



STORMWATER PROJECT SUMMARY SHEET

Project: <u>Lake Cook</u>	Address: <u>4001 Eisenhower Avenue</u>
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BACKGROUND INFORMATION

Lake Cook was originally constructed in the 1970's as a fishing pond and is still a popular urban fishing location due to the Northern Virginia Regional Park Authority stocking the pond with trout annually. The pond receives inflow from both Cameron Run and Strawberry Run and is estimated to have a drainage area of 390 acres. The City completed a feasibility study in the fall of 2013 which investigated potential retrofit opportunities at various City locations. Lake Cook was identified as an excellent opportunity to provide significant stormwater pollution reductions that will also have the potential to improve existing amenities.

- OPPORTUNITIES / BENEFITS**
- The pond can be dredged to provide sufficient capacity to treat the entire 390 acres directed to it.
 - There is room for a sediment forebay at the confluence of Strawberry Run.
 - Additional water treatment features such as aquatic benches and/or floating wetlands can be added
 - The project seeks to provide improvements to existing amenities including;
 - Upgrading the existing fishing pier
 - Improving the trail system and shoreline access
 - Providing new landscaping conducive to riparian birds and animals
 - Adding educational and ecological information around trail
- OTHER CONSIDERATIONS**
- Large drainage area of 390 acres (127 ac impervious) directed to the pond.
 - Regulated area ≈314 ac (112 ac impervious)
 - Pond is stocked with trout by NVRPA
 - Limited open space surrounding the lake
 - Train tracks on the north side of the pond limit trail connectivity
- IMPACTS**
- Temporary construction related activities
 - Increased maintenance requirements over existing

- DESIGN CONCEPT**
- ≈391 ac (127 ac impervious) drainage area
 - Regulated area ≈314 ac (112 ac impervious)
 - ≈0.40 ac sediment forebay proposed
 - Standard aquatic benches (min. 4' wide x 1' deep)
 - Incorporate upflow filter at outlet
 - Provide targeted landscaping to discourage geese from entering pond
 - Enhance park amenities and aesthetics

PROJECT COST INFORMATION (Percent of Total Pollutant Removal Target)

Estimated Cost	Pollutant Reduction [lbs/yr]			Equivalent Acres Treated	
Design & Construction	TN	TP	TSS	Ac Treated	Cost per Equiv. ac
≈\$2.4M	1,000 (13%)	110 (11%)	86,000 (10%)	≈120	≈\$20k

Figure 1: Lake Cook Concept



Figure 2: Lake Cook Drainage Area

