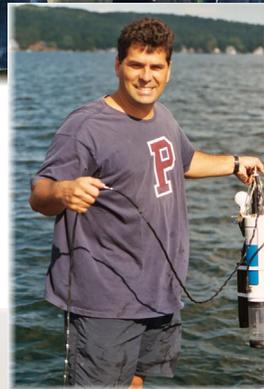


Agricultural Best Management Practices for Conesus Lake



SUNY Brockport ♦ SUNY Geneseo
Rochester Institute of Technology ♦ Cornell Cooperative Extension
Livingston County Soil & Water District ♦ Livingston County Planning Department Livingston
County Farm Service Agency

Agricultural Best Management Practices for Conesus Lake

Agriculture is a major use of land in the Conesus Lake Watershed. This watershed covers nearly 70 square miles (45,000 acres) as part of the Genesee Basin Watershed. Approximately 42 percent of the direct drainage in the watershed is in agricultural use. This makes farming important to the water quality of Conesus Lake. Farming also contributes to the natural beauty and rural character of the watershed.

Local agricultural agencies, with participation of local farmers, founded the “Conesus Lake Watershed Group” (CLWG) to focus attention on watershed issues important to farmers. They coordinate and foster collaboration among academic researchers, governing bodies, and the agricultural community.

This project is an important step in the implementation of the Conesus Lake Watershed Plan. It is a mechanism for the farming community to be proactive in watershed issues through education, implementation of Best Management Practices (BMPs) and by its traditional stewardship of the land being farmed.

The goal of the project is to demonstrate, through the experimental watershed approach, that implementation of BMPs in agriculturally dominated watersheds will preserve soil and reduce nutrient loss from sub-watersheds. A second goal is to evaluate the impact of implemented BMPs by measuring the impacts on the downstream lake community at the sub-watershed scale.

Nutrient Management Planning –



keep nutrients on farm



Soil testing – inventory of what’s available in the soil. Do one-third of acreage each year.



Manure analyses - know nutrient content and calculate quantity of nutrients produced and record applications.



Credit nutrients from manure and crop residues.



Calibrate fertilizer and manure spreaders annually.



Use fertilizer applications to meet crop needs after crediting manure and recycled crop nutrients.

In this project, 1800 acres have been impacted by this practice.



Use minimum tillage, strip crops, contour tillage and/or terracing to reduce runoff and keep soil loss below NRCS acceptable levels.



Protect areas of concentrated water flow and hydrologically sensitive areas (wetlands).



Consider subsurface drainage (tiling) to drain away excess water and improve infiltration.



Install Water and Sediment Control Basins (WASCOBs) to minimize surface flow of runoff.



Plant cover crops whenever possible.



Use crop rotations that meet NRCS standards for maximum soil loss.

Over 1800 acres have one or more of these practices in place or planned.

Erosion Control –



keep soil on farm

Water Management –



keep clean water clean; manage
dirty water

- 💧 Separate clean water from contaminated water, using roof gutters and barnyard curbs.
- 💧 Treat silage leachate plus dirty water from barnyards and milking centers so discharge meets NRCS standards using grass filter strips or storage.
- 💧 Fence cattle out of streams and provide alternative watering systems.

These practices are installed or planned where needed on cooperating farms.

Feed Management –



maximize quality, minimize waste



Balance rations to optimize production and minimize nutrients in manure.



Test forage quality on a regular basis.



Consider rotational grazing to optimize production and maintain ground cover.

Rotational grazing was established on 50 acres of pasture. Forage is regularly tested and rations balanced on cooperating dairy farms.

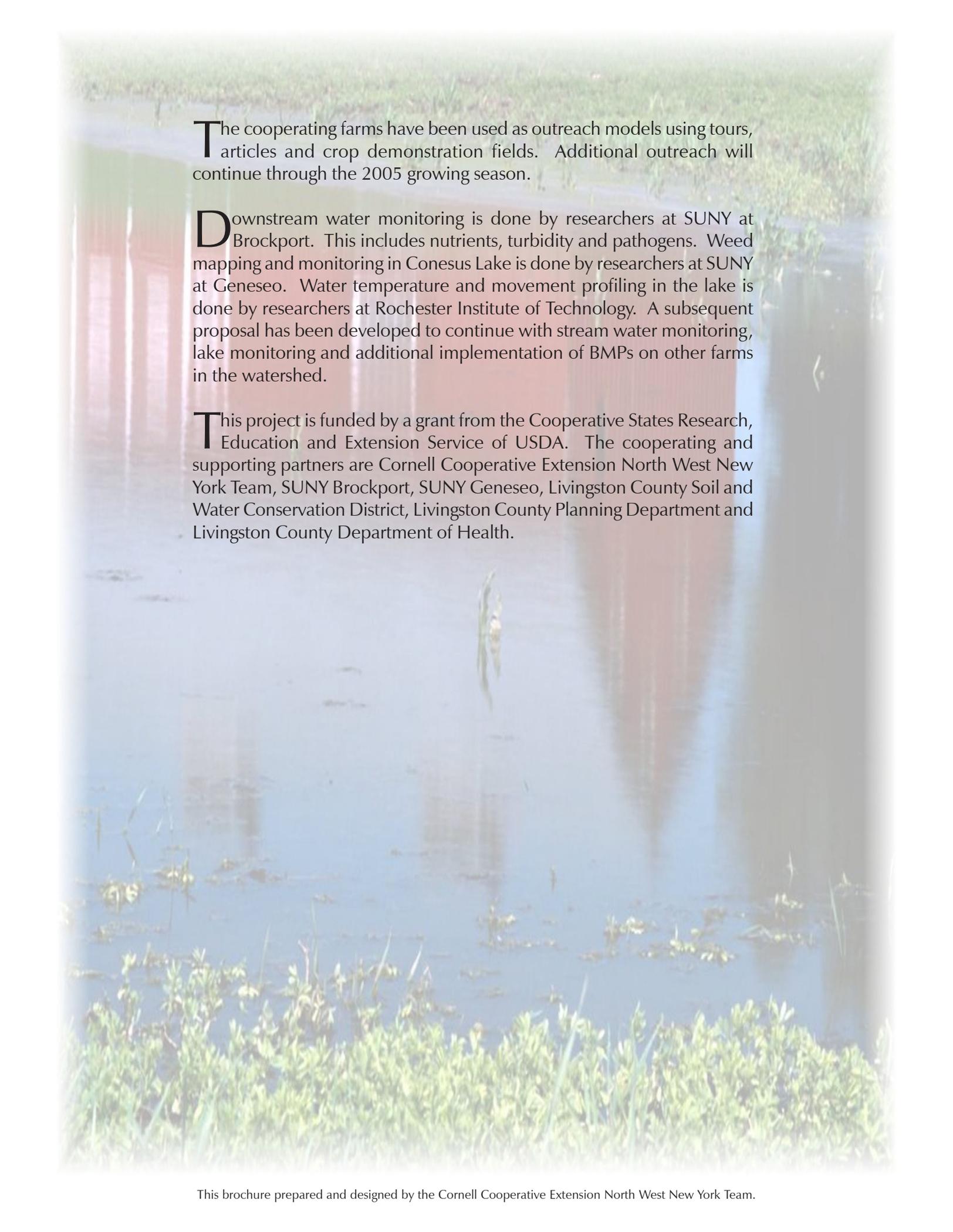
Record Keeping –



documentation for compliance

- 🖋️ Develop field maps, drainage maps, building layout maps.
- 🖋️ Record crop history and future crop rotations.
- 🖋️ Record manure, fertilizer and chemical applications by field, rate and date.
- 🖋️ Emergency action plan – deal with spills or runoff.
- 🖋️ Develop written goals for the next five years.

These BMPs are being used on the three farms in this project.



The cooperating farms have been used as outreach models using tours, articles and crop demonstration fields. Additional outreach will continue through the 2005 growing season.

Downstream water monitoring is done by researchers at SUNY at Brockport. This includes nutrients, turbidity and pathogens. Weed mapping and monitoring in Conesus Lake is done by researchers at SUNY at Geneseo. Water temperature and movement profiling in the lake is done by researchers at Rochester Institute of Technology. A subsequent proposal has been developed to continue with stream water monitoring, lake monitoring and additional implementation of BMPs on other farms in the watershed.

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