

Operations and Maintenance Manual
For
Extended Detention Basin
Peaceful Ridge at Fountain Valley Subdivision
Colorado Springs, Colorado

Prepared for:

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Extended Detention Basin

Maintenance Recommendations

An Extended Detention Basin (EDB) is a sedimentation basin designed to totally empty out sometime after stormwater runoff ends. Compared to a flood control detention basin, the extended basin uses a much smaller outlet that extends the emptying time for the more frequently occurring runoff events to facilitate pollutant removal. The basins are considered to be “dry” because they are designed not to have a significant permanent pool of water remaining between storm runoff events. However, EDBs may develop wetland vegetation and sometimes shallow pools in the bottom portions of the facilities.

Extended detention basins have low to moderate maintenance requirements. Routine and nonroutine maintenance is necessary to assure performance, enhance aesthetics, and protect structural integrity. The 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. Access to critical elements of the pond (inlet, outlet, spillway, and sediment collection areas) must be provided. The basic elements of the maintenance requirements are presented in Table EDB-1.

Table EDB-1
Extended Detention Basin Maintenance Considerations

Required Action	Maintenance Objective	Frequency of Action
Mowing	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 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.
Erosion and sediment control	Repair and revegetate eroded areas on slopes.	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 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.

Drainage Maintenance Access

Code Section: Per Section 11.2.2 of El Paso County Drainage Criteria Manual, "Access to the bottom of the pond from a public road shall be provided via a 15-foot-wide ramp at a slope no greater than 12%."

The 10' wide maintenance and access road depicted in the construction drawings is adequate width to maintain the pond. The pond is constrained in an existing drainage tract. The drainage tract is bound by platted lots to the north and south, Marksheffel Road to the east and Periwinkle Place to the west. To accommodate a 15'- wide road, additional fill would be required within the pond and required detention volumes cannot be achieved.

Plan reference: See attached Pond Grading Plan for reference and Pond Design Spreadsheet for reference.