

**Stormwater Monitoring/Assessment Plan
for the
City of Post Falls**

IPDES Permit #IDS028231



**Prepared by:
City of Post Falls**

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Acronyms

CFR	Code of Federal Regulations
IDEQ	Idaho Department of Environmental Quality
IPDES	Idaho Pollutant Discharge Elimination System
MS4	Municipal Separate Storm Sewer System
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control

Section 1

Introduction

As part of its Idaho Pollutant Discharge Elimination System (IPDES) Municipal Separate Storm Sewer System (MS4) Permit (Permit) requirements, the City of Post Falls (City) is required to develop and implement a stormwater monitoring/assessment plan. Specific stormwater monitoring requirements and objectives are defined in Part 4.2 and Part 6.2 of the IPDES MS4 Permit (Permit Number IDS-028231).

The purpose of this monitoring/assessment plan is to address the monitoring and assessment component of the IPDES MS4 Permit requirements. The City has developed the monitoring/assessment plan and overall monitoring strategy based on the stormwater monitoring objectives defined in the Permit. Conducting monitoring activities as described in this plan will allow the City to evaluate pollutant sources, characterize stormwater discharges, evaluate receiving water trends (when sufficient data have been collected over many years), and identify effects of MS4 discharges on receiving waters. Additionally, the monitoring and assessment activities will provide the City with information to support incremental and overall stormwater program modifications and adjustments.

Section 2

Stormwater Monitoring Objectives

The Permit defines the minimum monitoring expectations for the City's MS4 program. The Permit states that the Permittee must quantify pollutant loadings from the MS4 into the Spokane River as listed in Table 4.2 and, no later than October 1, 2022, develop a monitoring/assessment plan that includes the quality assurance requirements defined in Part 6.2.7.

The City must develop and implement a monitoring program to:

- Estimate the pollutant loading currently discharged from the MS4 to the Spokane River.
- Assess the effectiveness and adequacy of control measures implemented through this Permit

This monitoring/assessment plan is focused on meeting these stormwater monitoring objectives.

Section 3

Stormwater Monitoring

According to the Permit, the wet weather discharge monitoring program must include the following:

- Representative Sampling – Samples, measurements, and/or assessments conducted in compliance with this Permit must be representative of the nature of the monitored discharge or activity. Sampling will be focused on representing MS4 discharges to the Spokane River.
- Monitoring procedures – Sample collection, preservation, and analysis must be conducted according to sufficiently sensitive methods/test procedures approved under 40 CFR Part 136. Where an approved 40 CFR Part 136 method doesn't exist, and other test procedures have not been specified, any available method may be used after approval from IDEQ.
- Quantify Pollutant Loadings – For monitoring activities associated with this monitoring/assessment plan, the Permittees must identify the location, sample type, parameters, and frequency of samples, as well as develop a Quality Assurance Project Plan (Permit Part 6.2.7), and submit all data collected in the annual report submitted to IDEQ.

3.1 Monitoring Parameters

The Permittee must meet the monitoring requirements listed in Parts 4.2 and 6.2 of the Permit, which at a minimum includes monitoring lead, zinc, and total phosphorus at the outfalls.

To accomplish this, the Permittee intends to monitor the stormwater parameters listed in Table 1. Monitoring activities are further described in Section 3.3.

Table 1. Monitoring parameters, frequency, and type

Parameter	Monitoring Frequency^{1,2}	Sample Type
Lead	At least 4 times per year	Grab
Zinc	At least 4 times per year	Grab
Total Phosphorus	At least 4 times per year	Grab
TSS	At least 4 times per year	Grab
Temperature	At least 4 times per year	Recording
Depth of water	At least 4 times per year	Measurement

1. Samples collected during storm events
2. One sample collected in September-October time period

3.2 Monitoring Site Locations

To meet the monitoring requirements outlined in Section 3.1, the City will conduct stormwater (outfall) monitoring at the two outfall locations within City limits. The two City MS4 outfalls (Centennial Trail outfall and 4th Avenue outfall) were selected for the monitoring locations for the wet weather discharge monitoring (Table 2, Figure 1).

Table 2. Monitoring Site Locations

Site Name	Latitude North	Longitude West
4th Street Outfall	47.7110287° N	116.9532559° W
Centennial Trail Outfall	47.7134370° N	116.9582656° W

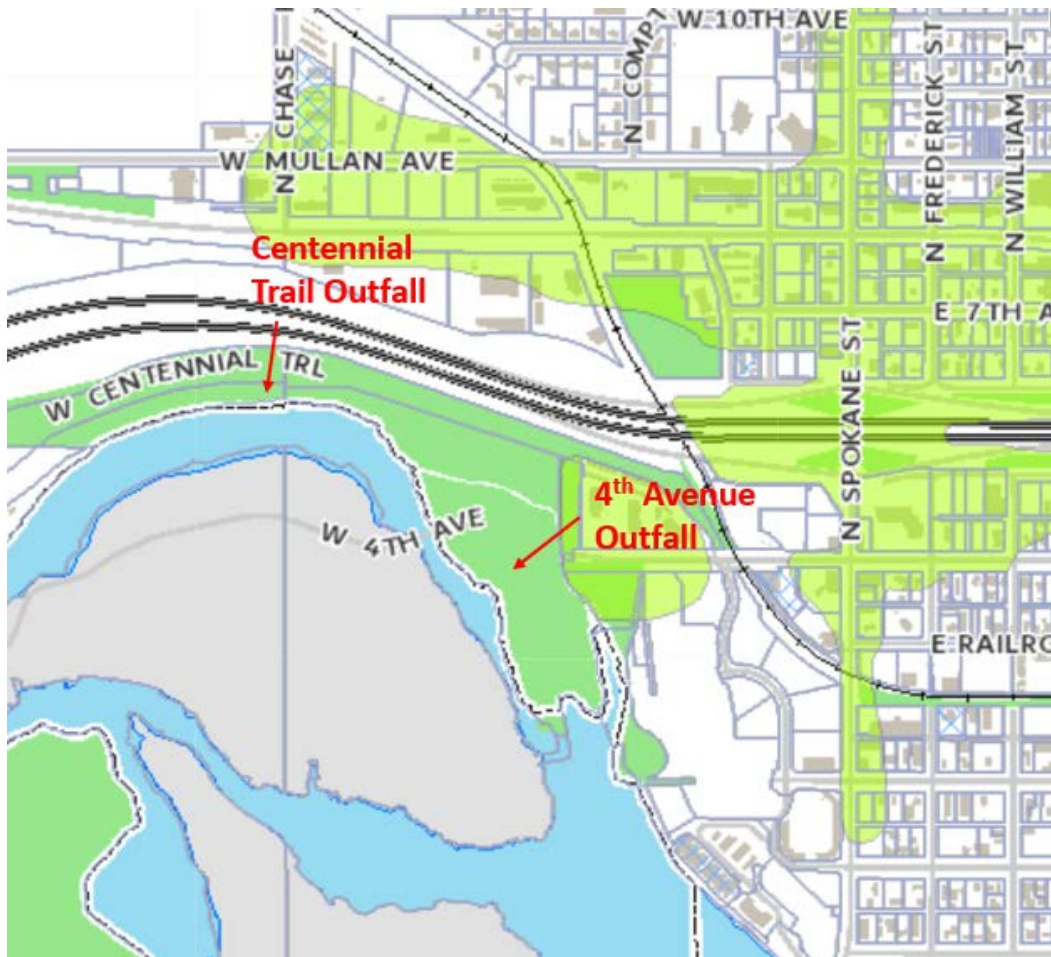


Figure 1. Location map of City of Post Falls MS4 outfalls to the Spokane River

3.3 Sample Collection Methods

3.3.1 Grab Samples

Lead, zinc, total phosphorus and total suspended solids will be collected as grab samples. Grab samples will be collected during storm events.

Grab samples will be collected directly into the appropriate sample container in flowing water. Each sample container will then be capped, labeled (time, date, and site name), and stored in a cooler on ice. Samples will then be taken to Accurate Testing Laboratory for analysis. Detailed grab sample collection procedures and analytical procedures are outlined in the City of Post Falls Quality Assurance Project Plan (QAPP). Key features of that plan include:

- Establishment of data quality objectives
- Written standard operating procedures for field and laboratory tasks
- Routine instrument calibration and equipment maintenance
- Field quality assurance/quality control (QA/QC) samples for monitoring data quality
- Sample Chain-of-Custody procedures and forms
- Use of standard analytical procedures
- Data management and validation

3.3.2 QA/QC Procedures

Field QA/QC

Field duplicates will be collected for 10% of the grab samples. A field duplicate is a second sample collected at the same time and in the same manner as the first sample. Field duplicate pairs provide information about the repeatability of sampling and analysis. For this project, field duplicates will be partially “blind,” i.e. they will be assigned arbitrary sample names and collection times, making it more difficult for the laboratory to identify the duplicate pairs. For more details on QA/QC procedures and calibration methods, see the City QAPP.

Lab QA/QC

Laboratory analysis for lead, zinc, total phosphorus and total suspended solids will be conducted by Accurate Testing Laboratory. See the respective lab’s QA Plan for more information on their procedure.

Section 4

Monitoring Documentation and Record Keeping

Detailed field notes, field calibrations, and final lab reports will be documented electronically.

Data will be QA/QC'd and stored according to best practices in data management. See the City of Post Falls' QAPP for more information on data management and storage.

Data collected and lab reports will be submitted to IDEQ in the Annual Report, and made available to IDEQ upon request.

Section 5

Assessment and Final Report

Assessment of stormwater monitoring data will be conducted by quantifying stormwater pollutants contributions from the MS4 area. This will be accomplished using the pollutant concentrations reported in lab sample data, storm event precipitation data, and land surface area within the MS4 to determine the stormwater event pollutant loading.

The Final Monitoring/Assessment Report will contain a cumulative assessment of stormwater pollutant loadings from the MS4 into the Spokane River, including a summarization of all monitoring/assessment data collected during the permit term, a comparison of this data with any historical data as appropriate and any relative discussion points as required in Section 6 of the Permit.

Section 6

Schedule of Activities

November 1, 2020 - December 31, 2024: Collect 4 grab samples per calendar year.

2020 - 2024: Data analyzed annually for trends and for inclusion in the Annual Report to the IDEQ (submitted by December 1 of each year).

April 3, 2025: Submit final report summarizing the monitoring/assessment data collected during the Permit term.