

TimberRidge Estates Metropolitan District Operations and Maintenance Manual Extended Detention Basin (on Tract A)

County Job No. SF-18-027

Extended detention basins have low to moderate maintenance requirements. Routine and non-routine maintenance is necessary to assure performance, enhance aesthetics, and protect structural integrity. Dry basins can result in nuisance complaints if not properly designed or maintained. Bio-degradable pesticides may be required to limit insect problems. Frequent debris removal and grass-mowing can reduce aesthetic complaints. If a shallow wetland or marshy area is included, mosquito breeding and nuisance odors could occur if the water becomes stagnant.

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1. TimberRidge Estates Extended Detention Basins Maintained by TimberRidge Estates Homeowners Association.

There is a single Extended Detention Basin within TimberRidge Estates that the TimberRidge Estates Home Owners Association owns and maintains. The following are details of this detention basin. Attached to this manual is a map showing the detention basin location.

Extended Detention Basin on Tract A – Extended Detention Basin with WQCV. This full spectrum detention basin will be built in 2019. The final drainage report for TimberRidge Estates covers the drainage calculations for this pond.

2. Access

The Extended Detention Basin on Tract A can be accessed from Arroya Lane or by following the drainage channel down slope from Nature Refuge Way. There is a gravel access ramp on the southeast corner of the Extended Detention Basin.

3. Inspections

Inspection and Frequency

Annually inspect detention basin to insure that the basin continues to function as initially intended. The annual inspection should evaluate the forebay, pond side slopes, inflow channel, the spillway condition, the depth of sediment in the forebay, outlet structure, trash rack, downstream channel, and the condition of the downstream face of

the pond. A site survey will be the best indication of excessive sediment buildup and degradation of the spillway. In addition, an inspection of the vegetation on the berm, inside the detention area and the downstream face of the spillway should be conducted. Any bare areas should be noted and repaired using native grasses. Any sloughing or erosion of the embankment should be noted and repaired. Items to record will include any items inspected and the mowing frequency of the vegetation on the facility.

☐ Just before annual storm seasons (that is, April and May) and following significant rainfall events, inspect for litter and debris that may plug outlets. Of notable importance, the inspections should also include the water quality orifice plate and trash rack to ensure plugging has not occurred.

☐ A baseline survey should be performed at the time of construction and comparison surveys conducted every ten to twenty years after to monitor overall performance of the pond. Results of inspections should be recorded and kept at a central location for review and recording by the district.

Inspection Personnel

A qualified engineer, surveyor, or certified storm water inspector should conduct inspections of the facility.

4.0 Operations

No specific operating instructions are required.

5.0 Maintenance

Maintenance of the Extended Detention Basin shall be in accordance with the guidelines included in Table EDB-1, below.

| Required Action | Maintenance Objective | Frequency of Action |
|---------------------------|---|--|
| Lawn mowing and lawn care | Occasional mowing to limit unwanted vegetation. Maintain irrigated turf grass as 2 to 4 inches tall and nonirrigated native turf grasses at 4 to 6 inches. | Routine – Depending on aesthetic requirements. |
| Debris and litter removal | Remove debris and litter from the entire pond to minimize outlet clogging and improve aesthetics. Outlet structure trash racks should be clear of any blockage. | Routine – Including just before annual storm seasons (that is, April and May) and following significant rainfall events. |

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|------------------------------|---|--|
| Erosion and sediment control | Repair and revegetate eroded areas in the basin and channels. | Nonroutine – Periodic and repair as necessary based on inspection. |
| Structural | Repair pond inlets, outlets, forebays, low flow channel liners, and energy dissipators whenever damage is discovered. | Nonroutine – Repair as needed based on regular inspections. |
| Inspections | Inspect basins to insure that the basin continues to function as initially intended. Examine the outlet for clogging, erosion, slumping, excessive sedimentation levels, overgrowth, embankment and spillway integrity, and damage to any structural element. | Routine – Annual inspection of hydraulic and structural facilities. Also check for obvious problems during routine maintenance visits, especially for plugging of outlets. |
| Nuisance control | Address odor, insects, and overgrowth issues associated with stagnant or standing water in the bottom zone. | Nonroutine – Handle as necessary per inspection or local complaints. |
| Sediment removal | Remove accumulated sediment from the forebay, micro-pool, and the bottom of the basin. | Nonroutine – Performed when sediment accumulation occupies 20 percent of the WQCV. This may vary considerably, but expect to do this every 10 to 20 years, as necessary per inspection if no construction activities take place in the tributary watershed. More often if they do. The forebay and the micro-pool will require more frequent cleanout than other areas of the basin, say every 1 or 2 years. |