Outfall 8

Outfall 9

Outfall 10

Outfall 11

Outfall 12

Outfall 13

Outfall 14

Outfall 15

Outfall 16

Outfall 17

Outfall 18

Outfall 19

Outfall 20

Outfall 21

Outfall 22

Outfall 23

Outfall 24

Outfall 25

Outfall 26

Outfall 27

Outfall 28

Outfall 29

3. TARGETING POLLUTANTS OF CONCERN

There are no specific requirements for Lakes Highway District in Part 4 of the NPDES Permit.

4. LEGAL AUTHORITY AND ENFORCEMENT

Lakes Highway District has no ordinance authority under Idaho Code and must rely on the authority of Kootenai County, Idaho Department of Environmental Quality, and Panhandle Health for enforcement.

Lakes Highway District relies on the following legal authorities.	
To prohibit and eliminate illicit discharges to the MS4.	**Kootenai County, Idaho Department of Environmental Quality, Panhandle Health**
To control the discharge of spills, dumping or disposal of materials other than stormwater to the MS4.	**Kootenai County, Idaho Department of Environmental Quality, Panhandle Health**
To control the discharge of storm water and pollutants from land disturbance and development, both during the construction phase and after site stabilization has been achieved.	**Kootenai County**
To control the contribution of pollutants from one MS4 to another interconnected MS4.	**Idaho Department of Environmental Quality**
To require local compliance with such requirements.	**Kootenai County, Idaho Department of Environmental Quality, Panhandle Health**
To carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with the Permit.	**Idaho Department of Environmental Quality**

5. STORM WATER CONTROL MEASURES TO REDUCE POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE

The following sections describe Lakes Highway District's program to reduce pollutants in the MS4 discharges to the maximum extent practicable, as required by Permit Part 3. Each section summarizes the mandatory program and describes how Lakes Highway District meets each program component.

5.1. Construction Site Runoff Control

To control the discharge of storm water and pollutants from land disturbance during the construction phase Lakes Highway District must:

- ✓ Require appropriate erosion, sediment, and waste management requirements for construction site activity that results in land disturbance of 1 acre or more.
- ✓ Establish installation and use guidelines for required erosion/sediment/waste management during all phases of construction site activity.
- ✓ At a minimum, review preconstruction site plans for construction sites that will result in land disturbance of one (1) or more acres, using a checklist or similar process to consider and address potential water quality impacts from the site activities.
- ✓ Inspect and enforce erosion, sediment, and waste management requirements on construction sites.
- ✓ Establish an inspection prioritization plan.
- ✓ Establish an enforcement response policy.
- ✓ Ensure that Permittee staff is trained to conduct these activities.

Staff Training

Date	Entities	Training Topics
2010 & 2011	LHD	Municipal Storm Water Pollution Prevention Training (Storm Watch)
2013	LHD & PFHD	Presentation by LHD's consulting engineer regarding MS4 areas and IDDE; video titled "Rain Check: Storm Water Pollution Prevention for MS4's"; Q&A session
December 22, 2014	LHD & PFHD	Annual Staff Training
December 11, 2015	LHD, PFHD, & ESHD	Annual Staff Training
November 29, 2016	LHD, PFHD, & ESHD	Annual Staff Training: BMPs, IDDE, "Rain Check" Videos
December 14, 2017	LHD, PFHD, & ESHD	Annual Staff Training: BMPs, Good Housekeeping, IDDE
December 7, 2018	LHD, PFHD, & ESHD	Annual Staff Training: BMPs, Good Housekeeping, IDDE
December 18, 2019	LHD, PFHD, & ESHD	Annual Staff Training: BMPs, Good Housekeeping, IDDE
September 23, 2021	LHD	Annual Staff Training: BMPs, Good Housekeeping, IDDE
September 21, 2022	LHD	Annual Staff Training: BMPs, Good Housekeeping, IDDE

The training materials and sign-in sheet are provided in the appendix.

Requirements for Construction Site Operators Disturbing >1 Acre

- In 2009, Lakes Highway District through Resolution 2009-12 and again by Resolution 2010-4 has required all construction projects within the District, whether performed by the District or under the supervision of, to be performed in accordance with the EPA Construction General Permit requirements.
- Resolution 2010-4 requires construction site operators within road rights-of-way under the jurisdiction of Lakes Highway District to obtain a permit from the District. These permits are evaluated to ensure appropriate BMPs are in-place for site stabilization and to ultimately prevent storm water runoff.
- Work outside of the road right-of-way, under the jurisdiction of Kootenai County, requires individuals performing work to comply with Kootenai County Site Disturbance Ordinance No. 374. On December 22, 2009 the Board provided official direction to staff through Resolution 2009-12 that not only clarified existing District requirements, but also implemented new requirements for all work within the public right-of-way to be performed under the training of SEEP.
- Additionally, through Resolution 2009-12 LHD will report all non-storm water discharges to the County Code Enforcement Officer as a potential violation to the Kootenai County Site Disturbance Ordinance.
- Additionally, the Lakes Highway District requires that construction conform to the Associated Highway District Standards and the Kootenai County Site Disturbance Ordinance. Lakes Highway District tracks issued permits and location with respect to the MS4. The LHD is committed to provide sufficient resources to oversee and direct contractors on work within the MS4. Efforts during the first permit year included publishing of the "North Idaho Storm Water Erosion & Sediment Control Field Guide".
- LHD provides SEEP Field Guides to interested public though office and to Construction Operators who are permitted to do work within LHD right-of-way.

Enforcement of Local Erosion, Sediment, and Waste Management Control Requirements for Sites Disturbing >1 Acre

- In 2008, 2015, 2018, and again in 2019, the Lakes Highway District adopted the Highway Standards for the Associated Highway Districts of Kootenai County, Idaho. These standards provide procedures for design, construction operations and final construction acceptance (inspection) by the District. As part of the Districts 2010-04 Resolution and Illicit Discharge Detection and Elimination Program, the District will inspect construction sites that are permitted within the MS4 to ensure erosion control is in place during construction and that the construction site is clean. Violations will be documented and reported to the Kootenai County Code Enforcement Officer and/or EPA.
- For construction performed in the development of private property, work must comply with the Kootenai County Site Disturbance Ordinance, which addresses compliance and enforcement of storm water and erosion control. Additionally, when called upon by the Kootenai County to review Site Disturbance Plans and other improvement plans within its MS4, the District will provide a review of the temporary erosion control measures in addition to its review for compliance with the Associated Highway District Standards (AHDS). The District is jointly considering adding language to the AHDS to address MS4 NPDES Permit Conditions in the forthcoming standards revisions.
- Enforcement shall be in accordance with the identified authority in Section 4.
- In 2010, LHD began tracking public comments or inquiries concerning storm water related issues

that are either received by phone or email. When an inquiry is received, Lakes staff log the date, address, contact information and description/reason for the call. A follow up comment is then posted concerning what response was given or results of an inspection performed regarding the call.

The Public Input Tracking Log is included in the appendix.

Prioritization of Inspection of Construction Sites:

- Highest Priority – Projects with one acre or more of disturbance and with potential to discharge to Lakes Highway District MS4 jurisdiction.

- Medium Priority – Projects with less than one area of disturbance and potential to discharge to Lakes Highway District MS4 jurisdiction.

- Lower Priority – Projects that have no potential to discharge to Lakes Highway District MS4 jurisdiction.

Lakes Highway District will log the nature and number of inspections, follow up actions, and subsequent enforcement actions. The Construction Site Inspection log is included in the appendix.

Enforcement Response Policy
The North Idaho Highway Districts will continue to refer enforcement policy instances to the authorities listed in Section 4.

Planned Activities for 2023
Lakes Highway District will do the following during the 2023 calendar year:

- Continue to develop, discuss with the Associated Highway District supervisors and commissioners, and adopt when finalized the NPDES related standards approved for inclusion in the next Associated Highway Districts of Kootenai County Highway Standards.
- Comply with CGP requirements for Lakes Highway District constructed projects.
- Review erosion control plans as part of its review process for private projects under Lakes Highway District jurisdiction.
- As part of the road inspection process for new private projects, ensure that the appropriate level of erosion control is in place during construction.
- Educate staff on construction storm water discharges and direct staff to keep an eye on construction storm water discharges from private projects during road maintenance activities and maintenance rounds.
- Document and report to IDEQ and Kootenai County any detected illegal construction storm water discharges.
- The District will track approach and utility permits within the MS4 and at the time of permit issuance will distribute Seep Field Guides regarding storm water BMPs to those projects located in the MS4.

5.2. Storm Water Management for Areas of New Development and Redevelopment

To control the discharge of storm water and pollutants from land disturbance and development, after construction is completed, Lakes, Post Falls, and East Side Highway Districts must:

- ✓ Require the installation and long-term maintenance of permanent storm water controls at new development and redevelopment project sites that result from land disturbance of 1 acre or more.
- ✓ Permanent storm water controls must be sufficient to retain onsite the runoff volume produced from a 24-hour, 95th percentile storm event; or sufficient to provide the level of pollutant removal greater than the pollutant removal expected by using onsite retention of runoff volume produced from a 24 hour, 95th percentile storm event.
- ✓ Alternatively, storm water treatment requirements must be required that can attain an equal or greater level of water quality benefits as onsite retention of storm water discharges from new development and redevelopment sites.
- ✓ Other alternatives may be allowed for projects to meet the onsite retention requirement at a particular project site based on technical infeasibility, and/or site constraints.
- ✓ Establish proper installation and use guidelines for permanent storm water controls – the Permittee may establish different types of controls for different types and/or sizes of site development activity.
- ✓ At a minimum, review and approve preconstruction plans for permanent storm water controls at new development and redevelopment sites that result from land disturbance of one (1) or more acres
- ✓ Periodically inspect "high priority" permanent storm water controls for proper installation and operation, using an inspection prioritization system
- ✓ Maintain an inspection prioritization plan and enforcement response policy,
- ✓ Maintain a database inventory to track and manage the operational condition of permanent storm water controls
- ✓ Ensure the appropriate Permittee staff is trained to conduct these activities.

Lakes Highway District

Implement and Enforce Installation Requirements of Permanent Sites

LHD does not have the authority over development needed to directly comply with this requirement. Kootenai County is the regulatory authority over developments and redevelopments. Development is required to comply with the Kootenai County Site Disturbance Ordinance No. 37 4. Only at such time that a development is complete and finally stabilized will the Highway District consider accepting roads within a development. In accordance with LHD Resolution 2010-04, LHD will notify the County Code Enforcement Officer of site runoff from developments for enforcement under the Kootenai County Site Disturbance Ordinance No. 37 4. When appropriate, LHD will encourage the County to require drywells to ensure all runoff is retained on-site.

Permanent storm water management controls outside of the road right-of-way are not within the regulatory authority of the Lakes Highway District. With respect to permanent storm water controls within the road right-of-way, acceptance of roads by the Board of Highway District Commissioners ensures funding of long-term operation and maintenance.

If new roads are accepted by the Lakes Highway District for maintenance, Lakes Highway District ensures proper long-term operation and maintenance of permanent storm water management controls within

the road right-of-way under the jurisdiction of LHD.

The District's process for pre-construction plan review is as follows:

- When called upon by Kootenai County to review Site Disturbance Plans and other improvement plans within its MS4 areas, the District will provide a review of permanent storm water features in addition to its review for compliance with Associated Highway District Standards.
- Provide installation inspection of storm water controls for private projects within the right-of-way and those facilities off the right-of-way that have potential to discharge to its MS4s.
- Monitor private storm water facilities off the right-of-way that may discharge to the MS4. Notify the owner and/or Kootenai County and IDEQ if the facility is not being maintained or is not functioning properly.

Prioritization of Permanent Stormwater Controls

- Highest Priority – Projects with one acre or more of disturbance and with potential to discharge to Lakes Highway District MS4 jurisdiction.
- Medium Priority – Projects with less than one area of disturbance and potential to discharge to Lakes Highway District MS4 jurisdiction.
- Lower Priority – Projects that have no potential to discharge to Lakes Highway District MS4 jurisdiction.
- The Highway Districts will log the nature and number of inspections, follow up actions, and subsequent enforcement actions.

Enforcement Response Policy

As stated previously, LHD does not have ordinance authority. Therefore, the District will notify Kootenai County, IDEQ and Panhandle Health if it becomes aware of any potential violations.

Tracking of Operation & Maintenance of Permanent Controls

Lakes Highway District staff provide the Operations & Maintenance for permanent stormwater controls within their own jurisdiction. As the Outfall maps are revised to include all permanent stormwater controls, a tracking sheet will be developed to track the Operations & Maintenance activities. It is anticipated this task to be completed by 2024.

Planned Activities for 2023

Since LHD's authority is limited to road rights-of-way accepted into the District, future work on this item will include:

- The District will work with the County and other agencies where it is able, in keeping with the intent of the above requirements.
- When called upon by the County to review Site Disturbance Plans and other improvement plans within the Districts MS4, the District will provide a review of the erosion control plans in addition to review for compliance with the Associated Highway District Standards.
- The District will notify the County Code Enforcement Officer of site runoff from developments for enforcement under the Kootenai County Site Disturbance Ordinance No. 374. When appropriate, LHD will encourage the County to require drywells to ensure all runoff is retained on-site.

5.3. Pollution Prevention/Good Housekeeping for MS4 Operations

To properly operate and maintain the MS4, and its facilities using prudent pollution prevention and good housekeeping, Lakes Highway Districts must:

- ✓ Maintain a current Map of the MS4, including an inventory of all Outfalls and other features.
- ✓ Inspect catch basins and inlets at least once every five years. using an inspection prioritization plan.
- ✓ Maintain or clean catch basins based on those inspections.
- ✓ If applicable, maintain Operation and Maintenance (O&M) Procedures for Streets, Roads, Highways and Parking Lots.
- ✓ If applicable, inventory and manage Street/Road Maintenance Materials.
- ✓ If applicable, implement a Street, Road, Highway and Parking Lot Sweeping Management Plan.
- ✓ Maintain O&M Procedures for Other Municipal Areas and Activities to protect water quality.
- ✓ Use best practices to reduce the discharge of pollutants to the MS4 associated with the Permittee's application and storage of pesticides, herbicides and fertilizers.
- ✓ Develop site-specific Pollution Prevention Plans for Permittee-owned facilities.
- ✓ Work cooperatively with other entities to control litter on a regular basis.
- ✓ Ensure the appropriate Permittee staff is trained to conduct these activities.

Operations & Maintenance Requirements

In 2010, Lakes Highway District formalized an Operations & Maintenance plan for the operations facility on Ramsey Road (See the Lakes Highway District Operations & Maintenance Program in the appendix).

Inlet/Catch Basin Inspections & Maintenance

As Lakes Highway District improves and completes their outfall map to include catch basins, an inspection and maintenance schedule will be developed and implemented to meet the requirements of catch basin inspection and cleaning at least once per five years.

Last Review/Update of Inspection and Maintenance Schedules

Lakes Highway District will implement a yearly checklist (see attached) of Pollution Prevention and Good Housekeeping Practices and intends to incorporate this inspection into its 2023 activities.

Material Storage Locations

The Lakes Highway District Maintenance yards are located outside of the Coeur d'Alene Urbanized Area and MS4 Boundary. Therefore, action contained in Section 3.5.4 is not specifically required. No further action will be taken under this permit.

Sweeping Management Plan

Lakes Highway District spring and summer maintenance efforts include street sweeping in the MS4 boundary. LHD will include their Street Sweeping Management Plan in the SWMP no later than April 3, 2025. The map of 2022 street sweeping activities is included in the appendix.

Planned Activities for 2023

- Continued implementation of the Operations & Maintenance Program.
- Conduct another training session for LHD employees in 2023 on good housekeeping, BMPs, and

illicit discharge detection.
- Perform a Pollution Prevention & Good Housekeeping Check
- Send additional staff members to SEEP certification classes.

5.4. Illicit Discharge Detection and Elimination

To prohibit and eliminate illicit discharges to the MS4, Lakes Highway District must:

- ✓ Enforce an ordinance that effectively prohibits illicit discharges into the MS4.
- ✓ Respond to Complaints or Reports of illicit Discharges from the Public.
- ✓ Keep Track of Complaints/Reports, and any Response Actions Taken.
- ✓ Conduct MS4 outfall screening inspections during dry weather.
- ✓ Follow-up to determine the source of a recurring illicit discharge identified as a result of complaints, or of the dry weather screening investigations within thirty (30) days.
- ✓ Take appropriate action to address the source of an ongoing illicit discharge.
- ✓ Prevent and Respond to Spills to the MS4, as appropriate.
- ✓ Coordinate with other entities for the proper disposal of used oil and toxic materials.
- ✓ Ensure the appropriate Permittee staff is trained to conduct these activities.

Illicit Discharge Policies

The Highway District's will monitor MS4 areas for illicit discharges in accordance with the Illicit Discharge and Spill Response Plan (see attached). Examples of illicit discharges that the District will be looking for include:

- Sanitary sewage or drainfield effluent running over the surface into a ditch,
- Paint or oil dumped into a ditch or storm drain,
- A shop floor drain discharging to a ditch,
- Turbid construction site runoff,
- Other harmful pollutants (use common sense).

The Highway Districts have also developed a Spill Response Procedure detailing the actions to be taken when an illicit discharge is detected by a District employee:

1. Be Safe: Identify the pollutant and determine if it is safe to remain in the area and if safety equipment is needed
2. Stop the Source: If the source is readily identifiable and can be stopped quickly and safely, do so.
3. Notify: Dial 911 if you deem it an emergency.
4. Report the spill to your supervisor.
5. Notify the following agencies:
   - Northern Lakes Fire District: (208) 772-3044
   - Kootenai County Sheriff's Office: (208) 446-1850 for chemical spills
   - Idaho Department of Environmental Quality: (208) 769-1422 for wastewater discharges
   - Kootenai County Building and Planning Department: (208) 446-1070 for minor sediment discharges and code violations.
6. Protect Stormwater: If it can be safely done, while help is on the way, confine the spill with sandbags, berms, diversion ditches, etc.
7. Assist with Clean Up: Remain on site and assist by providing materials, labor and equipment as

directed by the authority agency. Examples include sand, gravel, the District's Spill Kit, etc. Communicate with the authority agency and make sure that they are aware of concerns for protecting downstream surface water.

8. Notify EPA within 24 hours at (206) 553-1846.
9. Report: Supervisor to write a summary report of the incident and file it with SWMP monitoring records. Submit a copy of the report to EPA and IDEQ within 30 days.

The Dry Weather Outfall Screening procedures are as follows:

Task	Description
Dry Weather Field Inspections	Outfall Reconnaissance Inventory (ORI) – MS4's shall be visited at a minimum of one time during the months of July through September.
Dry Weather Quality Testing	At a minimum, if the inspector observes actual flow from an MS4 outfall, during dry weather, he/she should specifically note any observed color, odor, clarity, floating solids, foam, sheen, suspended or settled solids or other indicators of pollution. Additional water quality testing may also be warranted. If deemed necessary by the permit coordinator, obtain a sample kit from Accurate Testing Labs in Hayden or other approved source and sample for parameters identified.
Analysis of Water Quality Data	Compare background tests to dry weather sampling results, if water present during dry weather inspections.
Reporting	Prepare a technical memo identifying the following: • Work performed • Results from Water Quality Testing • Illicit Discharge Detected, Reported and Results

The dry weather screening memo with inspection reports, photos, and test results are included in the appendix.

Conditional Allowance of Non-Stormwater Discharges

The District does not have ordinance authority and it is not aware of any existing local conditions on non-storm water discharges. If the District observes what it deems to be repeated violations of state surface water quality standards (IDAPA 58.01.02.200), it will notify EPA and IDEQ for enforcement assistance.

Some examples of allowable non-storm water discharges that may not need to be addressed include:

- Water line flushing
- Irrigation water
- Discharges from potable water sources
- Foundation drains
- Air-conditioning condensate
- Individual residence car wash water
- Dechlorinated swimming pool discharges
- Street wash water
- Groundwater

Targeting of Outfall Screening During Dry Weather
The highest priority in most programs is to find any continuous and intermittent sewage discharges to the storm drain system. A range of monitoring techniques can be used to find sewage discharges. In general, monitoring techniques are used to find problem areas and then trace the problem back up the stream or pipe to identify the ultimate generating site or connection. Monitoring can sometimes pick up other types of illicit discharge that occur on a continuous or intermittent basis (e.g., wash water and liquid wastes). Monitoring techniques are classified into three major groups:

- Outfall Reconnaissance Inventory
- Indicator Monitoring at Storm Water Outfalls and In-stream
- Tracking Discharges to their Source

All outfalls within the LHD's MS4 boundaries will be inspected and photographed on an annual basis.

Response to Illicit Discharges, Typical Complaints, and Other Findings
Responsibilities for illicit discharge detection and typical illicit discharge inspection type are as follows:

Tasks	Jurisdictional Authority	Responsible Parties
Inspection of Potential Illicit Discharge within Public Road Right-of-Way	LHD	LHD
Inspection of Potential Illicit Discharge from a Private Property	County	County
Repair/Cleanup of Illicit Discharge within Public Right-of-Way	LHD / County HazMat / Sewer District	LHD / County HazMat
Enforcement	County	County

All actions relating to illicit discharge detection will be recorded in a database administered by Lakes Highway District. The database will be organized by MS4 outfall and will contain information such as: the outfalls inspected, any complaints received, and tests conducted. Illicit discharge detection activities will also be documented on the storm sewer system map.
If an illicit discharge is identified, the Highway District will notify EPA within 24 hours by phone at (206) 553-1846, and provide a written report within 5 days (see Permit Part 7.9).

Outfall Screening During Dry Weather
Lakes Highway District conducts annual dry weather screening of all outfalls within the District (see Dry Weather Monitoring Plan and Lakes Highway District Dry Weather Report 2022 in attachments).

The table shows the following Lakes Highway District MS4 Outfall Dry Weather Monitoring discharges were sampled and tested.

Lakes Highway District Dry Weather Monitoring Sample Test Results

Analyte	Outfall Results							Unit	PQL
	2	5	12	13	19	28	29		
E. Coli Bacteria	13.4	16	85.7	ND	ND	ND	129	MPN/ 100mL	1
Chlorine, Total Residual	ND	0.04	0.02	ND	ND	ND	0.02	mg/L	0.01
Phosphorus, Total	0.016	0.487	0.036	0.014	0.044	0.014	0.035	mg/L	0.004
pH	8.34	8.14	7.43	7.28	8.21	7.17	7.8	pH Units	6.5-9.0
Phenolics	ND	ND	ND	ND	ND	ND	ND	mg/L	0.05
Total Suspended Solids	2	212	ND	ND	1	ND	5	mg/L	1

Outfall 2

Outfall 2 is located on East Hayden Lake Road in an area with residential development. The test was taken upstream of the roadway where a ½ pipe culvert comes down the slope. At outfall 2, Chlorine (Total Residual) and Phenolics were not detected. E. Coli was detected at 13.4/100 mL, which is less than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor. Total phosphorus was detected at 0.016 mg/L which equals 16 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 8.34 is within the acceptable range of 6.5 to 9. The total suspended solids (TSS) test had a result of 2 mg/L, but it is unknown how this TSS value compares to a turbidity trigger of 25 NTUs. The inspector noted that the runoff appeared clear with no noticeable turbidity.

It appeared that the runoff was likely groundwater or irrigation from uphill or adjacent residences. The slight presence of E. Coli is too low to suspect a direct connection from septic or sewer. The E. Coli is likely coming from other sources in the forest or ditch. We recommend testing this location again during the dry weather in 2023. If E. Coli is still present, then further investigation into the source will be necessary.

Outfall 5

Outfall 5 is located on East Hayden Lake Road in an area with residential development. At outfall 5 Phenolics were not detected. E. Coli was detected at 16/100 mL, which is less than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor. Chlorine was detected at 0.04 mg/L which is equal to 40 µg/L. This exceeds the trigger of 11 µg/L in the DEQ Water Quality Standards. Chlorine could come from swimming pools, a water system leak, or chlorinated irrigation water. There do not appear to be any swimming pools uphill from the outfall, but there is a residence that has a decorative pond that could potentially be a contributor. The chlorine levels are low and do not raise serious red flags for a suspected illicit discharge. Total phosphorus was detected at 0.486 mg/L which equals 486 µg/L. This far exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 8.14 is within the acceptable range of 6.5 to 9. The total suspended solids (TSS) test had a result of 212 mg/L, but it is unknown how this TSS value compares to a turbidity trigger of 25 NTUs. The inspector noted that the runoff appeared clear with no noticeable turbidity.

It appeared that the runoff was likely groundwater, irrigation from uphill or adjacent residences, or discharge from a decorative pond uphill from the outfall. The slight presence of E. Coli and chlorine are too low to suspect a direct connection from septic or sewer. The E. Coli is likely coming from other sources in the forest or ditch. Because North Kootenai Water and Sewer District (NKWSD) chlorinates their potable water, it is possible that the chlorine is coming from irrigation or from a leaking water pipe. We recommend testing this location again during the dry weather in 2023. If E. Coli is still present, then further investigation into the source will be necessary. If chlorine is still present, we recommend contacting NKWSD to determine if they have a leaking pipe.

Outfall 12

Outfall 12 is located on East Hayden Lake Road in an area with residential development. At outfall 12 Phenolics and Total Suspended Solids were not detected. E. Coli was detected at 85.7/100 mL, which is less than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor. Chlorine was detected at 0.02 mg/L which is equal to 20 µg/L. This exceeds the trigger of 11 µg/L in the DEQ Water Quality Standards. Chlorine could come from swimming pools or a water system leak. It could also come from chlorinated irrigation water. There is a home with a swimming pool off of E. Haydenview Drive uphill from this outfall; therefore, it is possible that the pool could be a contributor. The chlorine levels are low and do not raise serious red flags for a suspected illicit discharge. Total phosphorus was detected at 0.036 mg/L which equals 36 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 7.43 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater, discharge from a pool, or irrigation from uphill or adjacent residences. The slight presence of E. Coli and Chlorine are too low to suspect a direct connection from septic or sewer. The E. Coli is likely coming from other sources in the forest or ditch. Because NKWSD chlorinates their potable water, it is possible that the chlorine is coming from irrigation or from a leaking water pipe. We recommend testing this location again during the dry weather in 2023. If E. Coli is still present, then further investigation into the source will be necessary. If chlorine is still present, we recommend contacting NKWSD to determine if they have a leaking pipe.

Outfall 13

Outfall 13 is located on East Hayden Lake Road in an area with residential development. At outfall 13 E. Coli, chlorine, phenolics and Total Suspended Solids (TSS) were not detected. Total phosphorus was detected at 0.014 mg/L which equals 14 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 7.28 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater or irrigation from adjacent residences and follow up action is not recommended.

Outfall 19

Outfall 19 is located on East Hayden Lake Road in an area with residential development. At outfall 19, E. Coli, chlorine, and phenolics were not detected. Total phosphorus was detected at 0.044 mg/L which equals 44 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 8.21 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater or irrigation from adjacent residences and follow up

action is not recommended.

Outfall 28

Outfall 28 is located on N. Avondale Loop Road in an area with residential development and the Avondale Golf Course. At outfall 28 E. Coli, chlorine, phenolics and Total Suspended Solids (TSS) were not detected. The inspector detected a faint sewage smell; however, E. Coli was not detected through testing. Total phosphorus was detected at 0.014 mg/L which equals 14 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 7.17 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely irrigation from adjacent residences or the golf course and follow up action is not recommended.

Outfall 29

Outfall 29 is located at the intersection of N. Avondale Loop Road, Thames, and Brighton Roads in an area with residential development and in close proximity to the Avondale Golf Course. At outfall 29 phenolics were not detected. E. Coli was detected at 129/100 mL, which is greater than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor. Chlorine was detected at 0.02 mg/L which is equal to 20 µg/L. This exceeds the trigger of 11 µg/L in the DEQ Water Quality Standards. Chlorine could come from swimming pools or a water system leak. There is a swimming pool off of Brighton Court so that is a possibility. It could also come from chlorinated irrigation water. Additionally, this area is served with potable water from NKWSD and since they chlorinate the water, the chlorine could be coming from irrigation or a water line leak. The levels are low and do not raise serious red flags for a suspected illicit discharge. Total phosphorus was detected at 0.035 mg/L which equals 35 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie. The pH of 7.43 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater, irrigation from adjacent residences, or potential of discharge from a pool. Illicit discharge was not suspected, and follow-up action is not recommended.

Planned Activities for 2023

The Lakes Highway District will do the following during the 2023 calendar year:

- Visually monitor the MS4 area during routine maintenance rounds.
- Screen all outfalls during July-September in accordance with the Dry Weather Screening Plan.
- Conduct additional screening in spring and fall during maintenance and monitoring.
- Document and report detected illicit discharges to Kootenai County, EPA and IDEQ in accordance with the Spill Response Plan.

5.5. Education, Outreach, and Public Involvement

To educate and involve members of the public to learn about pollutants in storm water and similarly significant issues, Lakes Highway District must conduct, or contract with other entities to conduct, an ongoing education, outreach, and public involvement program. The Highway District must also comply with applicable State and local public notice requirements when implementing any public involvement activities.

Within one year of the Permit effective date, LHD, PFHD, and ESHD must, at a minimum:

- ✓ Select at least one audience and focus its efforts on conveying relevant messages
- ✓ Distribute and/or offer at least eight (8) educational messages or activities over the permit term to selected audience(s)
- ✓ Begin to assess, and track, activities to gauge the audience's understanding of the relevant messages and adoption of appropriate behaviors.
- ✓ Target specific educational material to the construction/engineering/design community regarding construction site runoff control and permanent storm water controls.
- ✓ Maintain and advertise a publicly accessible website to provide all relevant SWMP materials.

Lakes Highway District will track the Public Education and Outreach efforts during the permit term and provide reports in the Annual Reports. The permit requires at least 8 educational messages or activities during the permit term. The permit requires an effort to assess the understanding of the relevant messages and adoption of appropriate behaviors by the target audience.

The North Idaho Highway Districts have already established a public education and outreach program during the last permit term, and they will continue to build upon through this permit term.

The target audiences have been children and families with the following outreach efforts:

Earth Day – We had a booth with interactive activity for children and families who attended the Earth Day event on April 23, 2022. The booth educated students about stormwater drainage systems and groundwater. Students learned where drinking water comes from, the definition of groundwater and stormwater, and how to prevent and reduce stormwater pollution. Photos from the event are below.

Silverwood Physics & Science Day – Local middle and high schools from Eastern Washington and North Idaho traveled to Silverwood Amusement Park to participate in Science and Physics Day, while also enjoying the amusement park. Students took part in educational activities such as visiting the stormwater education booth, creating rollercoaster models, and measuring area using a circle. Together with the IDEQ and the City of Coeur d'Alene we ran the stormwater education booth. The booth educated students about stormwater drainage systems and groundwater. Students learned where drinking water comes from, the definition of groundwater and stormwater, and how to prevent and

reduce stormwater pollution. Photos from the event are below.

Ramsey Elementary Field Trip – Ramsey Elementary 5th grade students visited the Coeur d'Alene Wastewater Treatment Plant, were given a tour, and took part in other informational activities. One of these informational activities was learning about the stormwater drainage systems. This involved how they are cleaned and certain types of pollution that can be caused by stormwater runoff and how to prevent it. We informed the students about different types of swales, specifically mentioning grassy swales and how they work in providing clean water seepage. We also informed the students about the different sources of pollution that are involved with stormwater including pet waste, litter, fertilizer, motor oils, and chemicals. Along with covering where these pollutants come from, the students were taught about ways in which they can lower the number of pollutants that reach stormwater drains. Below are pictures from the fieldtrip.

Information on the Website
Flyers were placed on the website prior to Earth Day and prior to construction season. The excerpts form the website are included in the appendix.

In 2015, Lakes Highway District along with Post Falls Highway District and East Side Highway District, wrote a letter of support and agreed to co-fund a "Learning Station" for the University of Idaho grant application to develop the "Cleaner. Water. Faster: Bi-State Interpretive Clean Water Trail" Interpretive Trail for the four corners area in Coeur d'Alene. The University of Idaho was successful in securing the grant. The design of the "Learning Station" was completed in 2018 and was installed by the City of Coeur d'Alene in the spring of 2019. The "Learning Station" for the Storm Water Pollution Prevention Interpretive Trail Project will be maintained as a cooperative effort with Lakes Highway District, Post Falls Highway District, and East Side Highway District (see picture of Learning Station in attached).
The Highway Districts were approached with an opportunity to develop a PSA through the University of Idaho's "Cleaner. Water. Faster." grant. On September 19, 2017, the video was filmed and in October of 2018 the video was completed and published on YouTube and linked by the University of Idaho website. The video has also been posted to the Lakes Highway District website.

To supplement our Public Outreach Stormwater Demonstrations, the three Highway Districts along with the City of Coeur d'Alene designed and produced two large banner displays for stormwater and pollution prevention education purposes.

Planned Activities for 2023

Lakes Highway District plans to perform the following Public Outreach and Education during the 2023 calendar year:

- Earth Day Stormwater booth
- Ramsey Elementary Field Trip Stormwater Pollution Prevention Presentation
- Silverwood Physics and Science Day Stormwater Pollution Prevention Presentation
- Two public information brochures on the website.
- SEEP Field Guides distributed to all Contractors and Permit Applicants

6. UNIQUE PROVISIONS SPECIFIC TO LAKES, POST FALLS, AND EAST SIDE HIGHWAY DISTRICTS

6.1. Annual Compliance Evaluation

The annual report that is required by Part 6.4.2 of the NPDES Permit is accessible on the Lakes Highway District website at www.lakeshighwaydistrict.com

6.2. Alternative Control Measure Requests

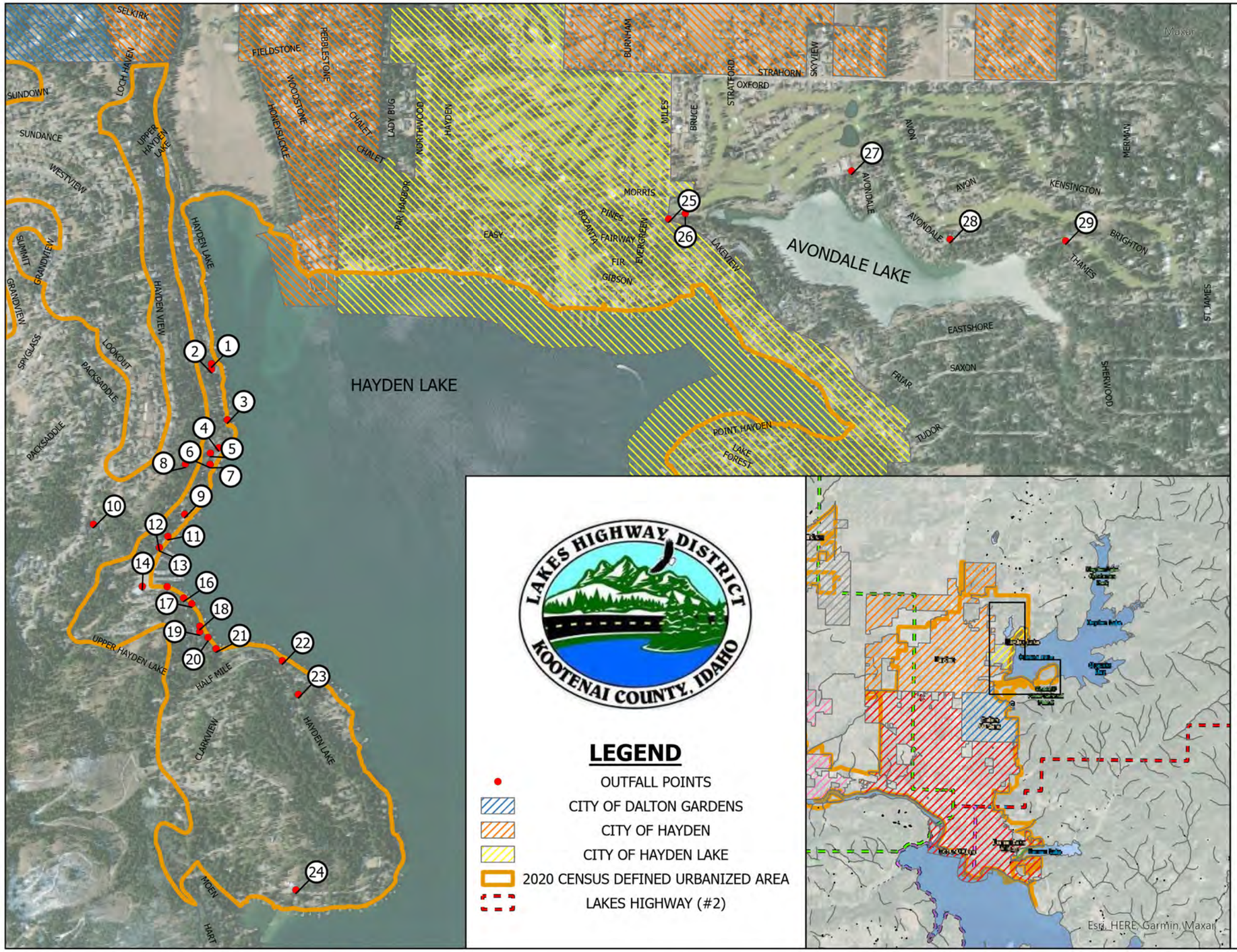
No requests were made for Alternative Control Measures.

6.3. Adaptive Management Actions

There are no adaptive management actions to date.

APPENDIX

MS4 Outfall Map



LAKES HIGHWAY DISTRICT
KOOTENAI COUNTY, IDAHO

LEGEND

- OUTFALL POINTS
- CITY OF DALTON GARDENS
- CITY OF HAYDEN
- CITY OF HAYDEN LAKE
- 2020 CENSUS DEFINED URBANIZED AREA
- LAKES HIGHWAY (#2)

OUTFALL TABLE

Map No.	Latitude	Longitude	Outfall Description
1	47.750833	-116.750278	18" CMP CULVERT
2	47.750833	-116.75	12" CMP CULVERT
3	47.751389	-116.7475	18" CMP CULVERT
4	47.751111	-116.746111	18" CMP CULVERT
5	47.750833	-116.745833	18" CMP CULVERT
6	47.750833	-116.745278	12" CMP CULVERT
7	47.750833	-116.745278	12" CMP CULVERT
8	47.75	-116.745278	12" CMP CULVERT
9	47.75	-116.742778	12" CMP CULVERT
10	47.746944	-116.742222	10" CMP CULVERT
11	47.749444	-116.741667	10" CMP CULVERT
12	47.749167	-116.741111	CENTER, 18" HDPE CULVERT
13	47.749167	-116.741111	LEFT, 18" CMP CULVERT
14	47.748611	-116.739167	24" CONCRETE PIPE
15	47.749444	-116.739167	10" CMP CULVERT
16	47.75	-116.738611	10" CMP CULVERT
17	47.750278	-116.738333	10" CMP CULVERT
18	47.750556	-116.737222	10" CMP CULVERT
19	47.750556	-116.736944	10" CMP CULVERT
20	47.750833	-116.736667	12" CMP CULVERT
21	47.751111	-116.736111	18" CMP CULVERT
22	47.753333	-116.735556	12" CMP CULVERT
23	47.753889	-116.733889	12" CMP CULVERT
24	47.753889	-116.724167	12" CMP CULVERT
25	47.766111	-116.757778	55" CMP CULVERT
26	47.766667	-116.758056	18" CMP CULVERT
27	47.772222	-116.760278	24" CMP CULVERT
28	47.775556	-116.756944	16" CMP CULVERT
29	47.779444	-116.756944	18" CMP CULVERT LT

NOTE: LATITUDE & LONGITUDE WERE RECALCULATED FROM SOURCE. SKEWED COORDINATES POTENTIALLY CAUSED BY HANDHELD GPS USE UNDER TREE CANOPY.

N

0 1,000 2,000 4,000 Feet

WELCH-COMER ENGINEERS | SURVEYORS
www.welchcomer.com 208-664-9382

LAKES HIGHWAY DISTRICT

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) MAP

Sources:
ESRI Basemaps, Idaho Tax Commission GIS, Kootenai County GIS, IDWR GIS,

PROJECT NO : 41322.11
DRAWN BY : .....AMC
FILENAME : .....20220518_LHD_OutfallLocations
DATE : 09-20-2022

Training Documentation

LAKES HIGHWAY DISTRICT
September 21, 2022 @ 6:30 A.M.
MS4 Training Video Sign in Sheet

NAME	
Chris Lyons	
Kevin Cooper	
Mike Horton	
Jim Grissom	
David Stoddard	
Jared Heston	
Troy Busenbark	
Welder Shawen	
Travis Benson	
Chris Schenck	
William Shaw	
Mark Roberts	
Aaron Sytts	
DAVID CARPENTER	
Eric Shanley	
Nathan Sheldon	
Bonny A Flagg	Bonny A. Flagg
Tracy Blaine	
Joe Mitchell	

Stormwater Management Training

OVERVIEW

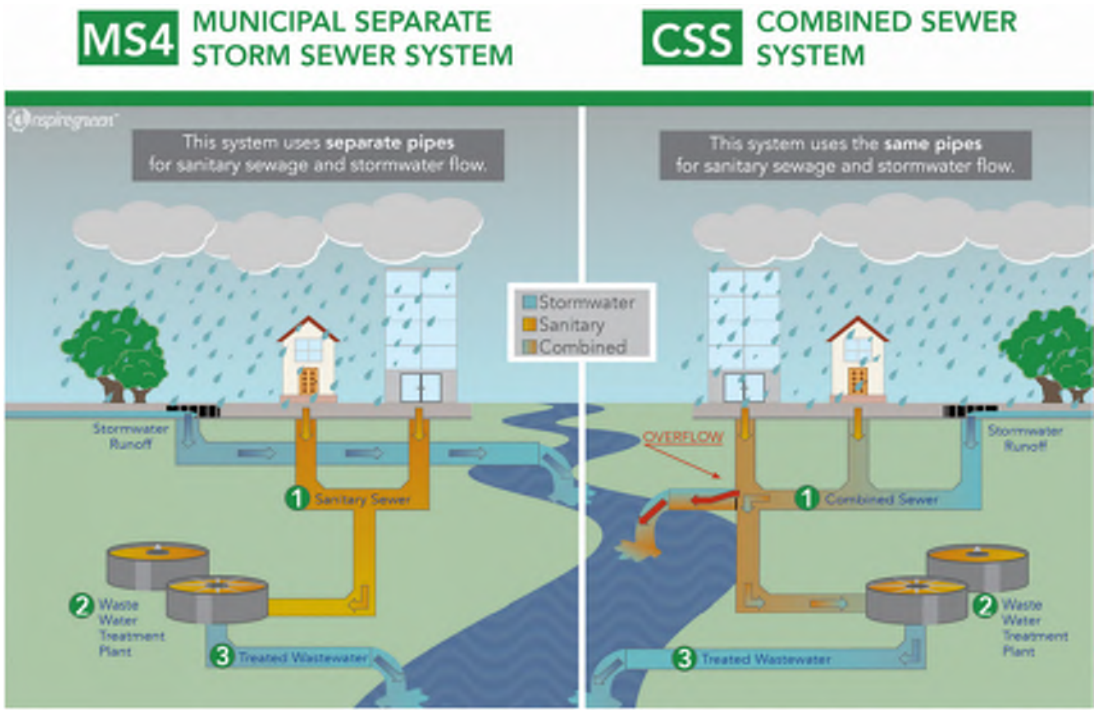
- MS4 introduction and permit
- Stormwater Management Program (SWMP)
- Identifying Illicit Discharge
- Responding to Illicit Discharge
- Best Management Practices

MS4 PERMIT

- National Pollutants Discharge Elimination System (NPDES) permit program for Municipal Separate Storm Sewer (MS4s)
- Goal is to reduce the discharge of pollutants into waterways
- Issued by the EPA
- Developed as a result of the Clean Water Act (1972)
- Administrated by the Idaho DEQ
- Allows MS4's to discharge stormwater to waterways
- Must be clear, specific, measurable, enforceable
- Keeps water uncontaminated

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4s)

A publicly owned conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that collects or conveys stormwater and discharges to surface waters of the State



MS4 ROAD DRAINAGE SYSTEMS

- Catch basins
- Ditches
- Curb & Gutter
- Culverts
- Drainage Swales
- Snow storage

MS4 IMPORTANCE TO OPERATORS

- Anything inside your right of way
- Within the MS4 boundary (urbanized areas)
- Anything that collects stormwater
- Outfalls to the waterways

STORMWATER MANAGEMENT PROGRAM

All operators of Regulated MS4s must implement and enforce a Storm Water Management Program (SWMP) to

- Reduce pollutants to the maximum extent practicable
- Protect Water Quality
- Satisfy the appropriate water quality requirements of the Clean Water Act

SWMP REQUIREMENTS

- Public Education and Outreach
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Stormwater Management
- Pollution Prevention/Good Housekeeping

SWMP EDUCATIONAL REQUIIREMENT

- “Permittees’ construction inspectors, maintenance field staff, and code compliance officers must be sufficiently trained to conduct dry weather screening activities and to respond to reports of illicit discharges and spills into the MS4.”

- “Permittees must ensure that all persons responsible for the stormwater infrastructure management and O&M activities as required by this Part are trained or otherwise qualified to conduct such activities.”

ILLICIT DISCHARGE

- Illicit Discharge-Any discharge to a MS4 that is not composed entirely of stormwater; except discharges pursuant to a NPDES permit and from firefighting
- Illicit Connection- A physical connection to an MS4 that primarily conveys non-stormwater discharges
  - Sewer connections
  - Floor drains
  - Inlets

STORMWATER POLLUTANTS

The term pollutant is defined very broadly in the Clean Water Act includes any type of industrial, municipal, and agricultural waste discharged into water such as:

- Litter
- Pesticides
- Oils and Grease
- Sewage and grey water
- Fertilizers
- Household chemicals
- Soil erosion
- Nutrients

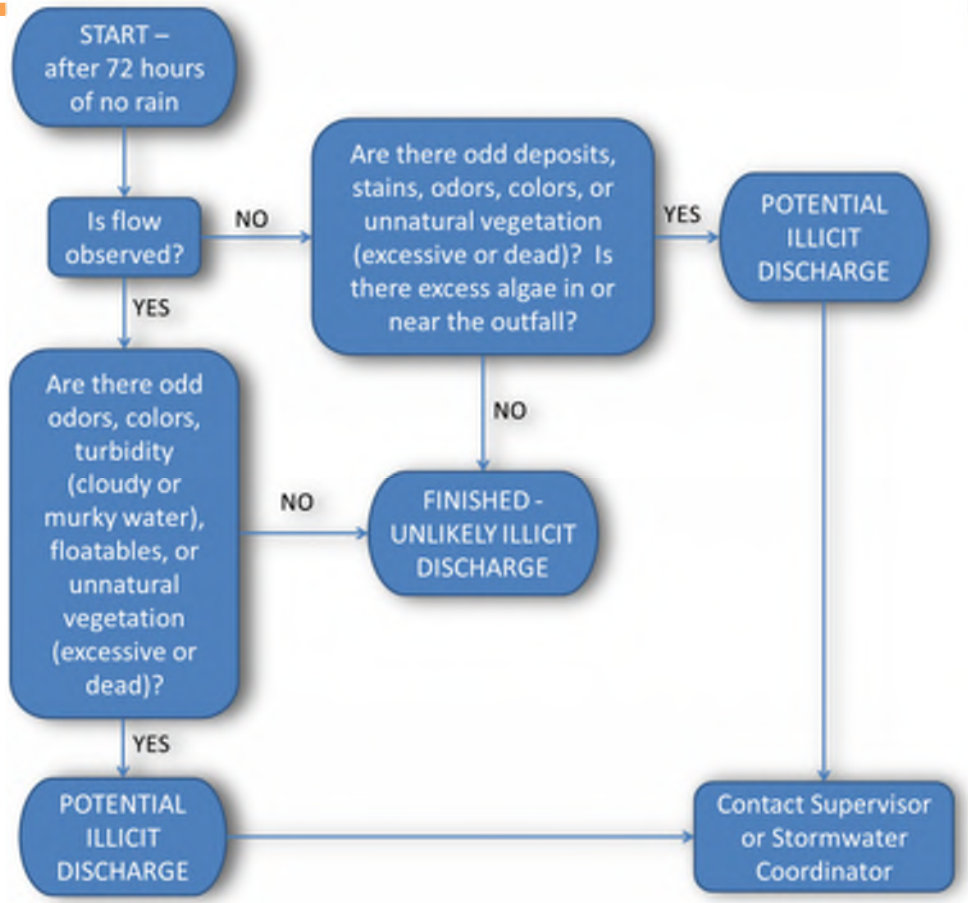
IMPACT OF ILLICIT DISCHARGE

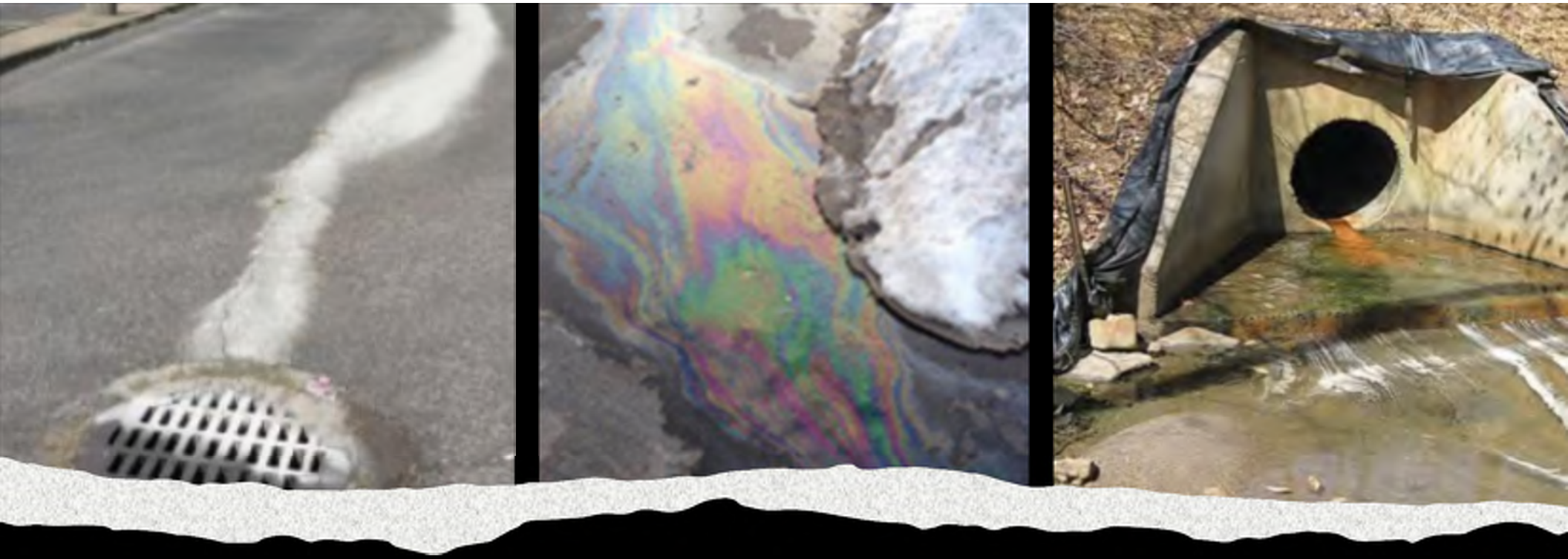
- Rainwater from storm events flows to surface water bodies
- Keeping pollution out of stormwater protects our waterways

SIGNS OF ILLICT DISCHARGE: DRY WEATHER FLOW

- A storm drain with measurable flow during dry weather
  - Dry - has rained less than 0.1 inches in 72 hours
- Exception-irrigation and footing drains
- Perform illicit discharge screening during dry weather

DRY WEATHER SCREENING FOR ILLICIT DIISCHARGE





SIGNS OF ILLICIT DISCHARGE: STAINING/SHEEN

SIGNS OF ILLICIT DISCHARGE: DISCOLORATION

SIGNS OF ILLICIT DISCHARGE: DISCOLORATION

Color	Possible Sources
Yellow	▪ Chemical, textile, tanning plants
Brown	▪ Construction activities ▪ Meat packing facilities ▪ Printing facilities ▪ Concrete, metal, stone operations ▪ Agricultural land
Tan to light brown	▪ Construction activities ▪ Suspended sediments ▪ Agricultural land
Light to dark brown	▪ Decaying organic matter from soil, leaves, or other vegetation
Green (pea green, bright green, blue-green, brown-green)	▪ Chemical plants, textiles ▪ Algae or plankton bloom ▪ Antifreeze ▪ Fertilizer
Gray (milky/dirty dishwater, gray-black)	▪ Dairies/ food processing ▪ Sewage discharge ▪ Concrete wash-outs
Milky white	▪ Paint, lime, grease, concrete ▪ Swimming pool filter backwash ▪ Concrete wash-outs
Clear black	▪ Sulfuric acid spill ▪ Turnover of oxygen-depleted water
Red, purple, blue, black	▪ Fabric dyes, inks from paper and cardboard manufacturers
Red	▪ Meat packing/processing

SIGNS OF ILLICIT DISCHARGE: VEGETATION

- Stressed or dead vegetation
- Overgrown or excessive algae

SIGNS OF ILLICIT DISCHARGE: SUDS/FOAM

SIGNS OF ILLICIT DISCHARGE: SMELL

Odor	General Causes
Musty	▪ Raw or partially treated sewage ▪ Livestock waste
Sewage	▪ Sanitary wastewater from cross-connection with the drainage system ▪ Septic tank/ failing septic system
Rotten Eggs (sulfide)	▪ Stale sanitary wastewater ▪ Meat processing plants/ canneries/ dairies ▪ Decomposing organic matter
Gas or Oil	▪ Gas stations ▪ Vehicle maintenance operations ▪ Illegal disposal ▪ Industrial operations: refineries/ manufacturing
Sharp, pungent	▪ Chemicals ▪ Pesticides
Rancid, sour	▪ Food processing facilities ▪ Dairies
Chlorine	▪ Wastewater treatment plant discharges ▪ Swimming pool discharges ▪ Local manufacturing / industrial sites
Sweet, fruity	▪ Commercial wash water

SIGNS OF ILLITICT DISCHARGE: FAILED SEPTIC

- Foul odor
- Pools of water near drain field
- Unusually bright green water or grass
- Algae blooms in nearby water

COMMON ILLICIT DISHARGES: SEDIMENT/EROSION

- Bare soils or banks with no erosion fencing
- Muddy discharge from an outfall

COMMON ILLICIT DISHARGES: OILS

COMMON ILLICIT DISHARGES: FLOOR CLEANERS

COMMON ILLICIT DISHARGES:DUMPSTERS

- Open lids
- Leaking liquids
- Overfilled

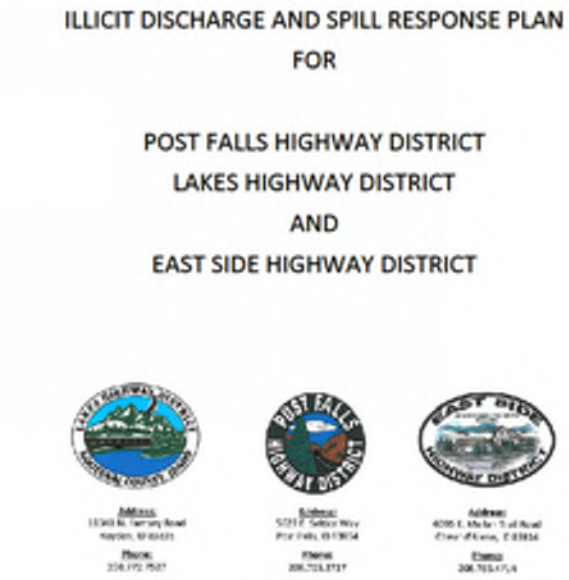
COMMON ILLICIT DISHARGES: CONCRETE

COMMON ILLICIT DISHARGES: PAINT/DRYWALL

COMMON ILLICIT DISHARGES:LITTER/DEBRIS

RESPONDING TO ILLICIT DISCHARGE

- Refer to the illicit discharge and spill response plan
- Contact your supervisor
- Documentation
  - Document location and date
  - Take photos
- Stay in Highway District right of way
- In the event of a suspected illicit discharge, it will be the responsibility of the Highway District to:
  - Investigate
  - Discharge Abatement
  - Document the corrective action


ILLICIT DISCHARGE AND SPILL RESPONSE PLAN
FOR

POST FALLS HIGHWAY DISTRICT
LAKES HIGHWAY DISTRICT
AND
EAST SIDE HIGHWAY DISTRICT

INVESTIGATING ILLICIT DISCHARGE

- Investigate no later than two working days
- If illicit discharge is confirmed
  - If safe, begin process to eliminate
  - If public health concern, perform water sampling or notify local responders
  - If the discharge falls under the jurisdiction of an existing plan, notify the appropriate party
  - Begin abatement process
- If investigation finds no illicit discharge
  - Document results
  - Notify the party that notified the Highway District of the investigation result

DISCHARGE ABATEMENT

If investigation confirms illicit discharge, perform discharge abatement

- Notify party responsible
- Educate responsible party to prevent further discharge
- If responsible party is not identified, contact those in the area to educate and prevent

DOCUMENTING ILLICIT DISCHARGE

Regardless of whether an actual discharge was determined, it is important to document each discharge response

At a minimum, the report shall contain the following:

- Time and date of discharge notification
- Time and date that the investigation began/ended
- Time and date the discharge was eliminated (if discovered)
- The responsible party (if discovered)
- Steps taken to eliminate the discharge
- Any environmental impacts
- If discharge was deemed an immediate public threat, document responding agency and discharge type

All investigations will be filed with the Annual Stormwater Report

ILLICIT DISCHARGE VS SPILLS

Illicit discharge - a discharge of non-stormwater to the storm sewer system

Spill-any release of material that threatens human health or the environment

A spill can become an illicit discharge once it enters the storm sewer system.

SPILL CONTROL

- When unable to prevent spills, prompt response is the best way to minimize impact
- Spill Preparation
  - Equipment and materials for cleanup
  - Appropriate spill personnel
  - Designate a point of contact
- Train everyone on spill control response actions:
  - What to do
  - Who to call
  - Where is spill equipment

SPILL RESPONSE

- Be safe: Identify the pollutant and determine if it is safe to remain in the area and if safety equipment is needed
- Stop the Source: If the source is readily identifiable and can be stopped quickly and safely, do so
- Provide corrective action if spill is within right of way
- Notify the correct agency
- Report the spill to your supervisor.
- Protect Stormwater: If safe, while help is on the way, confine the spill
- Assist with Clean Up: Remain on site and assist by providing materials, labor, and equipment as directed by the authority agency
- Notify EPA within 24 hours at (206) 553-1846
- Report: Supervisor to write a summary report of the incident and file it with SWMP monitoring records. Submit a copy of the report to EPA and IDEQ within 30 days

AGENCIES TO NOTIFY FOR SPILLS

Emergencies-Dial 911

Flammable Spills-Local Fire District

Chemical Spills-Kootenai County Sheriff's Office: (208) 446-1850

Wastewater Issues-Idaho Department of Environmental Quality: (208) 769-1422

Minor sediment discharge and code violations-Kootenai County Building and Planning Department: (208) 446-1070

BEST MANAGEMENT PRACTICES (BMPs)

- BMPs are schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States

- For the purposes of the NPDES Permit, BMP broadly refers to any type of structural or non-structural practice or activity undertaken by the permittee to implement an SWMP

TYPES OF BMPs

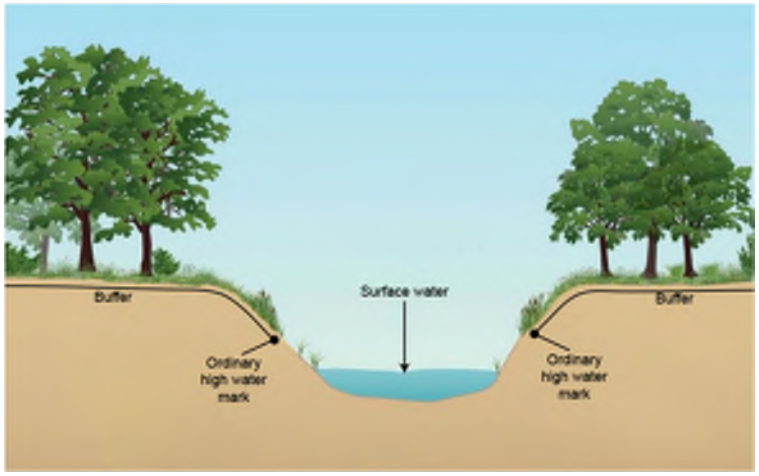
- BMPs are either temporary or permanent
- BMPs are applied either during design phase or during construction

PLAN TO MINIMIZE LAND DISTURBANCE

- Where grading is required, follow natural landforms and design to guide flow of runoff
- Protect sensitive areas such as floodplain, stream buffers, and existing vegetation by planning and clearly marking limits of disturbance prior to construction
- Avoid construction on slopes greater than 15%

PLAN TO PROVIDE NATURAL BUFFERS

- Natural buffers are areas along surface water where eroding activities are prohibited, ideally containing vegetation
- Minimizes erosion and filters stormwater runoff
- Sites within 50 feet of surface water should consider natural buffers or erosion controls to reduce sediment load



PLAN TO MANAGE IMPERVIOUS SURFACES

- Impervious areas that drain directly into drainage system contribute to stormwater pollution
- Disconnecting or reducing impervious surfaces will decrease runoff velocity and improve infiltration of runoff
- Strategies
  - Disconnect and direct flow to vegetation or pervious surface such as gravel
  - Break up flow with ridgelines or periodic curb slits

PLAN TO PHASE CONTRUCTION

Sequence construction activities with installation of controls practices

Disturb only a portion of a site at one time and stabilize before moving on

Reduces the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking

Perform construction in accordance with planned schedule

PLAN TO PRESERVE TOPSOIL AND VEGETATION

- Protect topsoil and vegetation by preventing disturbance or damage to area of construction site
- Preserving topsoil minimizes erosion and vegetation can provide biofiltration and stormwater detention

TEMPORARY BMPs

Apply temporary Best Management Practices and good housekeeping during construction to either

Goals of temporary BMPs it to keep pollutants

Controlled	Out of contact to precipitation	Away from MS4s

EROSION CONTROL

- Cover soil in inactive areas and finished slopes, open space, and utility backfills
- Slope roughening
  - Roughens the soil surface to create horizontal grooves running parallel to the contour
  - Should be applied immediately after grading
- Erosion control blankets
- Mulching

EROSION CONTROL BLANKETS

- A porous net or fibrous sheet laid over ground surface for slope stabilization, erosion control, or stabilizing mulch
- Steps to apply
  - Smooth soil surface
  - Anchor blanket at top of slope
  - Backfill and tamp, anchor ends
  - Roll blanket from top to bottom, not stretching
  - Overlap sides at least four inches
  - Overlap uphill/downhill rolls by three feet
  - Securely staple per instructions

MULCHING

- Immediate, effective, and inexpensive
- Provides timely protection of exposed soils subject to heavy erosion and helps retain moisture
- Choice of materials based on soil type, site conditions, and season
- Hydro mulching/seeding
  - Planting technique that uses wet mixture of mulch fiber and water to stabilize and protect soil, prevent soil compaction, and decrease runoff
  - Mulch mixed in tank and sprayed as a consistent, continuous blanket

DUST PREVENTION

The best method to control dust is to prevent dust production	Limit amount of bare soil exposed at one time	Identify all areas where ground disturbance is not allowed
Avoid using susceptible areas	Cover haul trucks with a tarp	Drive no faster than 15 miles per hours when leaving or entering site

DUST CONTROL

- Sprinkling-Apply water to dry areas
- Vegetative Cover-leave existing vegetation or follow seeding or planting recommendations
- Maintain stable entrances and exits with angular stone
- Soil Roughening-tilling or disking perpendicular to wind direction
- Barriers-a wind barrier generally protects soil downwind for a distance ten times height of barrier
- Tackifiers-chemical or organic compounds sprayed on loose soil to hold it in place

SEDIMENT CONTROL

- Install and maintain controls at
  - Perimeters
  - Entrances and exits
  - Drain inlets
- Sloped areas
  - Apply controls at toe, the toe, face and grade break of the slopes
  - Use Hydraulic mulch and fiber rolls
  - Avoid disturbance of steep slopes
- Use vegetative buffer strips, fiber rolls, silt fencing, gravel bags, and traps and basins to create barrier

SEDIMENT CONTROL: VEGETATIVE BUFFER STRIP

Gently sloping area of vegetive cover that provides a living filter for runoff before flow enters water body

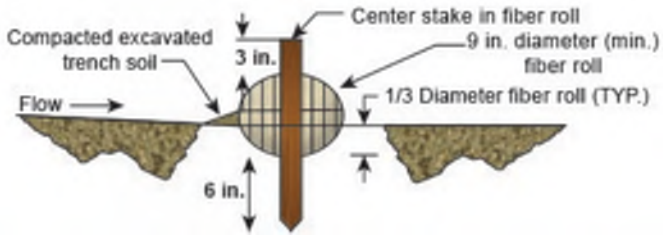
- Minimum width of 25 feet
- Minimum length along streams or above wetlands, 100 feet
- Steeper slopes require wider buffers
- Vegetation should be at least 75% of background
- No construction debris, equipment, or extra soil should be added into buffer strip

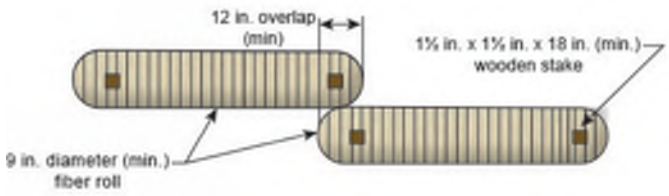
SEDIMENT CONTROL: FIBER ROLL (aka WATTLE)

- Consists of straw, flax, or other similar material bound into a biodegradable tubular plastic
- Intercept runoff, reduce velocity, release runoff as sheet flow, and remove sediment from runoff
- Can be left in place after stabilization

FIBER ROLL INSTALLATION

- Install on contour, perpendicular to flow
- Trench roll 3-4 inches into soil
- Stake ends and along roll at maximum of 4 feet on center
- Adjoin ends by overlapping
- Place in interval of 10-20 feet depending on slope and turn final ends uphill
- Remove sediment if it reaches ½ of roll height
- Install prior to storms and daily during rain events





SEDIMENT CONTROL: SILT FENCE

- A temporary sediment barrier consisting of filter fabric stretched and attached to supporting posts
- Assist in sediment control by retaining some eroded soil particles and slowing runoff velocity
- Parameters
  - Position fence minimum of 6 feet from toe of slope
  - Install as a close to the contour as possible, turn last 6 feet uphill
  - Key in(bury) bottom six inches, backfill and compact
  - Join fence sections by wrapping ends together
  - Space posts no more than 6 feet apart and drive in at least 16 inches
  - Remove sediment when it reaches one third of height

SEDIMENT CONTROL: TRAPS AND BASINS

- Sediment traps
  - Containment areas formed by excavation and/or embankment to intercept sediment-laden runoff and retain sediment
  - Less than 5 acres for smaller drainage areas
- Sediment basins
  - Detains sediment sediment-laden runoff long enough to allow most of sediment to settle
  - Greater than 5 acres for large areas
  - Sizing factors include drainage area, storm potential, settling velocities, and soil loss estimation

STABILIZING ENTRANCES AND EXITS

- Minimizes tracking of mud and dirt onto public roads
- Should consist of an aggregate pad, underlain with filter cloth, and located at any point where traffic enters or exits
- Inspect weekly and after rainfall for gravel loss or sediment buildup
- Entrances and Exits should be at least
  - 50 feet long and 12 feet wide
  - 6 inches deep (large angular rock over geotextile fabric)
  - Vehicles should experience two complete tire rotations

EROSION PREVENTION ON CONSTRUCTION ROADS

Temporary construction roads should include erosion prevention measures to divert runoff away from road

- Water bars (or cross ditch)
  - A cut and berm built at a downward angle across the roadway, extending from the cut bank to the opposite fill shoulder
- Road sloping
  - Constructing road with slight inward slope from the fill slope to the cut slope
  - Diverts runoff into sediment control device
- Rolling dip
  - A method of constructing the road with shallow, outward-sloping dips or undulations to collect surface runoff and direct it away from road

EQUIPMENT MAINTENANCE

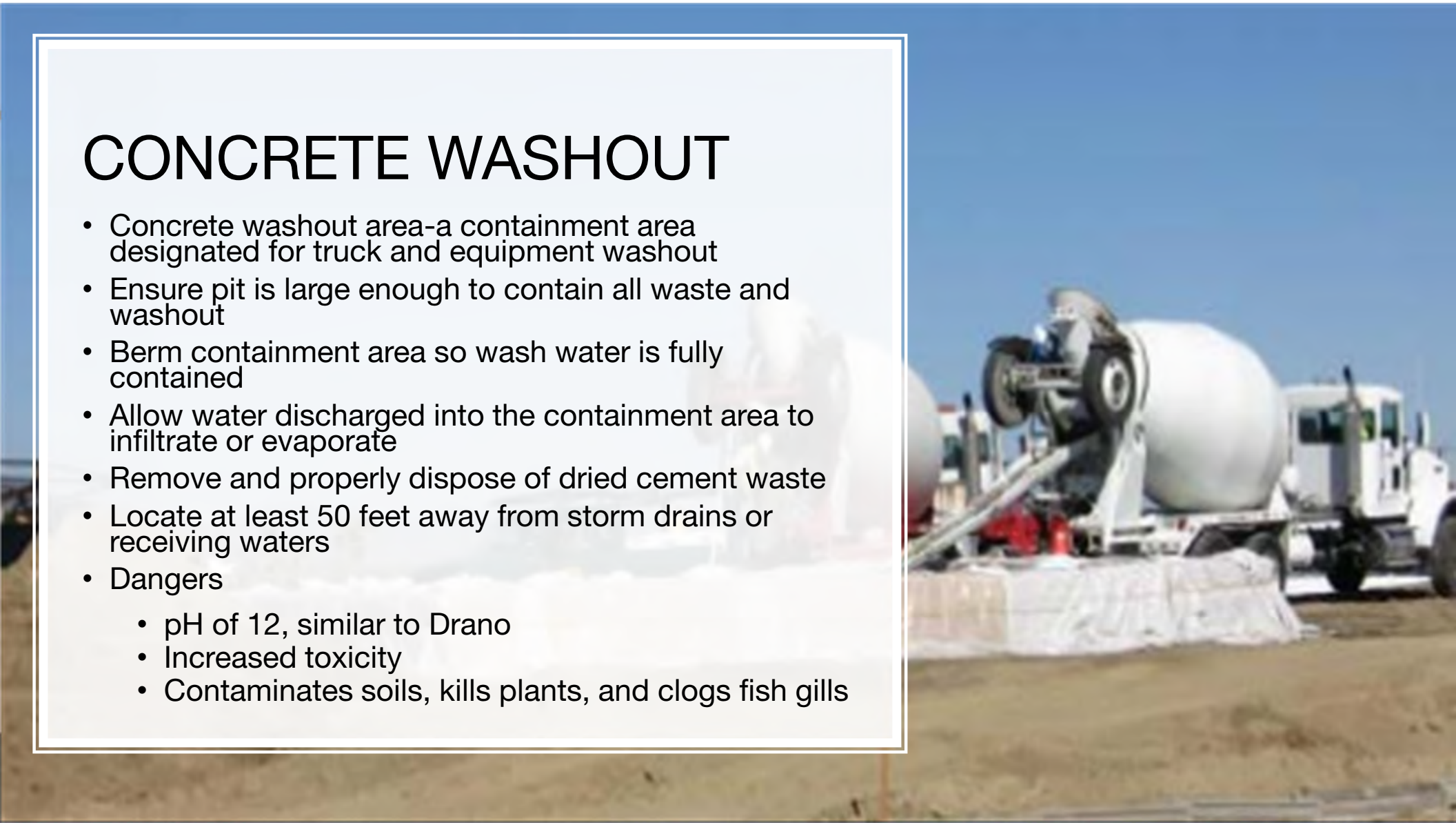
- Maintain equipment, checking regularly for leaks
  - When leaks occur clean immediately and dispose of waste properly
- Use drip pans to collect leaks or spills during maintenance activities
- Store equipment and vehicles in designated areas with appropriate BMPs
  - Impervious surface
  - Bermed area

FLEET VEHICLE WASHING

- Washing generates oil, grease, sediment, and metals, as well as cleaning solvents into the wash water
- Perform a dry debris removal, collect, and dispose as solid waste
- Wash vehicles in a designated wash area, using power washer to avoid detergents
- Collect wash water if possible

CONCRETE WASHOUT

- Concrete washout area-a containment area designated for truck and equipment washout
- Ensure pit is large enough to contain all waste and washout
- Berm containment area so wash water is fully contained
- Allow water discharged into the containment area to infiltrate or evaporate
- Remove and properly dispose of dried cement waste
- Locate at least 50 feet away from storm drains or receiving waters
- Dangers
  - pH of 12, similar to Drano
  - Increased toxicity
  - Contaminates soils, kills plants, and clogs fish gills



MATERIAL STORAGE

- Store oil, grease, chemicals and other hazardous materials in containers on spill pallets
- Label appropriately
- Store materials in covered areas where possible
- All outdoor storage must have adequate lids

STOCKPILED MATERIAL STORAGE

- Do not stockpile sediment, aggregate, sand, or asphalt near drainage systems (at lest 50 feet away)
- Make sure all stockpiled materials have been covered and bermed
- Protect from runoff using temporary sediment barriers
  - Silt fencing
  - Fiber rolls
  - Gravel Bag Berm
- Protect soil stockpiled from wind using
  - Water
  - Hydraulic mulch
  - Geo-textiles
  - Soil binders

DOUBLE CONTAINMENT

- Chemicals should be stored in watertight containers with double containment
- Chemicals with double containment
  - Fuels
  - Oils
  - Hydraulic fluids

MINIMIZE MATERIAL EXPOSURE TO PRECIPITATION

Line and berm storage areas and bag and box materials under cover

STREET MAINTENANCE

- Pollutants accumulate on streets between storm events and are washed into the drainage system by runoff
- Streets that discharge to receiving waters should have priority in street sweeping and debris removal
- Connected streets with a higher pollution loading should be prioritized and cleaned more frequently

SNOW REMOVAL AND DISPOSAL

- Use upland areas for storage and disposal of snow
- Choose flat pervious areas where melting snow can infiltrate
- Keep snow storage at least 100 feet away from water bodies, wetlands, and public or private drinking water wells
- Remove sediment and debris from dumping areas each spring

WASTE MANAGEMENT

- Inspect dumpsters and other waste containers periodically
- Repair or replace leaky dumpsters and containers
- Cover dumpsters and other waste containers

WASTE DISPOSAL

- Never dispose of waste products in storm drain inlets
- Provide adequate number of trash receptacles to avoid overflow
- Prevent disposal of wash water on impervious surfaces, pervious site surfaces, or into storm drain

TEMPORARY RESTROOMS

Position	Position sanitary facilities in convenient location
Avoid	Avoid discharging or burying untreated raw wastewater
Ensure	Ensure that a licensed service maintains facilities in good working order
Stake or secure	Stake or secure portable units to a fixed object, as needed

BUILDING AND GROUNDS MAINTENANCE

- Clean up after yourself
- Keep solid waste in containers away from drainage systems
- Perform periodic brooming of maintenance yard, disposing of debris in garbage
- If outdoor pavement cleaning with detergent is required, collect wash water and dispose in indoor sinks or drains for discharge to the sanitary sewer

PERMEANT STORMWATER CONTROLS

- Detention Swales
- Filtration Basins
- Ditches
- Culverts

PERMANENT BMP MAINTENANCE

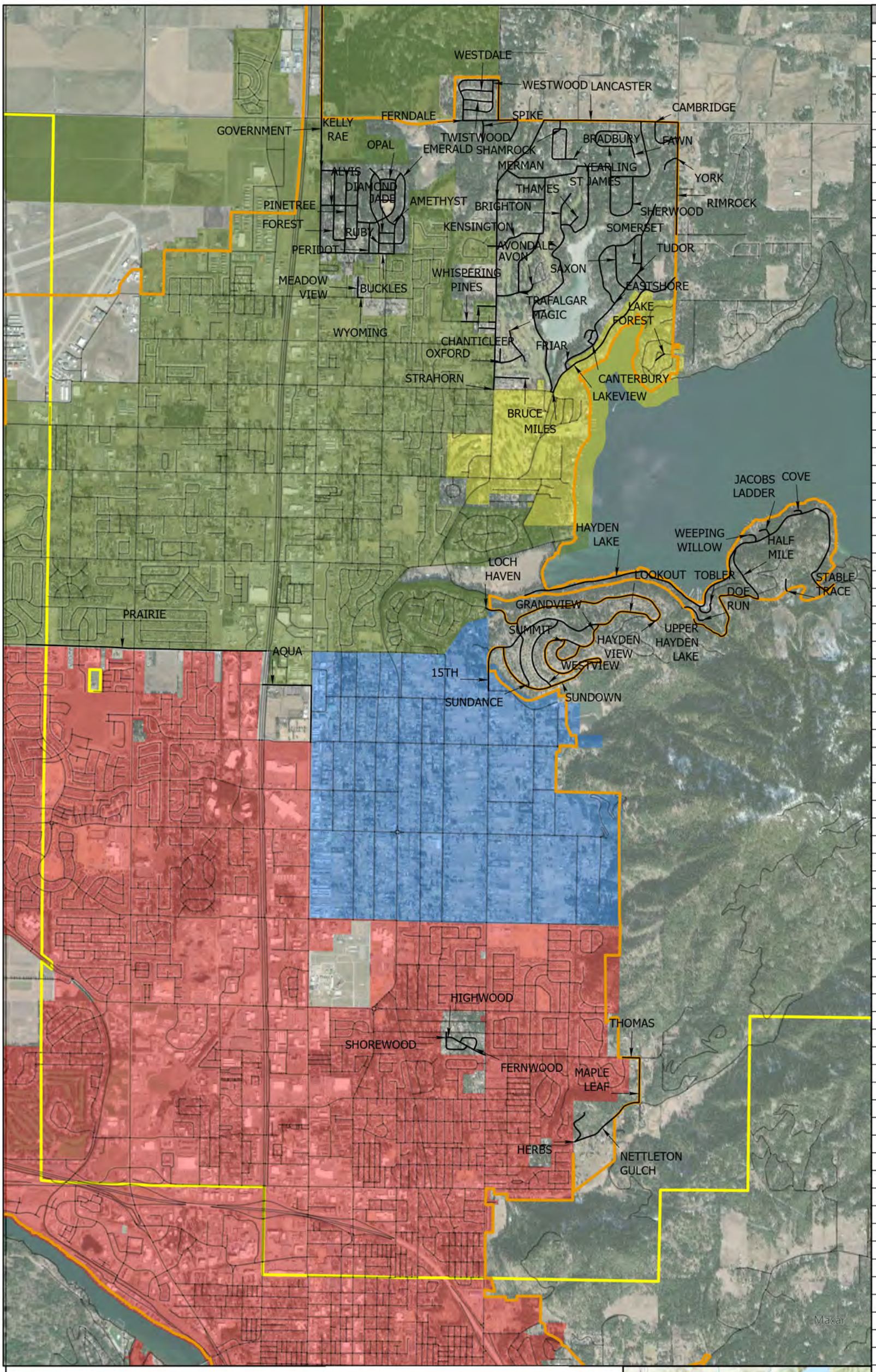
- Trash and debris can accumulate in MS4s and should be maintained as needed
- Ditches need periodic reshaping and reseeding
- Culverts and catch basins must be cleaned out

WHAT TO REMEMBER

- What is an MS4
- What is illicit discharge and stormwater pollutants
- How to identify and respond to illicit discharge
- Best Management Practices

THANK YOU

Street Sweeping Map



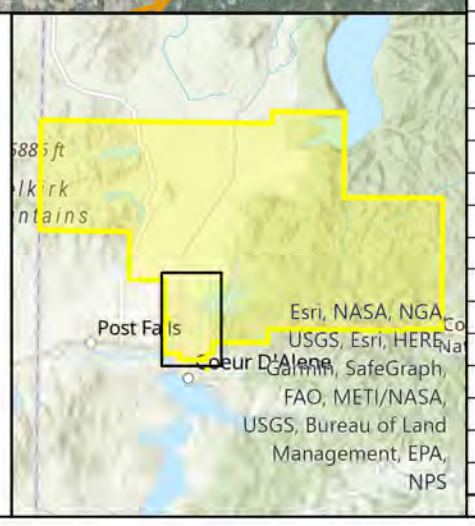
STREET NAME	DATE SWEPT
15TH	
ALVIS	
AMETHYST	
AQUA	
AVON	
AVONDALE	
BOEKEL	
BRADBURY	
BRIGHTON	
BRUCE	
BRUIN	
BUCKLES	
CAMBRIDGE	
CANTERBURY	
CHANTICLEER	
CLARKVIEW	
COVE	
DIAMOND	
DOE RUN	
DOVER	
EASTSHORE	
EMERALD	
FAWN	
FERNDALE	
FERNWOOD	
FOREST	
FRIAR	
GOVERNMENT	
GRANDVIEW	
HALF MILE	
HAYDEN LAKE	
HAYDEN VIEW	
HERBS	
HIGHWOOD	
JACOBS LADDER	
JADE	
KELLY RAE	
KENSINGTON	
LACEY	
LAKEVIEW	
LANCASTER	
LOCH HAVEN	
LOOKOUT	
MAGIC	
MAPLE LEAF	
MEADOW VIEW	
MERMAN	
MILES	
MIMOSA	
NETTLETON GULCH	
NETTLETON GULCH	
OPAL	
OXFORD	
PERIDOT	
PINETREE	
PRAIRIE	
RIMROCK	
RUBY	
SAPPHIRE	
SAXON	
SHAMROCK	
SHERWOOD	
SHOREWOOD	
SKYVIEW	
SOMERSET	
SPIKE	
ST JAMES	
STABLE TRACE	
STARLING MEADOWS	
STRAHORN	
STRATFORD	
SUMMIT	
SUNDANCE	
SUNDOWN	
THAMES	
THOMAS	
TOBLER	
TOPAZ	
TRAFALGAR	
TUDOR	
TWISTWOOD	
UPPER HAYDEN LAKE	
WEEPING WILLOW	
WESTDALE	
WESTVIEW	
WESTWOOD	
WHISPERING PINES	
WILBUR	
WYOMING	
YEARLING	
YORK	

LAKES HIGHWAY DISTRICT
KOOTENAI COUNTY, IDAHO

LEGEND

- MS4 BOUNDARY
- LHD BOUNDARY
- CITY OF COEUR D'ALENE
- CITY OF DALTON GARDENS
- CITY OF HAYDEN
- CITY OF HAYDEN LAKE
- LHD_ROADWAYS

0 1,500 3,000 6,000 Feet



WELCH-COMER ENGINEERS | SURVEYORS
www.welchcomer.com 208-664-9382

LAKES HIGHWAY DISTRICT

DISTRICT ROADWAYS MAP WITHIN MS4 BOUNDARIES

Sources:
ESRI Basemaps, Idaho Tax Commission GIS, Kootenai County GIS, IDWR GIS

PROJECT NO: 41322.11
DRAWN BY: .....AMC
FILENAME: .....20220531_LHD_DistrictRoadways
DATE: 06-01-2022

Tracking Logs & Checklists

Public Input Tracking Log

Date	Caller	Caller's Number	Comment	Results	Response to Caller

Construction Site Inspection Log

Project Name	Project Location	Does Project have SWPPP?
Inspection No.	Inspection Date	Weather at time of Inspection

Describe Present Phase of Construction:

Type of Inspection

☐ Regular ☐ Pre-Storm Event ☐ During Storm Event ☐ Post Storm Event

Is there evidence of any discharges?

List BMP's in place:

Are there any site conditions that need to be addressed?

Approach Permit Tracking Log

Permit #	Permit Issue Date	Location	MS4 (Y/N)	SEEP CERT (Y/N)	SEEP GUIDE (Y/N)	Inspector	Comments

ROW/Utility Permit Tracking Log

Permit #	Permit Issue Date	Location	Applicant	Permit Start Date	Permit Stop Date	MS4 (Y/N)	SEEP CERT (Y/N)	SEEP GUIDE (Y/N)	Inspector	Comments	AIN #

Pollution Prevention / Good Housekeeping Checklist **(to be performed annually)**		
Date	Item to Check for Good Practices	Comments
	Fleet Maintenance and Vehicle Washing Operations	
	Building Maintenance	
	Snow Management and Snow Disposal Sites	
	Solid Waste Transfer Activities	
	Materials Storage	
	Heavy Equipment Storage Area	
	Hazardous Materials Storage	
	Used Oil Recycling	
	Spill Control & Prevention Measure for Refueling	

SEEP Field Guide Cover

PANHANDLE
Stormwater Erosion Education Program

North Idaho

Stormwater Erosion & Sediment Control Field Guide

www.PanhandleSEEP.org

Illicit Discharge and Spill Response Plan

ILLICIT DISCHARGE AND SPILL RESPONSE PLAN

for

LAKES HIGHWAY DISTRICT

POST FALLS HIGHWAY DISTRICT

AND

EAST SIDE HIGHWAY DISTRICT

Address:
11341 N. Ramsey Road
Hayden, ID 83835

Phone:
208.772.7527

Address:
5629 E. Seltice Way
Post Falls, ID 83854

Phone:
208.765.3717

Address:
6095 E. Mullan Trail Road
Coeur d'Alene, ID 83814

Phone:
208.765.4714

PURPOSE

The purpose of the Illicit Discharge and Spill response plan is to provide guidance for:

- Responding to and investigating discharge complaints
- Who to notify in the event of a discharge
- Corrective action needed
- Documentation

This plan is not intended to replace any existing plans that were designed to address cleanup of hazardous material (HAZMAT) or sanitary sewer overflows. This plan will serve as a supplement to those plans and provide guidance for spills that are not included in plans already set in place.

ILLICIT DISCHARGE

DEFINED

40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to an MS4 that is not composed entirely of storm water, except allowable discharges pursuant to an NPDES permit, including those resulting from firefighting activities.

COMMON ILLICIT DISCHARGES

- Sewage and septage flows
- Chemical/Oil
- Car wash wastewaters (non-residential)
- Laundry wastewater (grey water)
- Irrigation water

COMMON CAUSES OF ILLICIT DISCHARGE

- Improper sewer line connections
- Sanitary sewer overflows
- Failing septic systems
- Industrial/Commercial waste discharge
- Accidental spills
- Excess landscaping irrigation water
- Leaking underground storage tanks

HIGHWAY DISTRICT ROLES AND RESPONSIBILITIES

In the event of an illicit discharge, it will be the responsibility of the Highway District with jurisdiction to:

- Investigate the complaint no later than two (2) working days.
- If the investigation confirms an illicit discharge, the Highway District will begin the process of eliminating the discharge. Water sampling shall be performed if there is reason to believe the discharge is considered a public health threat.
- Any discharge that is identified as an immediate threat to public health and safety will be reported to local emergency responders (911). If the investigation determines the discharge falls under another agency's jurisdiction, the Highway District will notify that entity (see Contact List below). Once the investigation confirms an illicit discharge, the Highway District will begin the abatement process. The party responsible for the discharge, once identified, will be notified immediately and will be required to eliminate the illicit discharge. The Highway District will attempt to educate the responsible party to prevent any future discharge. If the responsible party cannot be identified, the Highway District will contact residents and/or businesses near the discharge, in an effort to further educate and prevent future discharges.
- Provide Corrective Action if spill is within Highway District Right-of-Way, use a hazardous spill kit to prevent further discharge
- If the investigation finds no illicit discharge, the investigation results will be documented. In addition, the party that notified the Highway District of a possible discharge will be notified of the investigation results.

It is important to document each discharge response, regardless of whether an actual discharge was determined. At a minimum, an illicit discharge report shall contain the following:

- Time and date of discharge notification
- Time and date that the investigation began/ended
- Time and date the discharge was eliminated (if discovered)
- The responsible party (if discovered)
- Steps taken to eliminate the discharge
- Any environmental impacts

If the discharge was deemed an immediate public threat, document the responding agency and type of discharge (hazardous material, sewage, etc.). Reports shall be obtained from the responding agency.

Illicit Discharges must be reported to EPA by telephone at (206)553-1846 within 24-hours from the time the Permittee becomes aware of the noncompliance (see Permit Section 7.9).

All investigations shall be filed with the Highway District's Annual Stormwater Report, or equivalent.

LOCAL AGENCY CONTACT LIST

AGENCY	**OFFICE**
LAKES HIGHWAY DISTRICT	(208) 772-7527
POST FALLS HIGHWAY DISTRICT	(208) 765-3717
EAST SIDE HIGHWAY DISTRICT	(208) 765-4714
IDAHO STATE POLICE	(208) 772-6055
KOOTENAI COUNTY SHERRIFF	(208) 446-1300
KOOTENAI COUNTY CODE ENFORCEMENT	(208) 446-1075
IDAHO DEP. OF ENVIRONMENTAL QUALITY	(208)769-1422
PANHANDLE HEALTH	(208) 415-5100
COEUR D'ALENE POLICE DEPARTMENT	(208) 769-2320
HAYDEN LAKE POLICE DEPARTMENT	(208) 772-2161
POST FALLS POLICE DEPARTMENT	(208) 773-3517
SPIRIT LAKE POLICE DEPARTMENT	(208) 623-2701

Dry Weather Monitoring Memo and Inspection Reports

WELCH-COMER
ENGINEERS | SURVEYORS

www.welchcomer.com
O: 208-664-9382
F: 208-664-5946
330 E. Lakeside Avenue, Suite 101
Coeur d'Alene, ID 83814

Memorandum

TO: ERIC SHANLEY, P.E.

FROM: MELISSA CLEVELAND, P.E.

PRJ. #: 41322.11.02

SUBJECT: MS4 PERMIT DRY WEATHER INSPECTIONS MEMO

DATE: OCTOBER 13, 2022 (UPDATED)

CC: THE COMMISSIONERS

Introduction

On July 26 and 27, 2022, all Lakes Highway District MS4 outfalls were inspected in accordance with the North Idaho Highway Districts NPDES MS4 Permit. A few sites were reinspected in early August and one site (19) was re-inspected September 8th. At each outfall site, an inspection report was completed, and photos were taken. Where discharge was present, samples were taken and sent for testing at Accurate Testing Labs, LLC. Discharge was tested for pH, total chlorine, total phenols, E. Coli, total phosphorus, and total suspended solids. GIS mapping was also updated while performing dry weather inspections. The purpose of this memo is to give you a summary of the dry weather inspection results.

Private Property

During initial testing, Outfalls 1, 2, 17, 19, and 21 were not properly assessed and showed signs of flow but were not sampled for water quality due to limited access caused by private property. On August 8th, 2022, these outfalls were revisited to assess if flow or signs of discharge were still present. Outfalls 1, 17, and 21 were dry and determined as no flow or discharge. Outfall 2 and 19 still exhibited flow during reassessment. Outfall 19 was reassessed after gaining permission from the property owner, and a sample taken on September 8th. Outfall 2 was assessed upstream via a culvert and catch basin within the Highway District Right-Of-Way.

Water Quality Standards

IDAPA 58.01.02, Water Quality Standards, and Sub-Basin Assessment and Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie (2000), and the Hayden Lake Management Plan (1994) were referenced for applicable standards. Triggers are as follows:

- E. Coli concentrations should be less than 126/100 mL (IDAPA 58.01.02 Section 251)
- Chlorine should be less than 11µg/L (IDAPA 58.01.02 Section 210)
- Total Phosphorous should be less than 7 ug/L (TMDL and Hayden Lake Watershed Plan)
- pH should be between 6.5 and 9.0 (IDAPA 58.01.02 Section 250)
- Turbidity should be less than 25 NTUs (IDAPA 58.01.02 Section 250)

Water Quality Testing Results

All outfalls, but 7, were dry at the time of inspection. Outfalls, 2, 5,12,13, 19, 28, and 29 contained discharge during dry weather inspections and were tested for water quality. All samples were taken by Welch Comer staff and tested by Accurate Testing Labs, LLC. Results of the water quality samples are as follows:

Lakes Highway District Dry Inspection Discharge Testing Results										
Analyte	Outfall Results							Unit	PQL	Analysis Date
	2	5	12	13	19	28	29			
E. Coli Bacteria	13.4	16	85.7	ND	ND	ND	129	MPN/ 100mL	1	07/28/22
Chlorine, Total Residual	ND	0.04	0.02	ND	ND	ND	0.02	mg/L	0.01	07/28/22
Phosphorus, Total	0.016	0.487	0.036	0.014	0.044	0.014	0.035	mg/L	0.004	08/04/22
pH	8.34	8.14	7.43	7.28	8.21	7.17	7.8	pH Units	6.5-9.0	07/28/22
Phenolics	ND	ND	ND	ND	ND	ND	ND	mg/L	0.05	08/24/22
Total Suspended Solids	2	212	ND	ND	1	ND	5	mg/L	1	08/08/22

Note: If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method). See attached test results for method and analyst information. Refer to enclosed test results for method and analyst information.

Outfall 2

Outfall 2 is located on East Hayden Lake Road in an area with residential development. The test was taken upstream of the roadway where a ½ pipe culvert comes down the slope.

At outfall 2, Chlorine (Total Residual) and Phenolics were not detected.

E. Coli was detected at 13.4/100 mL, which is less than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor.

Total phosphorus was detected at 0.016 mg/L which equals 16 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 8.34 is within the acceptable range of 6.5 to 9.

The total suspended solids (TSS) test had a result of 2 mg/L, but it is unknown how this TSS value compares to a turbidity trigger of 25 NTUs. The inspector noted that the runoff appeared clear with no noticeable turbidity.

It appeared that the runoff was likely groundwater or irrigation from uphill or adjacent residences. The slight presence of E. Coli is too low to suspect a direct connection from septic or sewer. The E. Coli is likely coming from other sources in the forest or ditch. We recommend testing this location again during the dry weather in 2023. If E. Coli is still present, then further investigation into the source will be necessary.

Outfall 5

Outfall 5 is located on East Hayden Lake Road in an area with residential development. At outfall 5 Phenolics were not detected.

E. Coli was detected at 16/100 mL, which is less than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor.

Chlorine was detected at 0.04 mg/L which is equal to 40 µg/L. This exceeds the trigger of 11 µg/L in the DEQ Water Quality Standards. Chlorine could come from swimming pools, a water system leak, or chlorinated irrigation water. There do not appear to be any swimming pools uphill from the outfall, but there is a residence that has a decorative pond that could potentially be a contributor. The chlorine levels are low and do not raise serious red flags for a suspected illicit discharge.

Total phosphorus was detected at 0.486 mg/L which equals 486 µg/L. This far exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 8.14 is within the acceptable range of 6.5 to 9.

The total suspended solids (TSS) test had a result of 212 mg/L, but it is unknown how this TSS value compares to a turbidity trigger of 25 NTUs. The inspector noted that the runoff appeared clear with no noticeable turbidity.

It appeared that the runoff was likely groundwater, irrigation from uphill or adjacent residences, or discharge from a decorative pond uphill from the outfall. The slight presence of E. Coli and chlorine are too low to suspect a direct connection from septic or sewer. The E. Coli is likely coming from other sources in the forest or ditch. Because North Kootenai Water and Sewer District (NKWSD) chlorinates their potable water, it is possible that the chlorine is coming from irrigation or from a leaking water pipe. We recommend testing this location again during the dry weather in 2023. If E. Coli is still present, then further investigation into the source will be necessary. If chlorine is still present, we recommend contacting NKWSD to determine if they have a leaking pipe.

Outfall 12

Outfall 12 is located on East Hayden Lake Road in an area with residential development. At outfall 12 Phenolics and Total Suspended Solids were not detected.

E. Coli was detected at 85.7/100 mL, which is less than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor.

Chlorine was detected at 0.02 mg/L which is equal to 20 µg/L. This exceeds the trigger of 11 µg/L in the DEQ Water Quality Standards. Chlorine could come from swimming pools or a water system leak. It could also come from chlorinated irrigation water. There is a home with a swimming pool off of E. Haydenview Drive uphill from this outfall; therefore, it is possible that the pool could be a contributor. The chlorine levels are low and do not raise serious red flags for a suspected illicit discharge.

Total phosphorus was detected at 0.036 mg/L which equals 36 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 7.43 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater, discharge from a pool, or irrigation from uphill or adjacent residences. The slight presence of E. Coli and Chlorine are too low to suspect a direct connection from septic or sewer. The E. Coli is likely coming from other sources in the forest or ditch. Because NKWSD chlorinates their potable water, it is possible that the chlorine is coming from irrigation or from a leaking water pipe. We recommend testing this location again during the dry weather in 2023. If E. Coli is still present, then further investigation into the source will be necessary. If chlorine is still present, we recommend contacting NKWSD to determine if they have a leaking pipe.

Outfall 13

Outfall 13 is located on East Hayden Lake Road in an area with residential development. At outfall 13 E. Coli, chlorine, phenolics and Total Suspended Solids (TSS) were not detected.

Total phosphorus was detected at 0.014 mg/L which equals 14 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 7.28 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater or irrigation from adjacent residences and follow up action is not recommended.

Outfall 19

Outfall 19 is located on East Hayden Lake Road in an area with residential development. At outfall 19, E. Coli, chlorine, and phenolics were not detected.

Total phosphorus was detected at 0.044 mg/L which equals 44 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 8.21 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater or irrigation from adjacent residences and follow up action is not recommended.

Outfall 28

Outfall 28 is located on N. Avondale Loop Road in an area with residential development and the Avondale Golf Course. At outfall 28 E. Coli, chlorine, phenolics and Total Suspended Solids (TSS) were not detected.

The inspector detected a faint sewage smell; however, E. Coli was not detected through testing.

Total phosphorus was detected at 0.014 mg/L which equals 14 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 7.17 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely irrigation from adjacent residences or the golf course and follow up action is not recommended.

Outfall 29

Outfall 29 is located at the intersection of N. Avondale Loop Road, Thames, and Brighton Roads in an area with residential development and in close proximity to the Avondale Golf Course. At outfall 29 phenolics were not detected.

E. Coli was detected at 129/100 mL, which is greater than the IDAPA Standard of 126/100 mL. The inspector noted that there was no odor.

Chlorine was detected at 0.02 mg/L which is equal to 20 µg/L. This exceeds the trigger of 11 µg/L in the DEQ Water Quality Standards. Chlorine could come from swimming pools or a water system leak. There is a swimming pool off of Brighton Court so that is a possibility. It could also come from chlorinated irrigation water. Additionally, this area is served with potable water from NKWSD and since they chlorinate the water, the chlorine could be coming from irrigation or a

water line leak. The levels are low and do not raise serious red flags for a suspected illicit discharge.

Total phosphorus was detected at 0.035 mg/L which equals 35 µg/L. This exceeds the water quality trigger of 7 µg/L listed in the 2020 Total Maximum Daily Loads of Lakes and Streams Located on or Draining to the Rathdrum Prairie.

The pH of 7.43 is within the acceptable range of 6.5 to 9.

It appeared that the runoff was likely groundwater, irrigation from adjacent residences, or potential of discharge from a pool. Illicit discharge was not suspected, and follow-up action is not recommended.

Action Needed

Outfall 5 has two small pipes running through it. Will need to determine if those pipes are foundation drains or some other drain to make sure they are not contributing illicit discharge other times of the year; both were dry during the inspection. This outfall had high TSS. Clean pipe of sediment and look upstream to see if rock armoring on the slope or ditch would help with sediment transport.

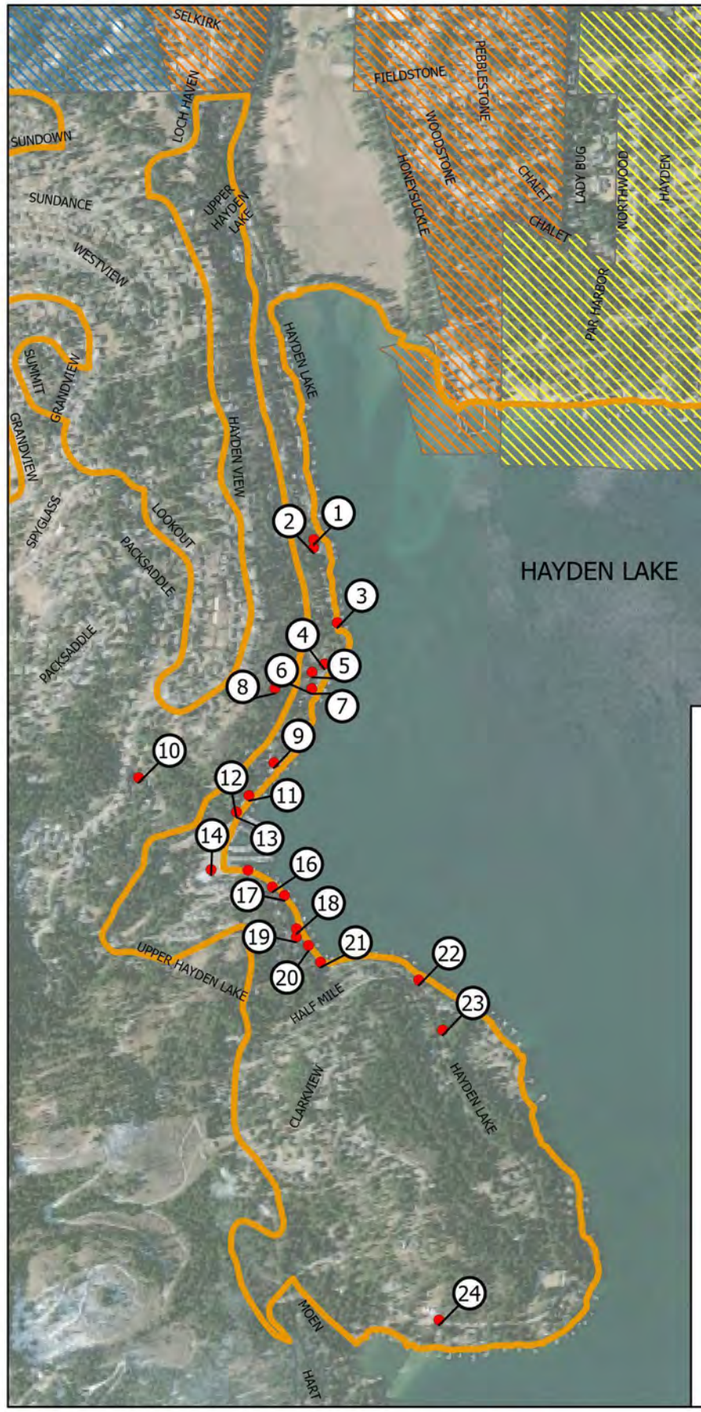
Outfall 10 was partially clogged with rock and gravel. Clean out this pipe.

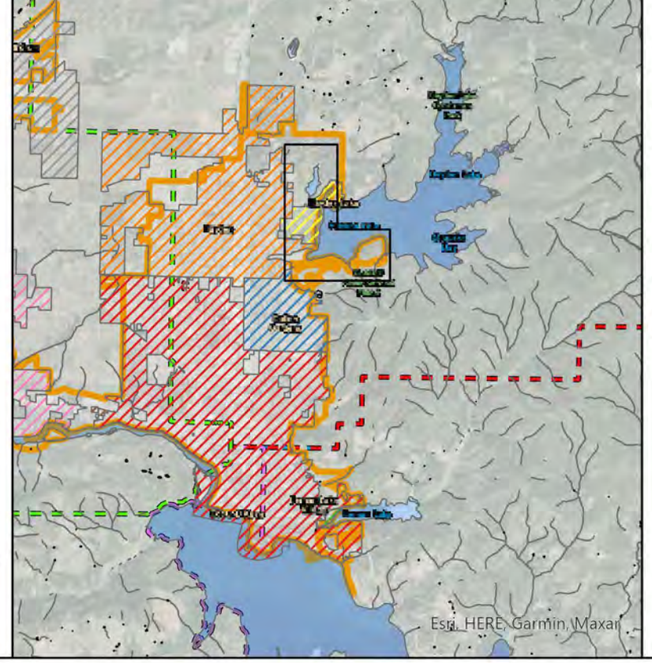
Outfall 13 discharges onto an eroding slope. Consider riprap installation at the end of the pipe to avoid further erosion.

Outfall 27 has a significant amount of sediment in the pipe. Consider armoring the slope/ditch upstream to cut down on erosion and sediment transport.

Monitor outfalls 2, 5, 12, and 29 in 2023 and determine if the E. Coli was a one-time event or needs follow-up.

Enclosures: Outfall map, inspection reports, outfall 2, 5, 12, 13, 28, and 29 test reports





OUTFALL TABLE

Map No.	Latitude	Longitude	Outfall Description
1	47.750833	-116.750278	18" CMP CULVERT
2	47.750833	-116.75	12" CMP CULVERT
3	47.751389	-116.7475	18" CMP CULVERT
4	47.751111	-116.746111	18" CMP CULVERT
5	47.750833	-116.745833	18" CMP CULVERT
6	47.750833	-116.745278	12" CMP CULVERT
7	47.750833	-116.745278	12" CMP CULVERT
8	47.75	-116.745278	12" CMP CULVERT
9	47.75	-116.742778	12" CMP CULVERT
10	47.746944	-116.742222	10" CMP CULVERT
11	47.749444	-116.741667	10" CMP CULVERT
12	47.749167	-116.741111	CENTER, 18" HDPE CULVERT
13	47.749167	-116.741111	LEFT, 18" CMP CULVERT
14	47.748611	-116.739167	24" CONCRETE PIPE
15	47.749444	-116.739167	10" CMP CULVERT
16	47.75	-116.738611	10" CMP CULVERT
17	47.750278	-116.738333	10" CMP CULVERT
18	47.750556	-116.737222	10" CMP CULVERT
19	47.750556	-116.736944	10" CMP CULVERT
20	47.750833	-116.736667	12" CMP CULVERT
21	47.751111	-116.736111	18" CMP CULVERT
22	47.753333	-116.735556	12" CMP CULVERT
23	47.753889	-116.733889	12" CMP CULVERT
24	47.753889	-116.724167	12" CMP CULVERT
25	47.766111	-116.757778	55" CMP CULVERT
26	47.766667	-116.758056	18" CMP CULVERT
27	47.772222	-116.760278	24" CMP CULVERT
28	47.775556	-116.756944	16" CMP CULVERT
29	47.779444	-116.756944	18" CMP CULVERT LT

NOTE: LATITUDE & LONGITUDE WERE RECALCULATED FROM SOURCE. SKEWED COORDINATES POTENTIALLY CAUSED BY HANDHELD GPS USE UNDER TREE CANOPY.

LEGEND

- OUTFALL POINTS
- CITY OF DALTON GARDENS
- CITY OF HAYDEN
- CITY OF HAYDEN LAKE
- 2020 CENSUS DEFINED URBANIZED AREA
- LAKES HIGHWAY (#2)

N

0 1,000 2,000 4,000 Feet

WELCH-COMER ENGINEERS | SURVEYORS
www.welchcomer.com 208-664-9382

LAKES HIGHWAY DISTRICT

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) MAP

Sources:
ESRI Basemaps, Idaho Tax Commission GIS, Kootenai County GIS, IDWR GIS,

PROJECT NO : 41322.11
DRAWN BY : .....AMC
FILENAME : .....20220518_LHD_OutfallLocations
DATE : 09-20-2022

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	1
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	10:07 AM	**Assessed By:**	Sadie Sundahl

Flow:	None
General Observations:	Couldn't access outfall due to private property data collected upstream at catch basin across the street catch basin is overgrown and sediment laden catch basin contained water, but cannot discern how much or if flow is present turbidity unknown

Indicator	Description	Comments
Pipe Condition		Catch Basin is in good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	1 Reassessment
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	08/08/2022	**Time:**	10:00 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	
Shape:		**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Reassessment Data collected upstream at catch basin due to private property catch basin is overgrown and sediment laden Contains mud and stagnant water No flow can now be determined Nearby culvert is sediment laden and dry		

Indicator	Description	Comments
Pipe Condition		
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Nearby Culvert

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	2
Date of Last Rainfall:	07/16/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	10:02 AM	**Assessed By:**	Sadie Sundahl

Flow:	None
General Observations:	Couldn't access outfall due to private property data collected upstream at catch basin catch basin was sediment laden overgrown and muddy water flowing from street and culvert cmp piping cut in half not enough flow to test water quality water is clear with no turbidity

Indicator	Description	Comments
Pipe Condition		
Odor		
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	2 Reassessment	
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	08/08/2022	**Time:**	10:00 AM	**Assessed By:**	Sadie Sundahl

Flow:	Trickle
General Observations:	No change from 07/27/2022 assessment
	Catch basin is sediment laden and overgrown
	Catch basin contains flowing water and debris
	Runoff from street and culvert drain directly into catch basin
	No enough flow to test water quality

Indicator	Description	Comments
Pipe Condition		
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	2 Reassessment	
Date of Last Rainfall:	08/09/2022	**Rainfall Quantity:**	0.01	**Weather:**	Sunny
Date:	08/12/2022	**Time:**	12:45 PM	**Assessed By:**	Some longer name

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	Trickle		
General Observations:	Culvert on private property Data collected via upstream catch basin Runoff from stream and culvert (cut in half) running directly into catch basin Mayfly eggs and larva present in road runoff puddle, indicating long-term presence of runoff and low turbidity Catch basin located adjacent to eroding steep slope, likely contributing to sedimentation Catch basin is sediment laden and overgrown Water quality samples taken via cut in half culvert debris and sediment present in upstream culvert on Upper Hayden Lake Rd, dry		

Indicator	Description	Comments
Pipe Condition		Rusted catch basin
Odor		No odor
Deposits/Stains	Flow Line	Flow line stain present on half in half culvert
Vegetation	Excessive	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Mayfly eggs and larva in runoff puddle

Runoff and cut in half culvert

Runoff and cut in half culvert

Catch Basin

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	3 18" CMP Culvert
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	12:32 PM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:
Flow:	None		
General Observations:	Could not access outfall interior due to private property Data collected from exterior of outfall an culvert across street culvert was heavily vegetated and sediment laden Culvert contained mud and was damp		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Culvert across the street

Culvert on private property

Culvert on private property

Culvert across the street

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	4
Date of Last Rainfall:	07/16/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	9:17 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	PVC/Plastic
Shape:	Circular	**Submerged:**	In Water: Partially With Sediment:No
Flow:	None		
General Observations:	On private property could not access due to high water levels, outfall is most likely submerged in lake data collected via culvert upstream across the street culvert is heavily vegetated		

Indicator	Description	Comments
Pipe Condition		
Odor		
Deposits/Stains		
Vegetation	Excessive	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	5
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	9:11 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	Trickle		
General Observations:	Contains two small pipes Recently cut tree stump Contains sediment sawdust and mud		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains	Flow Line	Residual mud on sides
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	6/7
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	9:03 AM	**Assessed By:**	Sadie Sundahl

Flow:	None
General Observations:	On private property could not access, was able to get near location and could not hear running water Data used from catch basin on other side of road Catch basin was heavily vegetated and dry

Indicator	Description	Comments
Pipe Condition		Catch Basin is in good condition
Odor		No odor
Deposits/Stains		
Vegetation	Excessive	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	8	
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	10:26 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Overgrown with long grasses Located in south side ditch Contains large rocks and sediment Surrounding culverts are sediment laden		

Indicator	Description	Comments
Pipe Condition		Squished
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	9
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	8:43 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	None		
General Observations:	Extends feet above steep slope Discharges directly into lake onto gravel		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	10
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/28/2022	**Time:**	10:56 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Could not access due to private property data collected upstream at culvert across the street Culvert was overgrown and sediment laden Fiber Wattles present up stream Culvert contained large rocks and gravel		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	11
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	8:26 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	None		
General Observations:	Heavily vegetated Discharges directly into lake at steep slope Photos were not taken in interior due to steep slope, but was visually inspected for flow and debris		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Excessive	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	12
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04in	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	8:18 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	PVC/Plastic
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Moderate		
General Observations:	Discharges directly into lake Two outfalls nearby Discharges onto steep eroding gravel slope Debris and trash present		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor		No odor
Deposits/Stains	Flow Line	Light ring
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	13
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04 inches	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	8:10 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Trickle		
General Observations:	Discharges directly to lake outfall contained sediment and moss two outfalls nearby discharges onto steep eroding slope trash present		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains	Flow Line	faint flow line, moss and mud present
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor	None	
Color	Clear no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

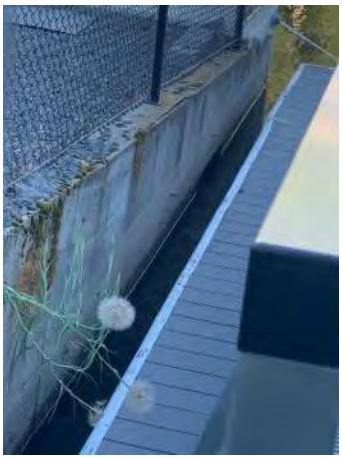
Stormwater Outfalls

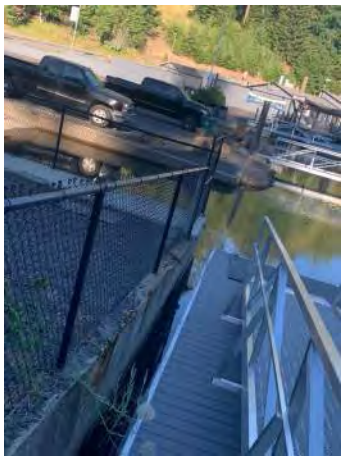
Highway District:	Lakes		**Outfall ID:**	14	
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	7:28 AM	**Assessed By:**	Some longer name

Type:	Closed Pipe		**Material:**	Concrete	
Shape:	Circular		**Submerged:**	In Water: Fully	With Sediment:No
Flow:	None				
General Observations:	Due to high water levels, outfall is fully submerged Located in Hayden Lake Marina Surrounding water is clear with no turbidity No sign of discoloration, odor, or other illicit indicators Two catch basins located in parking lot Catch basins are dry and sediment laden				

Indicator	Description	Comments
Pipe Condition	Chip/Cracked	
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS





Nearby catch basin

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	15	
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	7:17 AM	**Assessed By:**	Some longer name

Type:	Closed Pipe	**Material:**	Metal	
Shape:	Circular	**Submerged:**	In Water: Partially	With Sediment:Partially
Flow:	None			
General Observations:	Nondischarging end of outfall is exposed due to due to steep, eroding hill Discharges directly into lake Sediment laden Culvert on other side of road is sediment laden			

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	16	
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	7:09 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	None		
General Observations:	Discharges directly to lake has zip tie strapped around it could not inspect inside of pipe due to private property		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	17
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	7:03 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: With Sediment:Fully
Flow:			
General Observations:	On private property was not accessed No catch basins or other culverts in area, small ditch on other side of road could not hear running water Due to high water levels, it's assumed this outfall is fully submerged		

Indicator	Description	Comments
Pipe Condition		
Odor		
Deposits/Stains		
Vegetation		
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color		
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	17 Reassessment
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	08/08/2022	**Time:**	9:45 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: Fully With Sediment:
Flow:	None		
General Observations:	Reassessment Culvert is assumed to be submerged in water due to high water levels No culverts found, but upstream ditch is dry Ditch is overgrown		

Indicator	Description	Comments
Pipe Condition		
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	18
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	6:53 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Slightly damp large rocks in inlet catch basin across the street, contains stagnant water Discharges directly onto long grass Located in front of private property fence		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Catch basin across street

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	19
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	6:49 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Trickle		
General Observations:	Discharges directly into lake Catch basin across street Water too deep to test water quality		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation		
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	19 Reassessment
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	08/08/2022	**Time:**	9:30 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Trickle		
General Observations:	No change since 07/27/2022 Assessment Water too deep to test water quality Culvert discharges directly into lake and has flow No sign of illicit discharge		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	19 Reassessment	
Date of Last Rainfall:	08/09/2022	**Rainfall Quantity:**	0.01	**Weather:**	Sunny
Date:	08/12/2022	**Time:**	2:21 PM	**Assessed By:**	Some longer name

Type:	Closed Pipe	**Material:**	Metal
Shape:		**Submerged:**	In Water: No With Sediment:No
Flow:	Trickle		
General Observations:	No change since last assessment. No odor or sheen near culvert discharging into lake Could not assess culvert discharging to lake due to private property Upstream catch basin is sediment laden and contains water No enough flow to test water quality via catch basin		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Culvert discharging to lake

Upstream catch basin

Culvert discharging to lake

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:**	19 Reassessment	
Date of Last Rainfall:	09/04/2022	**Rainfall Quantity:**	0.01 inches	**Weather:**	Sunny
Date:	09/08/2022	**Time:**	8:55 AM	**Assessed By:**	Some longer name

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Trickle		
General Observations:	12" CMP Algae growth within pipe Was through initial assessments, flow was higher. Upon this reassessment, flow was present but diminished significantly to a small trickle w/ a slow drip.		

Indicator	Description	Comments
Pipe Condition		Good condition, partially dented on top
Odor		
Deposits/Stains		
Vegetation	NA	
Surrounding Land Use	Recreational	

Indicator	Description	Relative Severity Index
Odor		
Color	Clear	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	20
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	6:36 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Heavily vegetated and sediment laden		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor		No odor
Deposits/Stains		
Vegetation	Excessive	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	21
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	6:29 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: Partially With Sediment:Partially
Flow:	Moderate		
General Observations:	Culvert on private property could not access Culvert was partially or fully submerged in water and under private dock Catch basin upstream across the street with contained running water, assume moderate flow		

Indicator	Description	Comments
Pipe Condition	Corrosion	Heavily rusted
Odor		No odor
Deposits/Stains		
Vegetation		
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color		
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Outfall on private property

Catch basin assessed

Catch basin assessed

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	21 Reassessment
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	08/08/2022	**Time:**	9:30 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: Partially With Sediment:No
Flow:	None		
General Observations:	Reassessment from 07/27/2022		
	Outfall is on private property, but exterior can be seen from road		
	Outfall is partially submerged		
	Data collected upstream at catch basin		
	Catch Basin contains stagnant water and mud, no flow		
	Owner noted the catch basin is normally dry around June		

Indicator	Description	Comments
Pipe Condition	Corrosion	
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Outfall Exterior

Upstream Catch Basin

Upstream Catch Basin

Stormwater Outfalls

Highway District:	Lakes		**Outfall ID:** 22		
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/27/2022	**Time:**	6:08 AM	**Assessed By:**	Sadie Sundahl

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Heavily vegetated and sediment laden Fiber wattle in inlet		

Indicator	Description	Comments
Pipe Condition		Good condition
Odor		No odor
Deposits/Stains		
Vegetation	Excessive	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	23
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	2:15 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	None		
General Observations:	Overly vegetated Sediment laden		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor		No odor
Deposits/Stains		
Vegetation		
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	24
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	2:05 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	None		
General Observations:	Fiber Wattles surrounding inlet Silt Fencing Present to reduce sediment Located across street from 5691 E Hayden Lake Road Private Property at outfall, data collected upstream		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	25
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	1:50 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Becomes armored concrete channel on east side of road Contains gravel Signs of significant flow during storm events Sewage ventilation pipe located nearby, causing sewage odor		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor	Sewage	
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	26
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	1:30 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	None		
General Observations:	Heavily Vegetated Inlet contains pipe (possibly for irrigation)		

Indicator	Description	Comments
Pipe Condition		Squished
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	27
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	1:30 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:Partially
Flow:	None		
General Observations:	Stagnant water and mud present No flow Laden with sediment, pebbles, and gravel Sediment issues upstream (flow may have been present if culvert was cleared of sediment)		

Indicator	Description	Comments
Pipe Condition		Squished
Odor		No odor
Deposits/Stains		
Vegetation	Normal	
Surrounding Land Use		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	28
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	1:15 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Moderate		
General Observations:	Outfall discharges onto large rocks		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor	Sewage	
Deposits/Stains	Flow Line	Faint
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor	Sewage	Faint
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Stormwater Outfalls

Highway District:	Lakes			**Outfall ID:**	29
Date of Last Rainfall:	07/18/2022	**Rainfall Quantity:**	0.04	**Weather:**	Sunny
Date:	07/26/2022	**Time:**	1:00 PM	**Assessed By:**	Sadie Sundahl and Cody Hodgson

Type:	Closed Pipe	**Material:**	Metal
Shape:	Circular	**Submerged:**	In Water: No With Sediment:No
Flow:	Substantial		
General Observations:	Discharged onto grass Eroding steep slope		

Indicator	Description	Comments
Pipe Condition		Good Condition
Odor		No odor
Deposits/Stains	Flow Line	Faint, brown color, assume natural cause
Vegetation	Normal	
Surrounding Land Use		

Indicator	Description	Relative Severity Index
Odor		
Color	Clear, no turbidity	
Turbidity	N/A	
Floatables		

PHOTO ATTACHMENTS

Accurate Testing Labs, LLC
7950 Meadowlark Way
Coeur d'Alene, ID 83815
Phone (208) 762 8378 Fax (208) 762 9082
www.accuratetesting.com
info@accuratetesting.com

Certificate of Analysis

Order No.: **2022080307**

Welch Comer
330 E Lakeside Ave Ste 101
CDA , ID 83814

Project: MS4 Monitoring

Date Received: 08/12/2022 13:40

Sample: **1**
Location: Lakes # 2
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 08/12/2022 12:45
Collected by: Cody Hodgson

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	13.4	MPN/100mL	SM 9223B	1	08/13/22	WM
Chlorine, Total Residual	ND	mg/L	EPA 330.5	0.01	08/12/22	WM
Phosphorus, Total	0.016	mg/L	EPA 365.1	0.004	08/18/22	WM
pH	8.34	pH Units	EPA 150.1		08/12/22	WM
Phenolics	ND	mg/L	EPA 420.1	0.05	08/24/22	ANA
Temperature (Sample Received)	9.6	deg. C	Infrared		08/12/22	JM
Total Suspended Solids	2	mg/L	SM 2540D	1	08/18/22	GF

Sample: **2**
Location: PFHD # 8
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 08/12/2022 10:15
Collected by: Cody Hodgson

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	ND	MPN/100mL	SM 9223B	1	08/13/22	WM
Chlorine, Total Residual	ND	mg/L	EPA 330.5	0.01	08/12/22	WM
Phosphorus, Total	0.012	mg/L	EPA 365.1	0.004	08/18/22	WM
pH	7.32	pH Units	EPA 150.1		08/12/22	WM
Phenolics	ND	mg/L	EPA 420.1	0.05	08/24/22	ANA
Temperature (Sample Received)	9.6	deg. C	Infrared		08/12/22	JM
Total Suspended Solids	ND	mg/L	SM 2540D	1	08/18/22	GF

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:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 09/03/22

2022080307

Chain of Custody

Chain of Custody

Accurate Testing Labs 7950 Meadowlark Way | Coeur d'Alene, ID 83815 | Phone: (208) 762-8378 | Fax: (208) 762-9082
E-mail: mueller@accuratetesting.com | Internet: http://www.accuratetesting.com

Results & Invoice to: mcleveland@welchcomer.com
Name: (Melissa Cleveland) Welch Comer
Address: 330 E Lakeside Ave, Ste 101
Coeur d' Alene, ID 83814
Phone: 208 664 9382 Fax: _____

Reporting Requirements:
Preliminary: FAX ☐ Verbal ☐ by: ___/___/___
Final Report: FAX ☐ Verbal ☐ by: ___/___/___
Rushes: 48 hrs.☐ Other:☐

Name of Sampler: Cody Hodgson

Project Information:
Project Name: Lakes MS4 Monitoring
Project Number: _____
Purchase Order Number: _____

Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS	T. PO4	PH	Fcl RES.	TOTAL ALKALINITY	TSS	E. coli	Remarks/Sample Conditions
080307-1	Lakes #2	8/12/22	12:45	NP	4	X	X	X	X	X	X	Temp 9.6 c

ANALYSIS REQUEST

Relinquished by:	Date Time	Received by:	Date Time	Chain of Custody Seals
			8-12-22 1:40	☐ Yes ☐ No ☐ N/A
				☐ UPS ☐ FedEx
				☐ Bus ☐ Hand

Accurate Testing Labs, LLC
7950 Meadowlark Way
Coeur d'Alene, ID 83815
Phone (208) 762 8378 Fax (208) 762 9082
www.accuratetesting.com
info@accuratetesting.com

Certificate of Analysis

Order No.: **2022070735**

Sample:	**3**	Matrix:	Non-Potable Water
Location:	Lakes 5	D/T Collected:	07/27/2022 09:45
Sample Type:	Grabs	Collected by:	Sadie Sundahl

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	16	MPN/100mL	SM 9223B	1	07/28/22	ME
Chlorine, Total Residual	0.04	mg/L	EPA 330.5	0.01	07/28/22	WM
Phosphorus, Total	0.487	mg/L	EPA 365.1	0.004	08/04/22	WM
pH	8.14	pH Units	EPA 150.1		07/28/22	ML
Phenolics	ND	mg/L	EPA 420.1	0.05	08/24/22	ANA
Total Suspended Solids	212	mg/L	SM 2540D	1	08/08/22	GF

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:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/30/22

Chain of Custody

Accurate Testing Labs 7950 Meadowlark Way | Coeur d'Alene, ID 83815 | Phone: (208) 762-8378 | Fax: (208) 762-9082
E-mail: mueller@accuratetesting.com | Internet: http://www.accuratetesting.com

Results & Invoice to: mcleveland@welchcomer.com

Name: Welch Comer Engineering
Address: 330 E Lakeside Ave Suite 101
Coeur d'Alene, ID 83814
Phone: 208-664-9382 Fax: 208-664-5946

Reporting Requirements:

Preliminary: FAX ☐ Verbal ☐ by: ___/___/___
Final Report: FAX ☐ Verbal ☐ by: ___/___/___
Rushes: 48 hrs.☐ Other:☐

Name of Sampler: Sadie Sunday41

Project Information:

Project Name: Lakes MS4 Permitting
Project Number: _____
Purchase Order Number: _____

Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS	T. PO4	PH	Cl RES.	TOTAL PHENOLS	TSS	E. coli								Remarks/Sample Conditions
757851	Lakes 12	7/27/22	7:30																
-2	Lakes 13	7/27/22	9:45																
-3	Lakes 5	7/27/22	9:45																

ANALYSIS REQUEST

Relinquished by:	Date Time	Received by:	Date Time
		Cm 7.27-22	14.32

Chain of Custody Seals
☐ Yes ☐ No ☐ N/A
☐ UPS ☐ FedEx
☐ Bus ☒ Hand

Accurate Testing Labs, LLC
7950 Meadowlark Way
Coeur d'Alene, ID 83815
Phone (208) 762 8378 Fax (208) 762 9082
www.accuratetesting.com
info@accuratetesting.com

Certificate of Analysis

Order No.: **2022070735**

Welch Comer
330 E Lakeside Ave Ste 101
CDA , ID 83814

Project: LAKES MS4 PERMITTING

Date Received: 07/27/2022 14:32

Sample: **1**
Location: Lakes 12
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 07/27/2022 07:30
Collected by: Sadie Sundahl

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	85.7	MPN/100mL	SM 9223B	1	07/28/22	ME
Chlorine, Total Residual	0.02	mg/L	EPA 330.5	0.01	07/28/22	WM
Phosphorus, Total	0.036	mg/L	EPA 365.1	0.004	08/04/22	WM
pH	7.43	pH Units	EPA 150.1		07/28/22	ML
Phenolics	ND	mg/L	EPA 420.1	0.05	08/24/22	ANA
Total Suspended Solids	ND	mg/L	SM 2540D	1	08/08/22	GF

Sample: **2**
Location: Lakes 13
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 07/27/2022 07:45
Collected by: Sadie Sundahl

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	ND	MPN/100mL	SM 9223B	1	07/28/22	ME
Chlorine, Total Residual	ND	mg/L	EPA 330.5	0.01	07/28/22	WM
Phosphorus, Total	0.014	mg/L	EPA 365.1	0.004	08/04/22	WM
pH	7.28	pH Units	EPA 150.1		07/28/22	ML
Phenolics	ND	mg/L	EPA 420.1	0.05	08/24/22	ANA
Total Suspended Solids	ND	mg/L	SM 2540D	1	08/08/22	GF

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/30/22

Accurate Testing Labs, LLC
7950 Meadowlark Way
Coeur d'Alene, ID 83815
Phone (208) 762 8378 Fax (208) 762 9082
www.accuratetesting.com
info@accuratetesting.com

Certificate of Analysis

Order No.: **2022070697**

Welch Comer
330 E Lakeside Ave Ste 101
CDA , ID 83814

Project: MSY DRY WEATHER PERMITTING

Date Received: 07/26/2022 14:40

Sample: **1**
Location: Lakes 28
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 07/26/2022 13:20
Collected by: Cody Hodgson

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	ND	MPN/100mL	SM 9223B	1	07/28/22	ME
Chlorine, Total Residual	ND	mg/L	EPA 330.5	0.01	07/27/22	WM
Phosphorus, Total	0.0140	mg/L	EPA 365.1	0.004	07/28/22	GF
pH	7.17	pH Units	EPA 150.1		07/28/22	ML
Phenolics	ND	mg/L	EPA 420.1	0.05	08/19/22	ANA
Total Suspended Solids	ND	mg/L	SM 2540D	1	07/28/22	GF

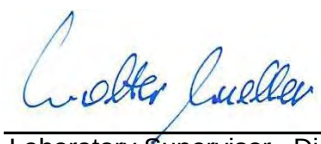
Sample: **2**
Location: Lakes 29
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 07/26/2022 13:06
Collected by: Cody Hodgson

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	129	MPN/100mL	SM 9223B	1	07/28/22	ME
Chlorine, Total Residual	0.0200	mg/L	EPA 330.5	0.01	07/27/22	WM
Phosphorus, Total	0.0350	mg/L	EPA 365.1	0.004	07/28/22	GF
pH	7.8	pH Units	EPA 150.1		07/28/22	ML
Phenolics	ND	mg/L	EPA 420.1	0.05	08/19/22	ANA
Total Suspended Solids	5	mg/L	SM 2540D	1	07/28/22	GF

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:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/30/22

Chain of Custody

Accurate Testing Labs 7950 Meadowlark Way | Coeur d'Alene, ID 83815 | Phone: (208) 762-8378 | Fax: (208) 762-9082
E-mail: mueller@accuratetesting.com | Internet: http://www.accuratetesting.com

Results & Invoice to: mcleveland@welchcomer.com

Name: Welch Comer Engineering
Address: 330 E Lakeside Ave Suite 101
Coeur d'Alene ID 83814
Phone: (208)664-9382 Fax: _____

Reporting Requirements:

Preliminary: FAX ☐ Verbal ☐ by: __/__/__
Final Report: FAX ☐ Verbal ☐ by: __/__/__
Rushes: 48 hrs.☐ Other:☐

Name of Sampler: Cody Hodgson

Project Information:

Project Name: MS4 Dry Weather Permitting
Project Number: _____
Purchase Order Number: _____

Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS	T. PO4	pH	Cl RES.	TOTAL PHENOLS	TSS	E. coli	Remarks/Sample Conditions
697-1	Lakes 28	7/26/22	1:20			X	X	X	X	X	X	
-2	Lakes 29	7/26/22	1:06			X	X	X	X	X	X	

070
+

Relinquished by:	Date Time	Received by:	Date Time	Chain of Custody Seals
			7-26-22 2:40	☐ Yes ☐ No ☐ N/A
				☐ UPS ☐ FedEx
				☐ Bus ☐ Hand

Accurate Testing Labs, LLC
7950 Meadowlark Way
Coeur d'Alene, ID 83815
Phone (208) 762 8378 Fax (208) 762 9082
www.accuratetesting.com
info@accuratetesting.com

Certificate of Analysis

Order No.: **2022090163**

Welch Comer
330 E Lakeside Ave Ste 101
CDA , ID 83814

Project: 41322.11 MS4

Date Received: 09/08/2022 10:00

Sample: **1**
Location: LHD Outfall # 19
Sample Type: Grabs

Matrix: Non-Potable Water
D/T Collected: 09/08/2022 09:00
Collected by: Cody Hodgson

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
E. Coli Bacteria	ND	MPN/100mL	SM 9223B	1	09/09/22	ME
Chlorine, Total Residual	ND	mg/L	EPA 330.5	0.01	09/08/22	WM
Phosphorus, Total	0.044	mg/L	EPA 365.1	0.004	09/15/22	WM
pH	8.21	pH Units	EPA 150.1		09/08/22	WM
Phenolics	ND	mg/L	EPA 420.1	0.005	10/06/22	ANA
Temperature (Sample Received)	12.4	deg. C	Infrared		09/08/22	JM
Total Suspended Solids	1	mg/L	SM 2540D	1	09/09/22	GF

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:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 10/13/22

2022090163

Chain of Custody

Chain of Custody

Accurate Testing Labs 7950 Meadowlark Way | Coeur d'Alene, ID 83815 | Phone: (208) 762-8378 | Fax: (208) 762-9082
E-mail: mueller@accuratetesting.com | Internet: http://www.accuratetesting.com

Results & Invoice to:

Name: Melissa Cleveland / WELCH-COMER

Address: 330 E Lakeside Ave, Suite 101
Coeur d'Alene, ID 83814

Phone: 208 664-9382 Fax: _____

Reporting Requirements:

Preliminary: FAX ☐ Verbal ☐ by: __/__/__

Final Report: FAX ☐ Verbal ☐ by: __/__/__

Rushes: 48 hrs.☐ Other:☐

Name of Sampler: Cody Hodgson

Project Information:

Project Name: #41322.11

Project Number: LHD MS4 Permit Outfall Inspection

Purchase Order Number: _____

Lab #	Sample ID	Date	Time	Matrix	NO. OF CONTAINERS	T. PO4	PH	Cl RES.	TOTAL ALKALINITY	TSS	E. coli	EPA 420.1	Remarks/Sample Conditions
090163-1	LHD Outfall #20	8/9	9:00am	STORM WATER									temp 12.4

ANALYSIS REQUEST

Relinquished by:	Date Time	Received by:	Date Time
Cody Hodgson	08/09 10:00am		8-8-22 10:00

Chain of Custody Seals
☐ Yes ☐ No ☐ N/A
☐ UPS ☐ FedEx
☐ Bus ☑ Hand

Public Education Summaries & Website Brochures

Earth Day 2022

FRIDAY, APRIL 22

Did You Know…

- The water that runs down your street ends up in our local lakes and rivers?
- As the water runs, it picks up pollutants and trash?
- You can help keep our lakes and rivers clean?

What Can You Do To Help?

- Clean up the outside areas around your home.
- Help to organize a neighborhood clean-up.
- Keep rainwater on your property, in rain barrels, cisterns or rain gardens.
- Always throw your trash away in a garbage can. Don't litter!

Join our Community at the Coeur d'Alene Library Earth Day Celebration!
Outdoor activities, games, giveaways and educational presentations await.
When: Saturday, April 23rd, 10:00am–2:00pm
Where: Coeur d'Alene Library, 702 E. Front Avenue, CDA 83814

Helpful Websites & Activities

- Clean Waterways: https://www.cleanwaterways.org/Resources/Kids-Educators
- Only Rain Down the Drain: https://www.onlyraindownthedrain.com/kids/
- Watershed Sleuth Challenge: https://www.neefusa.org/watershed-sleuth
- City of CDA Water Pollution Prevention: https://www.cdaid.org/629/

EAST SIDE HIGHWAY DISTRICT KOOTENAI COUNTY IDAHO

POST FALLS HIGHWAY DISTRICT

LAKES HIGHWAY DISTRICT KOOTENAI COUNTY, IDAHO

WELCH-COMER
ENGINEERS | SURVEYORS

www.welchcomer.com

O: 208-664-9382
F: 208-664-5946

330 E. Lakeside Avenue, Suite 101
Coeur d'Alene, ID 83814

Memorandum

TO: FILE

FROM: MELISSA CLEVELAND, PE

PRJ. #: MS4 PERMITS 41322.11, 41348.02, 41447

SUBJECT: EARTH DAY

DATE: APRIL 23, 2022

Welch Comer participated in the Coeur d'Alene Library's Earth Day event on behalf of the Highway Districts and City of Coeur d'Alene. We had a booth with an enviroscape, provided by the City of Coeur d'Alene, public education materials, Plinko Board with stormwater education. The target audience was primarily kids and families and the booth was well attended throughout the day. Photos from the event are below.


THE SOLUTION
How you can reduce stormwater pollution

WELCH-COMER
ENGINEERS | SURVEYORS

www.welchcomer.com

O: 208-664-9382
F: 208-664-5946

330 E. Lakeside Avenue, Suite 101
Coeur d'Alene, ID 83814

Memorandum

TO:	FILE
FROM:	AIDAN COLGAN, EIT
PRJ. #:	MS4 PERMITS 41322.11, 41348.02, 41447
SUBJECT:	RAMSEY ELEMENTARY COEUR D'ALENE WWTP TOUR
DATE:	MAY 17, 2022

Ramsey Elementary 5th grade students visited the Coeur d'Alene Wastewater Treatment Plant, were given a tour, and took part in other informational activities. One of these informational activities was learning about the stormwater drainage systems. This involved how they are cleaned and certain types of pollution that can be caused by stormwater runoff and how to prevent it. As an engineer representing Welch Comer Engineers, I informed the students about different types of swales, specifically mentioning how grassy swales and how they work the best in providing clean water seepage. I also informed the students about the different sources of pollution that are involved with stormwater including pet waste, litter, fertilizer, motor oils, and chemicals. Along with covering where these pollutants come from, the students were taught about ways in which they can lower the number of pollutants that reach stormwater drains. Below are pictures from the fieldtrip.


CDAID.ORG


THE POLLUTION
Everyday sources of stormwater pollution

WELCH-COMER
ENGINEERS | SURVEYORS

www.welchcomer.com
O: 208-664-9382
F: 208-664-5946
330 E. Lakeside Avenue, Suite 101
Coeur d'Alene, ID 83814

Memorandum

TO:	FILE
FROM:	SADIE SUNDAHL, EIT
PRJ. #:	MS4 PERMITS 41322.11, 41348.02, 41447
SUBJECT:	SILVERWOOD AMUSEMENT PARK SCIENCE AND PHYSICS DAY – STORMWATER PUBLIC OUTREACH
DATE:	MAY 26, 2022

Local middle and high schools from Eastern Washington and North Idaho traveled to Silverwood Amusement Park to participate in Science and Physics Day, while also enjoying the amusement park. Students took part in educational activities such as visiting the stormwater education booth, creating rollercoaster models, and measuring area using a circle. As an engineering assistant for Welch Comer, I represented Lakes Highway District, East Side Highway District, and Post Falls Highway District. Alongside Idaho Department of Environmental Quality and the City of Coeur d'Alene we ran the stormwater education booth. The booth educated students about stormwater drainage systems and groundwater. Students learned where drinking water comes from, the definition of groundwater and stormwater, and how to prevent and reduce stormwater pollution.

SAY "NO" TO THE STORMWATER BLUES!

ENJOY THE WATERS DURING OUR NORTH IDAHO SUMMER

Stormwater pollution is real and can greatly impact our lakes and rivers. The amount of contaminants that flow from our roads and into our surrounding bodies of water can cause algae growth and polluted waters, making our fun summer activities come to a halt due to unsafe waters. The good news? You can help keep our waters clean and safe. Check out the tips and links below to learn more about stormwater pollution and how you can do your part to help!

What You Can Do to Help

- **Don't overfertilize!** Pay close attention to manufacturer recommendations.
- **Don't leave pet waste behind!** Immediately clean up after your pet(s) and dispose of waste properly.
- **Maintain your septic system!** A healthy septic system makes for healthy water in your community.
- **Use green practices!** Rain barrels, rain gardens and permeable pavements help reduce the amount of stormwater leaving your property.
- **Get involved!** Look into community events and/or organize a community clean-up. Share what you've learned with friends, family and neighbors.
- **Be aware!** Pay attention to what you use on your lawn or garden, look for oil leaks beneath your car, minimize the amount of chemicals you use around your home. Every little bit counts!

Helpful Websites

Environmental Protection Agency (EPA) Nutrient Pollution
EPA – What You Can Do
American Rivers Organization Stormwater Information
University of Nebraska Kids Watershed Activity
Only Rain Down the Drain Kids Activities

EAST SIDE KOOTENAI COUNTY IDAHO HIGHWAY DISTRICT

POST FALLS HIGHWAY DISTRICT

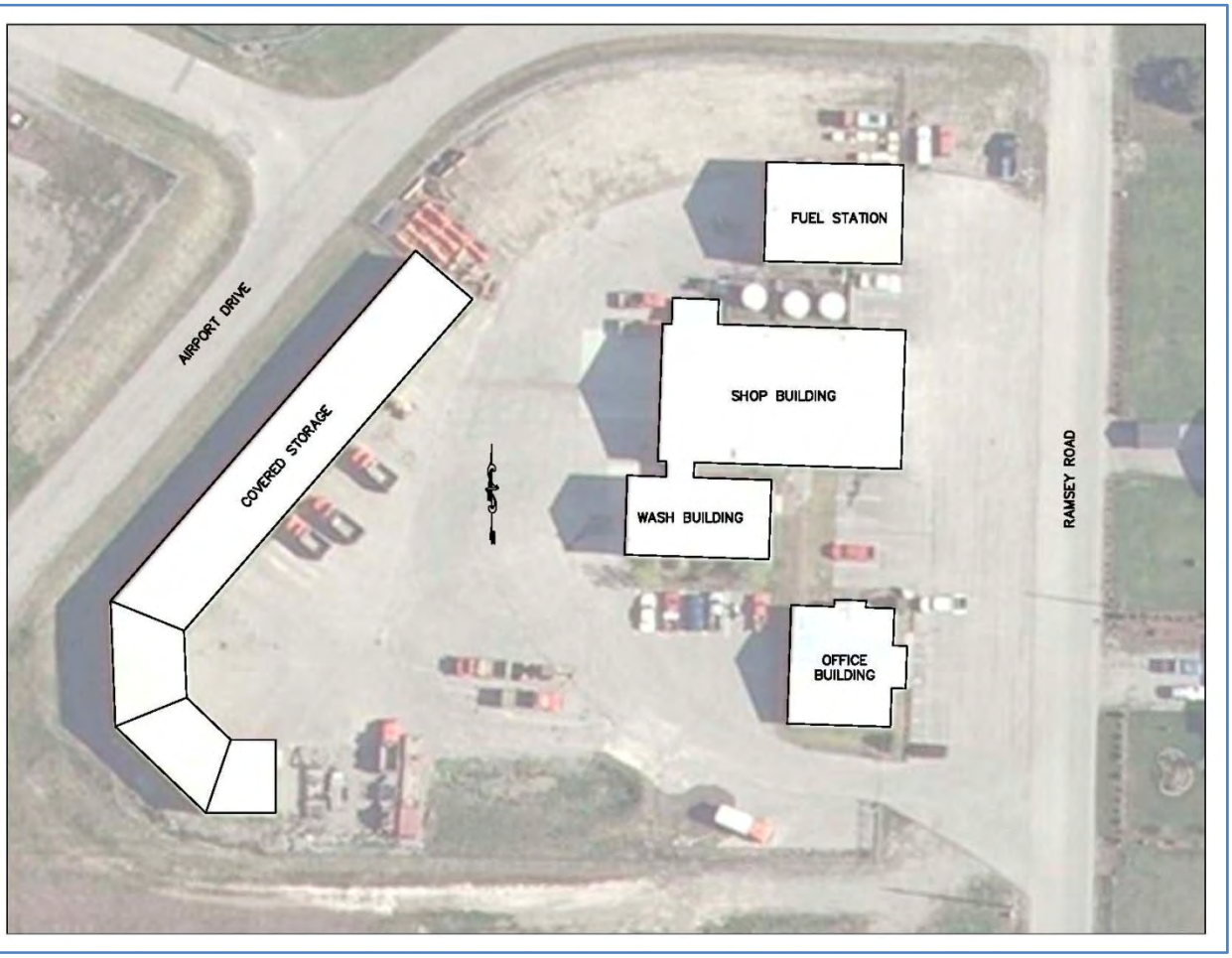
LAKES HIGHWAY DISTRICT KOOTENAI COUNTY, IDAHO

Ramsey Road
Operation Plan

OPERATIONS AND MAINTENANCE PLAN

FOR

LAKES HIGHWAY DISTRICT



PREPARED BY:

LAKES HIGHWAY DISTRICT
ERIC W. SHANLEY, P.E.
DISTRICT ENGINEER

Table of Contents

Executive Summary

Identification

Lakes Highway District has developed this Operations and Maintenance Manual to help provide guidance on efficient operations of the facility. The goal of this facility is to provide an operations center for the benefit of the traveling public and roadways located within the District boundaries.

Within the boundaries of Lakes Highway District ("LHD") consists a network of urban and rural roads encompassing eight (8) cities[1]. Road mileage within the District totals 262 miles, with 32 miles of gravel and roadway pavements consisting of Base Surface Treatments (BST's) and Asphalt Concrete Pavement (AC).

Scope

The scope of this report includes the following:

- Contact Information
- Emergency Contact Information
- Preventative Maintenance Schedule
- Operations
- Fuel Station / Underground Storage Tank
- Spill Response Plan
- Illegal Dumping Proceedures
- Safety Considerations

These items are discussed in the following sections of this report.

In addition to this plan, for detail regarding the Kootenai County Multi-Jurisdictional All Hazard Mitigation Plan, refer to the Multi-Jurisdictional Plan dated November 2009. This plan is located in the District Office. Refer to the Road Supervisor for location and information necessary hazard mitigation.

[1] City of Coeur d'Alene, Dalton, Hayden, Hayden Lake, Rathdrum, Spirit Lake, Athol and Bayview.

Contact Information

Lakes Highway District

Lakes Highway District	Office Fax	772-7527 772-7411	11341 N. Ramsey Road Hayden, Idaho 83835 contact@lakeshwy.com
Joe Wuest Road Supervisor	Cell	660-0937	PO Box 3263 Hayden, Idaho 83835-3263
Van Zee, Verlin E. Assistant Road Supervisor	Home Cell	755-7265 755-1583	N 15618 Atlas Road Rathdrum, Idaho 83858
Shanley, Eric W. District Engineer	Home Cell	772-8398 755-9391	5919 N. 17th Street Dalton Gardens, Idaho 83815
Esser, Marvin L. District Mechanic	Home Cell (Marv)	765-6499 691-7453	5375 N Mt. Carroll Avenue Coeur d'Alene, Idaho 83815

Emergency Contact

Emergency 911			
Northern Lakes Fire District	Office	772-3044 772-5711	Fire / Spill
Timber Lake Fire District	Office	683-3333 683-6011	Fire / Spill
Kootenai County Sheriff		446-1300	Accident / Fire / Spill
Kootenai County Emergency Management		446-1775	Illegal Dumping

Preventative Maintenance Program Schedule

Preventive Maintenance Activity	Activity Frequency
HVAC Unit Filters (Office)	Monthly
Check roofs, downspouts, and gutters	Semi-annually, repair as needed - 20 year roof replacement
Inspect exterior lighting	Semi-annually
Clean fire alarm system smoke detectors	Semi-annually
Stripe exterior parking lots	Annually
Check condition of asphalt parking lots	Annually - 12 year replacement
Spray wash exterior soffits and building	Every 2 years or as needed
Paint interior of facilities	As necessary
Paint exterior of facilities	Every 8-10 years
Perform general facility inspections	annually
Underground Fuel Storage	Monthly. Refer to the Idaho Underground Storage tank Records Manual
Oil / Water Separator	Quarterly. Clean as necessary. Contact Safety Clean for disposal of waste.

Operations

General

The Lakes highway District Operations Facility is located at 11341 N. Ramsey Road in Hayden, Idaho. The property is an approximate 2.8-acre parcel owned by Kootenai County and is leased to the Highway District on an annual basis. On the property is located the following:

- Office
- Shop
- Fuel Station and Underground Storage
- Wash Building
- Covered Storage Area
- Oil / Water Separator
- Sewage Collection System
- Backup Power Supply

Components of the facility and general operations are further discussed as follows.

Office

The Lakes Highway District Operations Building consists of 2880 square foot of floor space to include a reception area, board meeting room, 8-work spaces/offices, in addition to a basement that is utilized for storage. The facility consists of 23 parking spaces with an additional 2 spaces for handicap. Site storm water for paved areas within the facility is maintained on-site.

Shop

The shop is a 60 x100-ft building consisting of a break room large work and storage area. The building is equipment with 2-restrooms and a wash water collections system that drains to the facilities oil / water separator and public sewer system.

The shop building is also equipped with an oil furnace that burns waste oils and hydraulic fluids from District trucks and equipment. Waste oils are stored on-site under covered storage within approved areas. The system is inspected annually by IDEQ to ensure proper secondary containment of the waste oils.

Fuel Station / Underground Storage

The fuel station is located on the north side of the property. The facility is located within a fenced area and shall be secured at the end of each day, on weekends and holidays. When the facility is not in operation, ensure that the power to the pumps is turned off. The power is located in the shop on the north wall.

The facility utilizes a fuel containment and collections system designed in accordance with IDEQ Standards. Inspections are performed once per month as required by IDEQ.

Routine maintenance of the fuel containment area shall be performed in accordance with IDEQ standards and procedures. The District maintains and utilities a 3-ring binder labeled "Idaho Underground Storage Tank Records Manual" for compliance and tracking of this facility. Contact the Assistant Road Supervisor for operations, procedures and inspection requirements.

Wash Facility / Lube Bay

This facility is equipped with an approximately sized 1920-sf wash building that includes an oil pit (lube bay) for changing vehicle lubricants. Refer to the Spill Prevention plan Section of this report for details regarding oil and lubricants stored within the wash building. Overflow from the oil pit and wash area drains into an oil water separator that in turn drains to the sewer system.

Covered Storage

This facility contains approximately 8500 square feet of covered storage area. This area is utilized to store trucks and equipment when not in use.

Oil / Water Separator

This shop and wash building facilities drain to an oil water separator designed and approved by IDEQ. The oil/water separator is located on the eastside of the wash building, between the office and the shop. The oil water separator shall be inspected on a quarterly basis.

Sewer System

The office, shop and wash facility is connected to an effluent sewage pump station that discharges waste to the Hayden Area Regional Wastewater Treatment Facility. Refer to the Office Remodel file for pump and/or control operations.

In the event of an alarm failure (alarm sound) contact the installer and maintenance company, RC Worst at 664-2133.

Backup Power Generator

This facility is equipped with a backup power generator. The generator is located on the eastside of the wash building, between the office and the shop. Fuel for the system is contained within the generator and stores approximately 150-gallons of fuel. Overflow from the generator drains into an oil water separator that in turn drains to the sewer system. All appurtenances are designed and approved by IDEQ.

Vehicle Equipment and Washing

It is important to recognize that whatever is in the wash water or on the equipment is will end up on the ground and will be picked up in the next storm and/or washed into the stormwater system. Therefore, only wash in designated locations where water doesn't drain to storm systems. Operators shall wash vehicles and equipment in the following locations:

- Wash indoors in either the shop or wash building. All floor drains in the shop and wash facility, drain to an effluent sewer pump station that pumps to the Hayden Area Wastewater Treatment Facility.

Vehicle and Equipment Maintenance

All vehicle and equipment maintenance shall be perform within areas where contaminates wont drain offsite. All storm water is currently maintained on-site within swale areas. However, it is preferred that all vehicles are worked on indoors. If leaking vehicles arrive on-site, move inside, or if it needs to be left outside, put a drip pan under the vehicle to collect the leaking material. If oil, hydraulic fluid or fuel does leak, clean up waste and dispose of properly.

Good House Keeping and Spill Prevention

Spills pose the biggest treat to storm water and environmental quality. Good House Keeping is the BMP that prevents most spills and leaks. The following list of Good Housekeeping techniques should be implemented in the operations of this facility:

- Keep work areas neat and tidy
- Drop cloth of tarp over work areas
- Put supplies and tools away when done
- Never hose down an outside work area
- Dispose of waste properly
- Fuel – position vehicle so nozzle is securely positioned in filler pipe
- Never leave your vehicle running
- Don't try to top off the tank when pump shuts off
- Don't leave containers open unless need for job at hand
- Sweep up after outdoor projects
- Dispose of waste properly – never wash down

Spill Reporting and Response

Spills can still occur however we need to ensure the impacts are minimized. To do so, the District requires any hazardous material storage in excess of 55 gallons to be stored in/on secondary containment. Additionally, the District requires the following:

- Follow procedures for spill response
- Notify the supervisor
- Utilize appropriate tools and equipment necessary to clean up.
- Site storm water drains to a containment grass swale, approx 4-ft deep on the south side of the property.
- If a spill occurs – clean up using floor dry and/or spill kits located in the shop
- The longer you wait more time for spill to spread by wind, water or vehicles
- Never hose down a spill – use dry absorbents

Outdoor Storage and of Materials and Wastes

Hazardous materials should never be stored outdoors. Materials should be stored under cover off a roof and protected from exposure. For short period use water with required periodic monitoring.

Dumpsters and Trash Receptacles

Dumpster and trash receptacles shall be kept covered. Again, rain can wash away contaminates.

Spill Response Plan

Purpose

Ensure all hazardous substances on-site are properly labeled. Store, dispense and/or use hazardous substances in a way that prevents release. Provided secondary containers when storing hazardous substances in bulk quantities (>55gl). Maintain good housekeeping practices for all chemical materials at the facility.

All Highway District maintenance vehicles are equipment with a 2008 version of the "Emergency Response Guidebook, A Guidebook for First Responders During the Initial Phase of a Dangerous Goods / Hazardous Materials Transportation Incident". Operators shall refer to this guidebook in the event a spill occurs.

For Hazardous Materials Response off-site on public roads and/or private property contact the Fire District. The Northern Lakes Fire Protection District, Standard Operating Guideline for Hazardous Materials Response is included herein as reference. **Refer to Appendix A**.

Contact Information

The general spill response procedure at this facility is to stop the source of the spill, contain any spilled material, and clean up the spill timely to prevent accidental injury or other damage from occurring. Because of the low potential for spills occurring at this facility the most likely spills to occur are small or incidental spills.

Small spills will be contained by site personnel if they are able to do so without risking injury. Spill kits are located at the following location(s): **Shop Office (Spill Kit and Floor Dry), Fuel Station (Floor Dry).** Ensure spill cleanup materials are properly characterized before disposal.

Spill Prevention

The key to spill prevention is to be prepared. Lakes Highway District performs quarterly inspections of all materials on-site. Additionally, the following tasks are necessary to implement the Districts Spill Prevention Plan:

- List the quantity of each liquid located at the facility
- Identify "high risk" and "spill-prone" areas
- Record the maximum worst case quantities of materials that could potentially spill at each location
- Keep updated MSDS sheets for all materials at each location and review them
- Select the correct type of spill kit and clean up accessories, based on the type of liquid in each area
- Conduct HAZMAT Training annually.

Required Action in the Event of a Spill

In the event we are faced with a spill, operators shall perform a Risk Assessment of the scene to include the following:

- Safety first.
- If there is a fire or medical attention is needed, call 911
- Evacuate all non-essential personnel
- Assess the spill and if possible, identify the spilled material
- If volatile or flammable materials are spilled immediately warn others in the area control the source and shut down the facility heating system.
- Select appropriate protective equipment
- Refer to material MSDS Sheets for cleanup procedures if unknown
- Contain the spill.
- Utilize cleanup kits and floor dry as necessary and required.
- Notify the Road Supervisor for reporting and documentation of the spill
- Review with the supervisor, preventative measures that would help avoid the spill in the future

Emergency Contact Information

Immediately call **911** in the event of injury, fire or potential fire, spill of a hazardous substance that gives rise to an emergency situation, or release of a hazardous substance to the environment (i.e. ground, surface water, floor drains or storm water drains).

If a hazardous substance spill has been released to soil, surface water or drains the following notifications must be performed:

[Contact]	**[Phone #]**
Northern Lakes Fire District	(208) 772-3044
Timber Lake Fire District	(208) 683-3333
Idaho Department of Environmental Quality	(208) 769-1422
Panhandle Health District	(208) 415-5200

Hazardous Materials Inventory

Hazardous Substance Inventory: Those materials manufactured, stored, used and/or generated as a chemical waste in quantities >55 gallons.

Hazardous Substance	Manufacturer	Quantity / Unit of Issue	Location
ISO 46 Hydraulic Fluid	Chevron	55 gallon / 1 EA	Lube Bay
1000THF Hydraulic Fluid	Chevron	55 gallon / 1 EA	Lube Bay
ISO 32 Hydraulic Fluid	Chevron	55 gallon / 1 EA	Lube Bay
Citrol Cleaner	Schaffers	55 gallon / 1 EA	Lube Bay
Kerosol (Keroseen)	Chem Central	55 gallon / 1 EA	Lube Bay
15W/40 Motor Oil	Chevron	250 gallon / 1 EA	Lube Bay
Waste Oil Burner	N/A	500 gallon / 1 EA	Shop
Solvent	Pearl	55 gallon / 1 EA	Lube Bay
50W Transmission Oil	TRC	40 gallon / 1 EA	Lube Bay
75/90W Gear Oil	Schaffers	15 gallon / 1 EA	Lube Bay
Grease	Schaffers	15 gallon / 1 EA	Lube Bay
Window Wash Concentrate	Napa	55 gallon / 1 EA	Lube Bay
Junk Oil	N/A	55 gallon / 2 EA	Lube Bay/Covered Storage
50W Transmission Oil	TRC	40 gallon / 1 EA 15 gallon / 1 EA	Tire Shed
Waste Antifreeze	N/A	55 gallon / 1 EA	Tire Shed

Illegal Dumping

In the event of an illegal dumping within the public right-of-way under the jurisdiction of LHD, notify the supervisor and proceed as directed.

If a vehicle identification or license is obtained, the supervisor shall contact sheriff for enforcement action. If the materials are deemed to be hazardous, the supervisor shall contact the County HazMAt Team for proper disposal. Otherwise, the supervisor will direct cleanup and disposal of materials dumped within the public rights of way to be disposed of and the County Landfill.

Safety Considerations

The Lakes Highway District Facility located at 11341 N. Ramsey Road should consider the following safety items during operations and maintenance procedures:

Emergency

Emergency / Fire Call 911.

Spill Response

Refer to the Spill Response Plan included in the following section of this report

Illegal Dumping

When handling illegally dumper materials, handle with caution. Refer to the Illegal Dumping Procedures defined in this report.

Electrical Hazard

When performing maintenance on electrical equipment, operators should have a partner observing the work to assist in the event of an emergency. Reliable testing equipment should be used and lock out / tag out equipment procedures should be used.

Confined Space Hazards

When performing maintenance within a “confined space” such as manholes, tanker trucks, etc, operators should have a partner observing the work to assist in the event of an emergency.

Operators should comply with confined space requirements.

OSHA

All work shall be in accordance with the Occupational Health and Safety Association (OSHA).

Appendix A

HAZARDOUS MATERIALS RESPONSE

Scope
This SOG is applicable to all District personnel

Purpose
This SOG is intended to provide general guidelines for district personnel in responding to a Hazardous materials incident.

PROPER PPE MUST BE UTILIZED AT ALL HAZARDOUS MATERIALS INCIDENTS!

This includes but, is not limited to the following:

Structural Firefighting PPE, SCBA, Latex exam gloves, Structural Firefighting gloves and any additional item deemed necessary by the I.C. or Regional Response Team (RRT).

A Decontamination corridor must be established if there is any potential for personnel to become contaminated.

General Procedures/First Due Units

1. The first arriving officer will establish command and begin size-up. Command should consider establishing a staging area for other responding units. Hazardous Materials incidents require a cautious and deliberate size-up as follows:
    a. Remain upwind, uphill or upstream of the incident. From a safe distance, assess the situation. Use binoculars, if available, to view the scene. Attempt to determine if hazardous materials (chemical, radiological or biological) are present. Observe and note the following:
        i. Effects on people, animals, and the environment;
        ii. Container types, markings, placards and labels. Use the *Emergency Response Guidebook (ERG)* for reference.
        iii. Gather information such as MSDS, shipping papers, NIOSH pocket guide etc.
        iv. Consider contacting CHEMTREC to determine the characteristics of the material involved or to assist with contacting various chemical manufacturing originations that have emergency response teams.
        v. Signs of any released or discharged materials or any unusual or pungent odors.

vi. Move farther away or upwind if you detect an odor and are not positive that it is safe.
vii. Note wind direction, and prevailing weather.
viii. Note distance and direction of nearby dwellings or other occupied buildings.
ix. Note distance and direction of any nearby surface water.

b. Notify the State Communications through Dispatch or call 1-800-632-8000 or (208)-334-4570. * **SEE the procedure for Haz-Mat Conference/Bridge Call Procedures and Etiquette**

c. DO NOT enter an area where you may become a victim, even to rescue another.

d. Establish Control Zones based on the information gathered from the Emergency Response Guide (ERG).

e. Air monitoring should be initiated and conducted as soon as possible.

NOTE: As soon as possible assign a Safety Officer

f. At the Hazardous Materials Operations level the following items should be considered for first due units (not all will be significant at any particular incident):
   i. *Cooling Containers—Flame Impingement*
      1. Obtain adequate water supply, use large GPM (500GPM minimum) hose streams or ground based monitors.
      2. Apply heavy streams to the vapor space area above the liquid line at all points of flame impingement.
      3. Use unmanned streams.
      4. Use natural barriers to protect personnel.
      5. Consider WITHDRAWL AND EVACUATION in potential B.L.E.V.E. situations.
   ii. *Remove Uninvolved Materials*
      1. These actions should only be done after a complete site safety plan has been established and confirmed by Incident Command the RRT and any additional technical advice.
      2. Move individual containers.
      3. Move tank cars away from flame.
      4. Cool containers before moving.

iii. *Stop the Leak*
   1. Use water spray to approach the leak knocking down vapor clouds (confirm water reactivity).
   2. Close valves when safe to do so. Look for remote shut-off valves.
   3. Use caution on tank cars when applying water to leaks or safety valves as icing can occur causing pressure to build up inside the tank.
   4. This action must be done with extreme caution. Operations level responders working in Structural Firefighting gear are not fully protected by chemical gasses, splashes and vapors.

iv. *Apply Diluting Spray, Foam or Neutralizing Agent*
   1. Dilute water-soluble liquids, such as Ammonia, Chlorine and LPG.
   2. Use water with caution on some materials, assure compatibility prior to application.
   3. Apply a foam blanket to control vapor production for flammable liquids.

v. *Construct Dikes, Dams and Diversion Channels*
   1. Direct running liquid away from exposures.
   2. Control run-off from corrosive or toxic materials.
   3. Use sand, dirt or suck-it-up.
   4. Keep product out of sewer, storm systems, canals, or other waterways, etc.

vi. *Remove Ignition Sources*
   1. Start down wind in proper PPE if down wind evacuations are deemed necessary.
   2. Eliminate all sources of heat, sparks and friction.
   3. These actions need to be done in conjunction with proper technical advice.

g. If Offensive tactical actions are needed to help bring the incident to a close, a Hazardous Materials Response Team will be notified to respond per the State Communications Bridge Call protocol.

h. ►Remember:
   i. At the Operations level of response it is DEFENSIVE in nature and any actions related to operations must keep responders from coming in contact with any material, be it solid, liquid or gas, excluding acceptable forms of hazardous materials such as gasoline, diesel fuel,

LPG or natural gas. Those materials can and may be dealt with on regular basis at vehicle accidents, broken fuel lines, broken gas lines etc. and, thru training and proper PPE, responders can apply proper mitigation techniques.

2. After the response:
   a. Personnel will ensure that they have not been contaminated.
   b. Personnel that have had contact with any suspected materials will need to go through a decontamination process.
   c. Personnel will be made aware of signs and symptoms of exposure to the suspected chemicals.
   d. EMS transport personnel must be made aware of the hazardous materials involved and the need for addition decontamination prior to arrival to any care facility. The type of hazardous materials must also be relayed to the hospital prior to victims arriving at the care facility.

BE AWARE THAT COMMAND IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL INVOLVED IN ANY INCIDENT.

Northern Lakes Fire Protection District

Proudly serving the areas of and surrounding Hayden and Rathdrum

Hayden Area (208) 772-5711 • Fax: (208) 772-3044
Rathdrum Area (208) 687-1815 • (208) 687-2088
www.northernlakesfire.com

HAZARDOUS MATERIALS WORKSHEET

This worksheet should be used on scene of all Hazardous Materials incidents.

Date: _____ Time of Dispatch: _____ Arrival Time: _____

Command Post Location: _____

Highway: ☐ Fixed facility: ☐ Incident Location: _____

Contact Name: _____ Phone #: _____

Material / Materials Involved: _____

UN # _____ Placard # / Color _____ ERG Guide # _____

Isolate Spill or Leak in all Directions: _____ ft. Protect Downwind: _____ ft.

Hazard Zones Established: Hot: ☐ Warm: ☐ Cold: ☐

Safety Officer in Place: ☐ Name: _____

Decontamination Corridor set up and in Place: ☐ Location: _____

EMS: Triage / Treatment in Place: ☐ Location: _____

Type of Container Involved / Size Shape: _____

Physical Form: Solid: ☐ Liquid: ☐ Gas: ☐

Type of Release: Leak: ☐ Spill: ☐ Quantity of Material in lbs. or gal. _____

Obtain the following: MSDS: ☐ Shipping Papers: ☐

Any Injuries or Exposures: _____

_____

Evacuation _____ (or) Shelter in Place _____

State Comm. Bridge Call Initiated: ☐ Time: _____ Call Back #: _____

Resources on Scene or Staged:

Fire: _____

EMS: _____ Law: _____

Haz-Mat: _____ DEQ: _____ Red Cross: _____

Disaster Services: _____ Other: _____

_____

5.4 Illicit Discharge Detection & Elimination

5.4 Illicit Discharge Detection and Elimination

To prohibit and eliminate illicit discharges to the MS4, Lakes Highway District must:

- ✓ Enforce an ordinance that effectively prohibits illicit discharges into the MS4;
- ✓ Respond to Complaints or Reports of illicit Discharges from the Public;
- ✓ Keep Track of Complaints/Reports, and any Response Actions Taken;
- ✓ Conduct MS4 outfall screening inspections during dry weather;
- ✓ Follow-up to determine the source of a recurring illicit discharge identified as a result of complaints, or of the dry weather screening investigations within thirty (30) days;
- ✓ Take appropriate action to address the source of an ongoing illicit discharge;
- ✓ Prevent and Respond to Spills to the MS4, as appropriate;
- ✓ Coordinate with other entities for the proper disposal of used oil and toxic materials;
- ✓ Ensure the appropriate Permittee staff is trained to conduct these activities.

Illicit Discharge Policies

The Highway District's will monitor MS4 areas for illicit discharges in accordance with the Illicit Discharge and Spill Response Plan (see attached). Examples of illicit discharges that the District will be looking for include:

- Sanitary sewage or drainfield effluent running over the surface into a ditch,
- Paint or oil dumped into a ditch or storm drain,
- A shop floor drain discharging to a ditch,
- Turbid construction site runoff,
- Other harmful pollutants (use common sense).

The Highway Districts have also developed a Spill Response Procedure detailing the actions to be taken when an illicit discharge is detected by a District employee:

1. Be Safe: Identify the pollutant and determine if it is safe to remain in the area and if safety equipment is needed
2. Stop the Source: If the source is readily identifiable and can be stopped quickly and safely, do so.
3. Notify: Dial 911 if you deem it an emergency.
4. Report the spill to your supervisor.
5. Notify the following agencies:
    - Northern Lakes Fire District: (208) 772-3044
    - Kootenai County Sheriff's Office: (208) 446-1850 for chemical spills
    - Idaho Department of Environmental Quality: (208) 769-1422 for wastewater discharges
    - Kootenai County Building and Planning Department: (208) 446-1070 for minor sediment discharges and code violations.
6. Protect Stormwater: If it can be safely done, while help is on the way, confine the spill with sandbags, berms, diversion ditches, etc.
7. Assist with Clean Up: Remain on site and assist by providing materials, labor and equipment

as directed by the authority agency. Examples include sand, gravel, the District's Spill Kit, etc. Communicate with the authority agency and make sure that they are aware of concerns for protecting downstream surface water.

8. Notify EPA within 24 hours at (206) 553-1846.
9. Report: Supervisor to write a summary report of the incident and file it with SWMP monitoring records. Submit a copy of the report to EPA and IDEQ within 30 days.

The Dry Weather Outfall Screening procedures are as follows:

Task	Description
Dry Weather Field Inspections	Outfall Reconnaissance Inventory (ORI) – MS4's shall be visited at a minimum of one time during the months of July through October.
Dry Weather Quality Testing	At a minimum, if the inspector observes actual flow form an MS4 outfall, during dry weather, he/she should specifically note any observed color, odor, clarity, floating solids, foam, sheen, suspended or settled solids or other indicators of pollution. Additional water quality testing may also be warranted. If deemed necessary by the permit coordinator, obtain a sample kit from Accurate Testing Labs in Hayden or other approved source and sample for parameters identified.
Analysis of Water Quality Data	Compare background tests to dry weather sampling results, if water present during dry weather inspections.
Reporting	Prepare a technical memo identifying the following: • Work performed, • Results from Water Quality Testing, • Illicit Discharge Detected, Reported and Results, • Inclusion of SWMP email tracking log.

Lakes Highway District

Conditional Allowance of Non-Stormwater Discharges

The District does not have ordinance authority and it is not aware of any existing local conditions on non-storm water discharges. If the District observes what it deems to be repeated violations of state surface water quality standards (IDAPA 58.01.02.200), it will notify EPA and IDEQ for enforcement assistance.

Some examples of allowable non-storm water discharges that may not need to be addressed include:

- Water line flushing,
- Irrigation water,
- Discharges from potable water sources,
- Foundation drains,
- Air-conditioning condensate,
- Individual residence car wash water,
- Dechlorinated swimming pool discharges,
- Street wash water,
- Groundwater.

Targeting of Outfall Screening During Dry Weather

The highest priority in most programs is to find any continuous and intermittent sewage discharges to the storm drain system. A range of monitoring techniques can be used to find sewage discharges. In general, monitoring techniques are used to find problem areas and then trace the problem back up the stream or pipe to identify the ultimate generating site or connection. Monitoring can sometimes pick up other types of illicit discharge that occur on a continuous or intermittent basis (e.g., wash water and liquid wastes). Monitoring techniques are classified into three major groups:

- Outfall Reconnaissance Inventory
- Indicator Monitoring at Storm Water Outfalls and In-stream
- Tracking Discharges to their Source

All outfalls within the LHD's MS4 boundaries will be inspected and photographed on an annual basis.

Response to Illicit Discharges, Typical Complaints, and Other Findings

Responsibilities for illicit discharge detection and typical illicit discharge inspection type are as follows:

Tasks	Jurisdictional Authority	Responsible Parties
Inspection of Potential Illicit Discharge within Public Road Right-of-Way	LHD	LHD
Inspection of Potential Illicit Discharge from a Private Property	County	County
Repair/Cleanup of Illicit Discharge within Public Right-of-Way	LHD / County HazMat / Sewer District	LHD / County HazMat
Enforcement	County	County

All actions relating to illicit discharge detection will be recorded in a database administered by Lakes Highway District. The database will be organized by MS4 outfall and will contain information such as: the outfalls inspected, any complaints received, and tests conducted. Illicit discharge detection activities will also be documented on the storm sewer system map.

If an illicit discharge is identified, PFHD will notify EPA within 24 hours by phone at (206) 553-1846, and provide a written report within 5 days (see Permit Part 7.9).

Most Successful Illicit Discharge Response

Not Applicable.

Outfall Screening During Dry Weather

Lakes Highway District conducts annual dry weather screening of all outfalls within the District (see Dry Weather Monitoring Plan and Lakes Highway District Dry Weather Report 2021 in attachments).

The following Lakes Highway District MS4 Outfall Dry Weather Monitoring discharges were sampled and tested (see attached Tables):

- Outfall #3: Outfall located as a point source discharge, on the property of 2937 E Upper Hayden Lake Road (lake side) and adjacent to 3129 E Lower Hayden Lake Road. Samples were collected on August 4, 2021 with E. Coli Bacteria and Chlorine reported as being over the established Ada County, Idaho thresholds. At this time, water quality standards for Kootenai County, Idaho have not been published.

  Additional confirmation samples were collected on October 5, 2021 with E. Coli Bacteria and Chlorine reported as being within the threshold limits.

The Outfall discharge was traced to ground water seepage.

- Outfall #4: Outfall located as a point source discharge, on the property of 2975 E Upper Hayden Lake Road (lake side) and adjacent to 3207 E Lower Hayden Lake Road. The IDEQ was previously notified that this Outfall was a discharge of concern, with return comment that there was no issue at that time. Samples were collected on August 5, 2021 with E. Coli Bacteria, Turbidity, Phosphorus, and Suspended Solids reported as being over the established Ada County, Idaho thresholds. At this time, water quality standards for Kootenai County, Idaho have not been published. At the time of sampling, the Outfall, pipe outlet, had never been located. The samples obtained were from a collection point in the inlet drainage ditch.

  This Outfall was revisited, and the actual Outfall was located under an existing private gated wooden walkway. Additional confirmation samples were collected on October 5, 2021 with only the E. Coli Bacteria reported as being over the threshold. The reported count was 579 MPN/100 mL with the Ada County, Idaho threshold at 406 CFU/100mL.

  The Outfall discharge was traced to ground water seepage.

- Outfall #5: Outfall located as a point source discharge, on the property of 3270 E Upper Hayden Lake Road (lake side). Samples were collected on August 30, 2021 with Chlorine and Phosphorus reported as being over the established Ada County, Idaho thresholds. At this time, water quality standards for Kootenai County, Idaho have not been published.

  Additional confirmation samples were collected on October 5, 2021 with Chlorine reported as not detected and Phosphorus reported as being within the threshold limits.

  The Outfall discharge was traced to ground water seepage.

- Outfall #12: Outfall located is a point source discharge on E Upper Hayden Lake Road (lake side). Samples were collected on August 4, 2021 and all analytes returned within the established Ada County thresholds.

- Outfall #14: Outfall located as a point source discharge, at easterly boat launch of the Hayden Lake Marina. Samples were collected on August 25, 2021 with E. Coli, Chlorine, and Phosphorus reported as being over the established Ada County, Idaho thresholds. At this time, water quality standards for Kootenai County, Idaho have not been published.

  Additional confirmation samples were collected on October 5, 2021 with only the E. Coli Bacteria reported as being over the threshold. The first reported count was 488 MPN/100 mL, and the second count was 2420 MPN/100mL with the Ada County, Idaho threshold established at 406 CFU/100mL.

  The Outfall discharge was traced to ground water seepage.

Planned Activities for 2022

The Lakes Highway District will do the following during the 2022 calendar year:

- Visually monitor the MS4 area during routine maintenance rounds.
- Screen all outfalls during July-October in accordance with the Dry Weather Screening Plan.
- Conduct additional screening in spring and fall during maintenance and monitoring.
- Document and report detected illicit discharges to Kootenai County, EPA and IDEQ in

accordance with the Spill Response Plan.

Significant Findings or Changes of the MS4

The LHD Outfall Map was revised from the previous permit term to remove outfalls that were not point source discharges to Avondale or Hayden Lake (see attached 2021 Lakes Highway District Outfall Map in Section 2 - Attachments).