

STORMWATER STANDARD OPERATING PROCEDURE

Extended Detention Basin Inspections



WESTMINSTER

Stormwater Coordinator
Signature:

A handwritten signature in blue ink, appearing to read 'Jake Moyer'.

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1.0

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Applies to: Post-Construction

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PURPOSE

The purpose of this SOP is to describe the Stormwater Management procedure for:

Extended Detention Basin Inspections: During Construction

The City of Westminster Stormwater Program's objective is to limit the amount of pollutant discharge to waterways and provide a safe and healthy environment.

Below are procedures pertaining to general inspection requirements for extended detention basin facilities **during construction**. Note: Some facilities may vary and will be reviewed on a case-by-case basis. Note: Some facilities may not include all of the components in this SOP.

Formal Inspections require a site visit and documentation to verify the construction. **Informal Inspections** do not require a site visit but do require documentation and verbal consent.

PROCEDURE

1. Pre-Construction (Formal Inspection)

- A pre-construction meeting should be held between the design engineer(s), project managers, contractor foreman and other relevant personnel to discuss important aspects of facility installation as well as phases that require inspection.
- Prior to excavation, the perimeter must be staked and dimensions must be verified to match the design specifications.

2. Forebay (Formal Inspection)

- The forebay should be gently sloped towards the outlet pipe or notched weir.
- Energy dissipation materials (riprap or other) should meet design specifications and installed according to design.

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- The concrete should be poured and reinforced according to the design specifications and should not show signs of settling and/or cracking.
- The forebay should be cleaned out prior to acceptance into and out of warranty.

3. Trickle Channel (Formal Inspection)

- Verify that the trickle channel shape, width and depth are according to design.
- Verify that the trickle channel is sloped (continuously) toward the outlet structure.
- Verify that the concrete was poured and reinforced correctly and that there are no signs of cracking or settling.
- Require that the trickle channel be cleaned out prior to acceptance into and out of warranty.

4. Micropool (Formal Inspection)

- The micropool's length, width and depth (typically 1 to 3 feet) should be installed according to design.
- Verify that there are no signs of cracking throughout the micropool.
- The micropool should be cleaned out prior to acceptance into and out of warranty.

5. Outlet Structure (Formal Inspection)

- The dimensions and type of trash rack (well screen and/or grate) should be consistent with design specifications. Visually verify that the trash rack (well screen) openings are smaller than the openings on the orifice plate.
- The trash rack should extend all the way to the bottom of the micropool (if applicable).
- The number and size of orifices shall be consistent with design specifications. Verify the orifice plate is bolted to the structure with a gasket material placed between the structure and the plate. Verify the lowest orifice is at the elevation approved on the accepted design specifications (measure).

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- A metal cap/plate shall be installed on top of the opening between the well screen and WQCV orifice plate.

6. Safety Grate (Formal Inspection)

- If a safety grate is included in the design, dimensions of safety grate shall be consistent with design specifications.

7. Emergency Overflow/Spillway (Formal Inspection)

- The length and depth of the emergency overflow weir shall be in accordance with design specifications.
- Emergency spillway shall be lower than the rest of the basin embankments/walls and higher than the outlet structure overflow.
- Riprap or other energy dissipation methods shall be installed downstream of the emergency overflow, per design specifications.

8. Final Landscaping (Formal Inspection)

- If the EDB had temporary control measures to provide sediment control, remove all temporary control measures from the upstream basin and make sure the upstream catchment is stable prior to landscaping.
- Seeding application rates shall be in accordance with landscape design specifications. Soil amendments are often required and must comply with the landscape design specifications and/or the Stormwater Management Plan (SWMP).
- Irrigation placement (temporary or permanent) shall ensure proper establishment of vegetation.
- If native seed mixes are used, 70% or more establishment is necessary before allowing the state and city stormwater construction permit (or land disturbance permit) be closed.

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9. Close Out

- Verify construction in the upstream catchment is complete and landscaped areas are properly vegetated or otherwise stabilized prior to the removal of temporary control measures.
- All components of the facility shall be maintained and shall not show signs of deterioration.

10. Employee Training

- The pre-construction meeting and routine stormwater inspections serve as an opportunity to inform operators of the City requirements, including city inspection processes, enforcement procedures, and pollutant sources such as trash.
- The City trains applicable employees who perform activities on this written procedure. Information regarding city processes and how to avoid and report spills is presented during this training.

11. Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet and topics covered.
- Extended Detention Basin Inspection Reports.
- All inspection records will be kept in eTrakIT as well as laserfiche for a period no less than 5 years after the project is accepted by the City.