

5.01 DAM REPLACEMENT RECOMMENDATIONS

This section summarizes recommendations for repair or replacement of the Lake Wingra Dam.

1. The existing metal plate located on the downstream face of the existing dam is considered a source of injury to migrating fish. Survey results indicate that the upstream face of the dam, not the metal plate, controls Lake Wingra elevations. Therefore, pending approval by DNR, this plate could be removed within a short time frame. We recommend the city submit a formal request for removal of the plate to Sue Josheff at DNR.
2. The boat locks are no longer necessary. We recommend the City formally petition the DNR to allow removal of the locks as part of dam replacement or repairs. To accommodate canoeists and kayakers, we recommend incorporation of paddling access areas upstream and downstream from the dam.
3. There is a desire on the part of Lake Wingra managers to allow periodic reductions in Lake levels to facilitate shoreline projects and wetland enhancement. We recommend that any dam replacement or repairs include installation of a drawdown structure, including stop logs, to provide improved lake level controls.
4. The south abutment area of the dam is overgrown with woody vegetation. At least a portion of this area should be cleared and reconstructed as a stable embankment. The City and UW-Arboretum should more clearly identify lines of ownership in this area and negotiate future access and maintenance rights and responsibilities.
5. We recommend the City proceed with full dam replacement, rather than repairs. While it is likely that the dam could be brought into compliance with DNR requirements with relatively minimal repairs, the cost of associated work needed to facilitate these repairs is relatively high. With consideration of these costs, we believe the additional cost of full dam replacement is warranted with consideration of the enhanced aesthetic, structural, hydraulic, and environmental benefits.

Either of the two dam replacement alternatives would be acceptable replacement structures. Based on the preliminary Opinion of Probable Costs, Alternative 1 may be slightly less expensive to construct.

6. This report has addressed the hydraulic and structural aspects of the dam site and has not focused on the recreational aspects. As this site is a popular gathering spot, we recommend consulting with a planner to develop a recreational and landscape plan for the shoreline area adjacent to the dam.