

Grover's Mill Pond Restoration Project Monitoring Plan

The goal of the Grover's Mill Pond Restoration Project is to restore fisheries habitat in a degraded freshwater pond. This goal will be accomplished by removing nutrient-rich sediment from the existing pond bottom. Removal of this nutrient-rich sediment and organic matter will provide additional habitat area, reduce subsequent aquatic plant growth, and increase the availability of oxygen in the lower water column.

Monitoring is necessary in this project to determine if limited dredging has a marked positive effect on fish habitat (as opposed to more extensive dredging or the addition of an aerator unit). The dredging was limited by the cost limit of CAP projects. If our monitoring shows only slight improvement, then we can recommend that future projects are carried out under a GI authority. We can also suggest the sponsor consider installing a solar-powered aeration unit on their own.

Historical water quality data from the pond was available from a 1969 New Jersey State Fisheries Division memo (June 1952 and July 1969) and a 1978 Allied Biological Control Corporation report (September 1977, October 1977, and August 1978).

Baseline water quality data was collected during the summer of 2006 (August) and will be collected in 2007 prior to construction. Samples were analyzed for chemical (nutrients), physical (temperature, depth, oxygen), and biological (bacteria and chlorophyll) parameters typically used to assess the health and habitability of lacustrine environments.

This sampling regimen will be repeated three times a year ((April-May (pre-stratification), July-August (stratified) and September-October (post stratification)) for five years following the completion of construction.

The anticipated monitoring cost is:

\$ 700.00 In-house labor for sampling, data entry, and reporting
\$ 700.00 Data analysis contract and supplies
\$ 100.00 Local travel

$\$1,500.00 \times 3 \text{ per year} = \$4,500 \times 5 \text{ years} + \$500 \text{ reporting} = \$23,000$