

City and Borough of Sitka "Swan Lake Recovery"



FY02 Grant Amount: \$39,750

Match Amount: \$26,500



Description and Purpose: This project continues the restoration of Swan Lake, a waterbody identified as having long-term pollution problems. In 1999, with the help of a DEC Water Quality Grant, the City of Sitka began cleaning up the pollution that has plagued Swan Lake for many years, causing it to be listed on DEC's impaired waterbody list. The City cleaned up debris in the lake and developed a plan to deal with the other pollution sources and to control advancing eutrophication. In 2000, the project built on the previous year's success by deepening the lake outlet for better flow, cleaning storm-drains, and

developing and sharing brochures for ways citizens and businesses can help restore the lake. Various methods of controlling aquatic vegetation that is choking the lake were tested, and a volunteer monitoring program was initiated. This year the City of Sitka will continue to implement the Swan Lake Watershed Recovery Strategy (TMDL) to control lake eutrophication. The work includes sediment, nutrient, and stormwater controls; aquatic plant harvest; lake dredging and monitoring to determine the effectiveness of previous year's efforts. Through these continued actions and effectiveness monitoring, this project supports the State's Recovery of Polluted Waters.

Evaluation of Environmental Benefit: Success of the lake rehabilitation tasks conducted in FY2002 will be measured in the following ways: 1) effectiveness of measures to reduce trash will be documented through an inventory of solid waste and debris (including total weight) removed from the lake and tributaries during the spring 2002 cleanup; 2) reduction of lily pad population density and biomass in high use recreational areas will be documented photographically; 3) effectiveness of dredging the entrance channel at the mouth of Wrinklneck Creek will be evaluated by visually confirming that flow is not restricted during fall rain events; 4) effectiveness of culvert upgrades and lake entrance channel dredging will be assessed through documenting a reduction in flooding on the back streets; 5) improvements in water quality will be assessed using water quality data collected by students and CBS; 6) effectiveness of public outreach regarding BMP implementation will be assessed through rates of municipal and residents compliance with the BMP manual for improving and protecting lake health and vegetative buffers; 7) reductions in sediment, nutrient and organic inputs to the lake through the stormwater system, tributaries and road runoff will be assessed through the monitoring program.

Deliverables for the Project Include:

- A ["State of the Lake"](#) report on what rehabilitation efforts worked/didn't work.
- Verification that the Wrinklneck Creek entrance



channel has been effectively deepened and stabilized, including survey results and “before and after” photographs of the dredging activity.

- A [Stormwater Control Strategy](#) for Swan Lake.
- Photographic verification of the extent and location of aquatic plant removal (lily pad and pondweed).
- Citizen and CBS monitoring data results in both hard copy and digital format suitable for entry into the DEC and STORET databases.
- Verification that storm drains and sumps are cleaned of sediments on at least an annual basis.
- PSAs and news releases on the Swan Lake spring (2002) clean-up.

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