City of Post Falls - Pollutant Reduction Activity: Catch Basin Elimination.

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) must define and implement at least one (1) pollutant reduction activity designed to reduce lead, zinc and total phosphorus from the MS4 into the Spokane River. In the final report required by Part 4.1.3 of the Permit, the Permittee must quantify the estimated pollutant reduction accomplished resulting from such activities.

The City has selected two project areas within the MS4 to convert catch basins to dry wells to meet requirements of the Permit required pollution reduction activity.

Background on Site:

Catch basins contribute pollutants, including lead, zinc, and total phosphorus, to the MS4 and surface water outfalls. Conversion from piped connections to the MS4 to stand alone drywells will reduce the overall area of the City's MS4 and total pollutant loading in the discharge. Areas along 6th Avenue were deemed appropriate for conversion with two subprojects listed below.

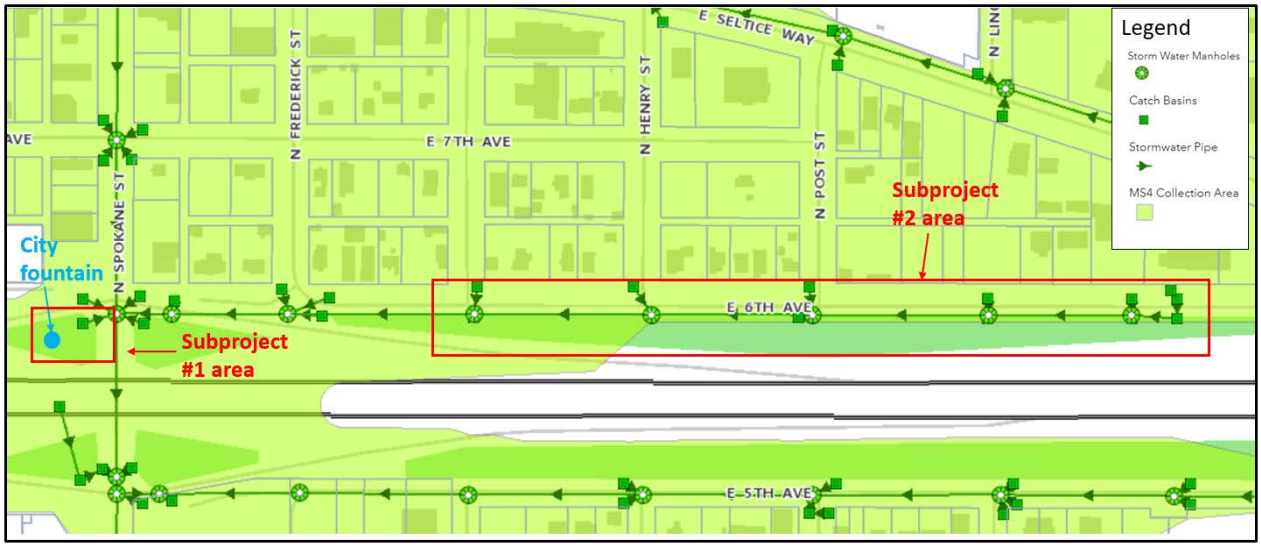

Figure 1. City of Post Falls map of 6th Avenue catch basins

Subproject #1: I-90 Onramp Fountain

At the westbound onramp of I-90 and Spokane Street, the City has a water fountain display. An adjacent catch basin captures road and swale runoff as well as overflows from the fountain. This catch basin is connected to the MS4 system and it is hypothesized that fountain overflows cause dry weather discharge to the 4th Avenue outfall. Attempts have been made to change the structure of the fountain and correct the overflow, but past efforts have not been successful.

Figure 2. City water fountain display

Figure 3. Catch basin dry weather discharge

Proposed Project:

The City plans to rehabilitate the catch basin near the water fountain by converting it into a dry well and improving the condition of the swale around the new dry well. Eliminating this catch basin and allowing for stormwater and overflow water from the fountain to infiltration into the swale will benefit the water quality of this stormwater. Pollutants and excess stormwater will be filtered by the swale before infiltrating into the groundwater as compared to the current flow path of directly flowing to the MS4 outfall with no pollutant removal.

Direct benefits to the City include the removal of an illicit discharge source and the improvement of water quality to the stormwater before infiltration.

Tentative Project Schedule:

- 2022-2025: Continue water quality monitoring for lead, zinc, TSS, and phosphorus from MS4 outfalls.
- 2023-2024: Begin modification of catch basin and continue water quality monitoring for lead, zinc, TSS, phosphorus from MS4 outfalls.
- 2024-2025: Finalize modification and compare water quality results to determine impacts to water quality.

Subproject #2: 6th Avenue Catch Basin Conversion

Proposed Project:

The City plans to remove additional catch basins along 6th Avenue directly to the east of Subproject #1. There are approximately nine catch basins between Williams Street and Idaho Street that will be assessed and potentially converted. Swales and dry wells will be installed for the stormwater diversions for these catch basins. Conversion to dry wells will reduce the overall pollutant load to the 4th Avenue outfall.

Figure 4. Map of 6th Avenue catch basins.

Tentative Project Schedule:

- 2022-2025: Continue water quality monitoring for lead, zinc, TSS, phosphorus from MS4 outfalls.
- 2022: Determine right of way ownership and future plans for the freeway near project site.
- 2023-2025: Remove catch basin connections to the MS4 and begin modification of diverting water to swales and dry wells
- 2024-2025: Finalize modifications and compare water quality results to determine impacts to water quality.