

**PDP/BMP
OPERATION AND MAINTENANCE MANUAL
THE GARDENS AT NORTH CAREFREE
DETENTION PONDS
EL PASO COUNTY, COLORADO**

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PREPARED FOR:

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Inspection

Inspection Frequency

- Inspections of the ponds should be, at a minimum, once every week until vegetation is re-established and then once a quarter. Inspections should also occur after major storm events.
- Hydraulic and structural facilities should be thoroughly inspected annually. Also, observations should be made for obvious problems during routine maintenance visits, especially for plugging of outlets.
- Inspections for debris and litter just before annual storm seasons (that is April and May) and following significant rainfall events.
- Results of inspections are to be recorded and kept at a central location for review and recording by the owner.
- Sediment removal should be performed when it occupies more than 20% of the WQCV. This time frame will vary, but should be expected to be done every 2 to 5 years as needed per inspection.
- Forebay and micro-pool will require sediment removal every 1 to 2 years.
- A baseline survey should be performed at the time of construction and comparison surveys conducted every 2 years after.

Inspection Items

- Inspections should evaluate the berm, spillway condition, depth of sediment behind the berm and 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.
- An inspection of the vegetation on the berm and the downstream face of the spillway should be performed. Bare areas should be noted and repaired using native grasses. Any sloughing or erosion of the embankment should also be noted and repaired.
- Items to record include erosion of the downstream face, excessive buildup of sediment in all areas of the pond (micro-pool, fore bay, etc), and the mowing frequency of the vegetation on the facility.

Inspection Personnel

A qualified engineer and/or surveyor should conduct inspections of the facility.

Operations

No specific operating instructions are required.

Maintenance

Mowing

Mowing shall occur to limit unwanted vegetation. Maintain irrigated turf grass as 2 to 4 inches tall and non irrigated native turf grasses at 4 to 8 inches.

Debris and Litter Removal

Remove debris and litter from the entire pond to minimize outlet clogging and improve aesthetics.

Landscaping Removal and Replacement (PLD)

Not Applicable

Structural

Repair pond inlets, outlets, fore bays, low flow channel liners and energy dissipaters whenever damage is discovered.

Nuisance Control

Address odor, insects and overgrowth issues associated with stagnant or standing water in the bottom zone.

Erosion and Sediment Removal

Repair and revegetate eroded areas in the basin and channels. Remove accumulated sediment from the fore bay, micro-pool and the bottom of the basin.

An Operation and Maintenance Log follows.

Operation & Maintenance Log

The Gardens at North Carefree
OPERATION AND MAINTENANCE LOG

(Record inspections, items found maintenance and corrective actions taken. Also record any training received by Contractor personnel with regard to erosion control, materials handling and any inspections by outside agencies)

DATE	ITEM	SIGNATURE OF PERSON MAKING ENTRY