

MILWAUKIE

Dogwood City of the West

City of Milwaukie
Public Works Department

10.01 Preventive Maintenance

STORM DRYWELL CLEANING

Standard Operating Procedure #10.01.002

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By

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Approved:



	9-9-13
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1.0 PURPOSE & APPLICABILITY

The purpose of this Standard Operating Procedure (SOP) is to establish uniform procedures pertaining to the practices, maintenance and reporting of Drywell cleaning, as performed by the City of Milwaukie Public Works department.

The Safe Drinking Water Act (SDWA) regulates subsurface injection through Underground Injection Control (UIC) programs. The Oregon Department of Environmental Quality (DEQ) has developed a UIC program for the state of Oregon. The intent of the program is to “protect existing groundwater quality for current or potential beneficial uses including use as an underground source of drinking water” (Oregon Administrative Rule [OAR] 340-044-0010).

The policies and procedures of this SOP are applicable to all City of Milwaukie personnel involved in the planning, preparation, conducting and reporting of Drywell Cleaning within the City of Milwaukie city boundaries.

The operator or inspector may deviate from these procedures when necessary due to unexpected or unique circumstances that may occur in the field. Any deviation must be discussed with supervisory personnel prior to implementation.

2.0 METHOD SUMMARY

Drywell cleaning is performed to remove accumulated sediment, debris and pollutants from the drywell or stormwater injection system. Type I drywells are required to be cleaned one time every two years. Type II drywells are required to be cleaned one time every 6 months. The Public Works crews manually record debris and sediment amounts in writing on hard copy maps and then complete work orders after the work is complete. The Vactor debris is dumped, stored and rotated in the Decant Facility.

3.0 DEFINITIONS

- 3.1 Drywell: an underground structure that disposes of Stormwater runoff, by dissipating it into the ground
- 3.2 Stormwater Injection Systems: Stormwater injection systems are Class V injection systems used for subsurface emplacement or discharge of stormwater runoff
- 3.3 Vactor: truck mounted vacuum cleaning unit with debris storage tank
- 3.4 Type I Drywells: Type I drywells are associated with streets maintaining less than 1,000 average daily trips (ADT)
- 3.5 Type II Drywells: Type II drywells are associated with streets maintaining greater than 1,000 ADT

4.0 HEALTH & SAFETY CONCERNS

Some of the concerns are exposure to hypodermic needles, loud noises, flying debris, heavy traffic areas, high water pressure, uneven surfaces and the general use of heavy equipment such as the Vactor.

5.0 PERSONNEL QUALIFICATIONS

Personnel must have a Class B Commercial Drivers License with a Tanker Endorsement, traffic control certification, blood borne pathogens training, and Vactor or VacCon operation training.

6.0 EQUIPMENT & SUPPLIES

Equipment and supplies consist of Vactor or VacCon, service truck, manhole hooks, safety glasses, traffic control equipment, hearing protection, hard copy maps, work boots, high visibility safety wear, first aid kits, gloves, radios or cell phones. Many assignments require at least two employees.

7.0 PROCEDURAL STEPS

- 7.1 Vactor pre- trip inspection and preparation (water, safety supplies, paper towels, hand sanitizer).
- 7.2 Determine area selection, route and map.
- 7.3 Upon arrival turn on required flashers and lights.
- 7.4 Use a spotter to guide you to the asset.
- 7.5 Assess traffic control needs, set up accordingly.
- 7.6 Connect bottom Vactor tubes on ground.
- 7.7 Pull drywell manhole lid.
- 7.8 Insert tubes into drywell.
- 7.9 Vacuum out water from base of drywell.
- 7.10 Make a hole in the center of the debris in the base of the drywell with the suction tube.
- 7.11 Hook up gamma jet nozzle, insert into drywell. Turn on water to break up or loosen debris.
- 7.12 Remove the debris with suction from the Vactor. Repeat if needed.
- 7.13 Remove the gamma jet from the drywell.
- 7.14 Remove the Vactor tubes from drywell.
- 7.15 Measure debris removed.
- 7.16 Place manhole lid back on drywell.
- 7.17 Clean area.
- 7.18 Pick up all traffic control devices.

8.0 RECORDS MANAGEMENT

The personnel performing the work will complete the work order that is generated by the Hansen program under each numbered asset in the database. The report hard copies will be retained in accordance with the current City of Milwaukie records retention policy and Oregon Administrative Rules 166-200-120.

9.0 REFERENCES

- 9.1 City of Milwaukie UIC Management Plan (2005) HDR Engineering Inc. and City of Milwaukie
- 9.2 NPDES MS4 Discharge Permit # 101348 (March 16, 2012) Oregon Department of Environmental Quality
- 9.3 Vactor Operating Manual (2007)
- 9.4 Decant Facility Use & Maintenance SOP # 50.01
- 9.5 City of Milwaukie Citywide Safety Manual (2002)
- 9.6 OAR 340-044-0010 Department of Environmental Quality

Revision Record

Revision	Date	Author	Description of change