MAINTENANCE REQUIREMENTS

- Embankments should be inspected at least annually by a qualified professional for settlement, erosion, seepage, animal burrows, woody vegetation, and other conditions that could degrade the embankment and reduce its stability for impounding water. Immediate corrective action should be implemented if any such conditions are found.

- Inlet and outlet pipes, inlet and outlet structures, energy dissipation structures or practices, and other structural appurtenances should be inspected at least annually by a qualified professional, and corrective action implemented (e.g., maintenance, repairs, or replacement) as indicated by such inspection;

- Trash and debris should be removed from the basin and any inlet or outlet structures whenever observed by inspection;

- Accumulated sediment should be removed when it significantly affects basin capacity.

DESIGN REFERENCES

- See Table 4-12

DESIGN CRITERIA

Design Parameter	Criteria
Side Slopes	2:1 or flatter (2.5:1 or flatter recommended, see Note 1)
Minimum Crest Width	4 feet (6 feet recommended, see Note 2)
Design Discharge	50-year, 24-hour storm without overtopping embankment crest, 1' of free-board required.
Emergency Spillway	Required for basins that impound water above existing ground elevation, see Note 3.

Notes:
1. Env-Wr 403.02 requires embankment slopes of dams subject to jurisdiction to be no steeper than 2.5 horizontal to 1 vertical unless a specific design for a steeper slope shows that the embankment is stable and capable of being safely maintained.
2. Env-Wr 403.02 requires embankment crests of dams subject to jurisdiction to be at least 6 feet in width.
3. Emergency spillways must be provided to protect against embankment failure when the primary outlet fails to function. Generally, emergency spillways should be constructed in existing ground, not in the embankment section. Freeboard from top of embankment to the design water surface in the spillway should meet the requirements of Env-Wr 403.02. If no freeboard is specified, use a minimum of one foot.