OPERATION & MAINTENANCE MANUAL

**Underground Injection Control Systems: Drywell**

**Manual Prepared: Month / Year**

**DFI No. DXXXXX**



Figure 1: DFI No. DXXXXX, looking [note cardinal direction]

**Identification**

|  |  |
| --- | --- |
| Drainage Facility ID (DFI): | DXXXXX |
| Facility Type: | Drywell with [list structural BMPs such as pretreatment DI to collect sediment, gate valves, etc.] |
| Construction Drawings: | (V-File Numbers) xxV-xxx |
| Location: | District: xxHighway No.: xxMile Post: xx to xx, [side] |

# **Manual Purpose**

The purpose of this manual is to outline inspection needs and summarize maintenance actions for drywells and system components.

# **Facility Location**

The location map below details the facility location. The highway, mile posts, side streets, access location, and stormwater flow directions are noted on the map.



Figure 2: Facility Location Map

# **Facility Summary**

This drywell is considered an Underground Injection Control system (UIC). The drywell structure allows stormwater to infiltrate into the surrounding soil. This process of infiltration through the drywell structure also removes pollutants from the stormwater.

Generally, drainage systems that outlet to a drywell also include inlets, pipes, pre-treatment manholes/structures to remove trash and debris, a shutoff valve, and the drywell structure. Drywells typically include manholes with perforated barrels, drain rock, and drainage geotextile.

Drywells are accessible via a manhole lid and can be identified by the Type S3 facility field markers shown below.



Figure 3: Type S3 Stormwater Facility Field Marker

|  |  |  |
| --- | --- | --- |
| **Diameter (Feet)** | **Drywell Bottom Depth (Feet)** | **Drain Rock (CUYD)** |
| x | x | x |

* Does this facility contain pretreatment BMPs? (Yes/No)
	+ If yes, please specify type: xx
* Depth to Groundwater Table: xx feet
* Groundwater Surface Elevation: xx feet
* Is there a well within 500 feet of the drywell? (Yes/No)

**Site Specific Information**

Enter any site specific information or measurements that should be noted for this facility and are not included in the sections above.

# **Facility Access**

Maintenance access to the facility:

|  |  |
| --- | --- |
| [ ] Roadside pad  | [ ] Roadside shoulder |
| [ ] Access road with Gate | [ ] Access road without Gate |
| ☐Roadway median | ☐Lane closure needed |
| [ ] Other Access (specify below in photo caption) |



Figure 4: [insert post construction facility access photo and caption text]

# **Operational Components / Maintenance Items**

**Operational Components**

The facility components table (**Table 1**) highlights the applicable components for this facility. The component is included in this facility when the box contains an “x” (e.g. [ ] ).

**Operational Plan**

See Appendix A for the site specific operational plan.

Key Features/Items:

This facility includes an overflow bypass component.

|  |  |
| --- | --- |
| [ ]  **No** | [ ]  **Yes** |
| **There is no bypass component. High flows drain into and infiltrate through the facility.** | **There is an overflow bypass component. Under large storm events, the drywell may overflow to other facilities. See Operational Plan for details.** |

**Maintenance Items**

Operational components marked in **Table 1** should be inspected and maintained according to Section 7. Each facility component is defined and detailed in the Standard Operation Manual using the associated ID number indicated below.

|  |  |
| --- | --- |
| **Table 1: Drywell Components** | **ID #** |
| **Upstream Manholes/Structures** |
| Drywell  |[ ]   |
| Pre-treatment StructureType: (List Type)  |[ ]   |
| Shutoff Valve  |[ ]   |
| **Facility Inlet** |
| Inlet Pipe(s) |[ ]   |
| **Ground Cover** |
| Common Fill  |[ ]   |
| **Underground Components** |
| Geotextile Fabric: (List Type) |[ ]   |
| Granular Drain Rock  |[ ]   |
| Perforated Pipe: (List Diameter)  |[ ]   |
| **Additional System Features** |
| High Flow Bypass  |[ ]   |
| Storm Sewer System |[ ]   |
| Granular Drainage Blanket |[ ]   |

**Unique Tools for Component Testing**

* 1. Valve key (for shutoff valve testing)

# **Facility Hazardous Material Spill Feature(s)**

The drywell cannot be used to store a volume of hazardous liquid. All hazardous material must be blocked prior to entering the drywell. The hazardous material can be blocked by turning off the valve between the pollution control manhole and the drywell. The valve requires a valve key to turn the valve off and on.

# **Maintenance**

**Maintenance Frequency/Maintain Records**

1. Inspect annually, preferably prior to the rainy season.
2. Clean and maintain as necessary. Refer to Activity 125 for conditions when maintenance is needed.
3. Keep a record of inspections, maintenance, and repairs.
4. Open and close any shutoff valves annually.

**Maintenance Guide/Maintenance Actions**

The ODOT Maintenance Guide lists the standard maintenance actions for water quality facilities under Activity 125.

Standard maintenance tables describe the maintenance component, the potential defect or problem, the condition when maintenance is needed, and the recommended maintenance to correct the problem. Use the following tables to maintain ODOT drywells:

* Table 8: Underground Injection Controls (UICs)

The *Maintenance Guide* can be viewed here:

<http://transnet.odot.state.or.us/hwy/MaintOPs/Pages/Maintenance%20Guide.aspx>

# **Limitations**

* Confined Space Entry
	1. All personnel who need to enter the drywell for maintenance, inspection, or any other reason must trained and certified in confined space entry.

# **Material Disposal**

Material removed from the facility is defined as waste by the Department of Environmental Quality (DEQ). Refer to the road waste section of the ODOT Maintenance Yard Environmental Management System (EMS) Policy and Procedures Manual for disposal options:

[http://www.oregon.gov/ODOT/Maintenance/Documents/ems\_manual.pdf](https://www.oregon.gov/odot/Maintenance/Documents/EMS/2020EMS_Manual_final.pdf)

Contact any of the following for more detailed information about management of waste materials found on site:

ODOT Materials Management Coordinator (503) 731-8493

ODOT Statewide Hazmat Coordinator (503) 667-7442

ODOT Region 1 Hazmat Coordinator (503) 731-8290

ODOT Region 2 Hazmat Coordinator (503) 986-2647

ODOT Region 3 Hazmat Coordinator (541) 957-3594

ODOT Region 4 Hazmat Coordinator (541) 388-6186

ODOT Region 5 Hazmat Coordinator (541) 963-1590

ODEQ Northwest Region Office (503) 229-5263

###### Appendix A – Site Specific Operational Plan

**Contents:**

**Operational Plan: DFI DXXXXX**





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###### Appendix B – Project Contract Plans

**Contents:**

**Site Specific Subset of Project Contract Plan xxV-xxx**

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