

PRIORITY AREA ASSESSMENT REPORT

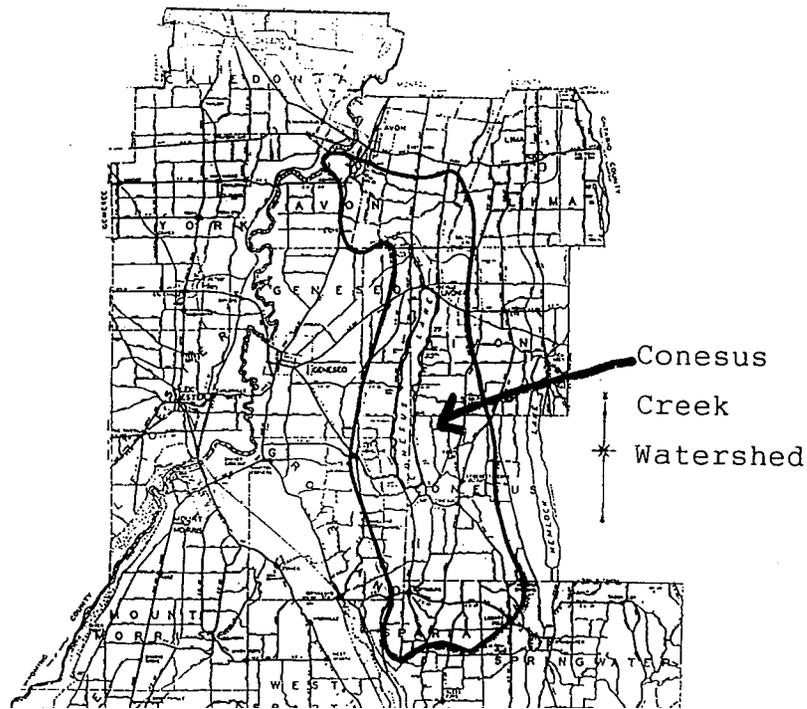
CONESUS CREEK

HUA 4130003.020

LIVINGSTON COUNTY
NEW YORK

APRIL 1, 1997

RANK # 3



The Local Work Group in Livingston County reviewed the County Resource Assessment and selected the Conesus Creek Watershed as the # 3 priority area. The 1992 Livingston County Water Quality Management Strategy listed Conesus Lake as the highest priority watershed because of water quality problems that are threatening the lake's use as a drinking water source and for swimming, boating and fishing. The Lake is also mentioned as a problem on the 1996 DEC Priority Waterbodies List. In ranking this watershed # 3, the Local Work Group considered past work already done in the area. The Farm Services Agency was approved for an ACP Water Quality Special Project in both 1994 and 1995 to treat non-point source problems related to agriculture. Many of the most severe problems have already been treated with best management practices or are under current LTA's. It is the consensus of the Local Work Group that while there are still some serious non-point source problems related to agriculture, many of the remaining problems are not due to farming operations in the area.

The Priority Area Assessment Report that follows includes:

- Natural Resource Concerns
- Goals, Objectives and Expected Outcomes
- Existing Assistance Resources Available
- Technical, Educational and Financial Assistance Needs
- List of Practices and Cost-share Rates

Natural Resource Concerns

A. Soil

There is a wide variation in the soils of the Conesus Creek Watershed. Conesus Lake is located in about the middle of the watershed. Agriculture is concentrated north of the lake and on the gently to moderately sloping areas along the top of the watershed on the east and west sides of the lake. The area between these gently sloping areas slope sharply down to the lake and are mainly forested, although a lot of new homes are being built in the area. The soils north of the lake are dominated by deep, well to moderately well drained Honeoye, Ontario, and Lima loams and silt loams. There is also a rather extensive muck area north of the lake at South Lima. The west side above the lake is mostly deep, moderately well drained Lansing and Conesus silt loams. On the east side of the lake the area is dominated by deep, well drained Ontario loams. The area immediately south of the lake contains very poorly drained hydric soils. Above the wetland area are very steep Lansing and Lordstown soils and somewhat poorly drained Erie soils. There is little active agriculture in this area.

Sheet and rill erosion and gully erosion are a problem on all of the active agricultural areas in this priority area. The steeply sloping areas between the farms and the lake lend themselves to rapid delivery of sediment to the lake. Water management practices such as diversions and sod waterways are an essential part of any conservation system. Strip cropping is also used extensively in the area, often in conjunction with diversions. The very steep areas leading into the lake contain many streams and gullies that have severe bank erosion problems. These are the source of much of the sediment delivered to the lake. There are 25,671 acres of cropland in the watershed (45%).

Because of the very productive soils east, west and north of the lake, agriculture is still quite strong in this priority area. Urban development pressure on the east side of the lake and north of the lake has started to have a negative effect on farming. The opening of Interstate 390 has made the area attractive for small business and new home development. There are serious water quality problems in Conesus Lake, and many homeowners around the lake blame agriculture for the problems. This has led to numerous complaints and conflicts between farmers and non-farmers. It is only a matter of time until watershed regulations are implemented that will impose regulations on agriculture. In spite of the problem, farming

B. Water

Conesus Lake is a multiple use water body that impacts a large portion of the population of Livingston County. Over 17,000 residents use the lake as a water source. These include the Villages of Geneseo, Avon, and Lakeville, and many residents in the Towns of York, Avon, and Geneseo as well as around the perimeter of the lake. Residents of the Village of Livonia and Town of Livonia who are within the watershed get their water from Hemlock Lake. Residents of Scottsburg get their water from an underground aquifer which has been contaminated by a leaking underground gasoline storage tank. Most of the rest of the residents in the watershed get their water from private wells. Water quality in the lake has been declining recently due to nutrients and sediment entering the lake. Weed growth has interfered with recreational use in recent years. The Livingston County SWCD operated a weed harvester for several years, but has discontinued the program because of funding problems and questionable results. The Livingston County Water and Sewer Authority has looked at purchasing water from the City of Rochester's Hemlock Lake reservoir to replace some of the water supplied by Conesus Lake. The 1996 DEC Priority Waterbodies List and 1992 Livingston County Water Quality Management Strategy list failing septic systems, heavy use of fertilizers and pesticides by homeowners, run-off from agriculture and construction sites, and stream bank erosion as serious water quality problems in this priority area. An NRCS study of the watershed stated that " Due to the location of agricultural enterprises, primarily along the top of the watershed on the east and west sides of the lake, the steeply sloping areas between the farms and the lake lend themselves to rapid delivery of any nutrients during snow melt and high intensity rainfall".

C. Air

Air quality is generally good in the area. There have been a few complaints of odors from manure spreading operations on farms in this area and in the Middle Genesee and Canaseraga Creek watershed west of the lake.

D. Plants

There are 15 dairies and 8 livestock farms in this watershed. Most use pasture to some extent, but there are no intensive rotational grazing systems in use. There are 1155 acres of pasture in the priority area, but most is either over-grazed or under utilized. There is an

There are 19,263 acres of forest land in this watershed (34%). Most is located southeast and south of Conesus Lake. Forest management and tree planting practices should be encouraged to protect the watershed and improve water quality.

Riparian areas have been reduced in the priority area, but not as much as in other areas of the county. An increase in riparian areas could improve water quality in Conesus Lake, Conesus Creek, Little Conesus Creek, and South McMillan Creek and the other tributaries in the Watershed.

There are extensive state owned wetlands at the south end of the lake that offer hunting, fishing, and other recreational activities and serve as a filter for pollutants entering the lake. This 1000 + acre area is a valuable natural resource. There is another valuable DEC regulated wetland on South McMillan Creek southeast of the lake. Many smaller wetlands on farms have been drained for crop production years ago. As land goes out of farming, there may be some opportunity to restore wetlands, especially on the east side of the lake.

There are no known threatened or endangered plants in this priority area that the Local Work Group is aware of. (DEC may supply list later).

E. Animals

The Conesus Creek Watershed has about 2000 milk cows on 15 dairies. Numbers of cows range from 30 to 300 with average size of about 125 animals. Only one farm presently has a manure storage structure. Barnyard run-off, milking center wastes, leachate from bunk silos, and manure run-off are problems in the watershed. Any non-point source pollution problems associated with animals on the hills around the lake quickly reaches the water of the lake because of the topography.

The area has a large population of turkeys and deer, especially in the southern half of the watershed. Pheasants used to be abundant in the northern portion of the area, but numbers have declined dramatically in the last 20 years, partly because of loss of habitat. A number of waterfowl use the lake and wetlands south of the lake. Other important wildlife species include fox, coyote, gray squirrel, muskrat, raccoon, cottontail rabbit, skunk and opossum. The lake provides excellent fishing in the summer, as well as ice fishing in the winter. Important fish species include Perch, Bass, Walleye Pike, Northern Pike, Bullhead and Sunfish.

F. Human

Agriculture is still a very important part of the economy in this priority area, but faces an uncertain future east and north of the lake. At least four medium sized companies provide employment in the Lakeville and Livonia area. A successful locally owned railroad offers excellent opportunities to market agricultural products and to serve new and existing businesses. Because of the proximity of Interstate 390, many people in the area commute to jobs in Monroe County.

The entire perimeter of Conesus Lake is lined with closely packed houses and cottages. Many of these are summer homes for persons living outside of the county. A growing number are year-round homes. A public boat launch offers access to the lake for many people who do not live on the lake.

Haphazard development in some towns around the lake has seriously threatened agriculture as a way of life. Many acres of prime farmland have already been lost. Land values and farmer-neighbor conflicts have made it difficult to continue farming. In other areas, development has occurred on steep areas subject to erosion, or on wet soils or soils with poor percolation. The Livingston County Soil and Water District has received water quality grants which it is using to complete a detailed modern soil survey of the watershed. When completed, the soil survey will be a valuable tool in preserving prime farmland and planning for orderly development.

The area around Conesus Lake is rich in cultural resources. An important Indian village was located in Conesus.

Goals, Objectives and Expected Outcomes

A. Impacts on Natural Resources

The expected impacts on natural resources in the Canaseraga Creek priority area are as follows:

1. Manure storage facilities on 3 additional farms.
2. Waste management, nutrient management and waste utilization plans on 75% of dairy and livestock operations.
3. Nutrient management and pest management plans on 50% of the cash crop farms.
4. A 50 percent increase in the use of conservation tillage systems, such as zone till and mulch till.
5. Two intensive rotational grazing systems installed.
6. A 10% increase in riparian areas.
7. Practices to control barnyard run-off, milking center wastes, and leachate from bunk silos installed on 90% of the farms needing them.
8. Forest management practices on 200 acres of forest land.
9. Water management and sheet and rill erosion control practices installed that will result in a 40% reduction in off-field sediment delivery.
10. Twenty-five acres of wetland restoration.
11. Practices to benefit upland wildlife installed on 50 acres
12. Tree planting on 50 acres.

B. Number and Length of Contracts

There are 48 farms in the Conesus Creek Watershed. Because of past work done in the watershed through ACP Special Water Quality Projects and other programs, it is thought that only about 30% or about 15 farms will need to have work done. Most of the contracts will average 5 years in length, but some will need to be up to 10 years.

The average contract will be about \$25,000. The goal will be as follows:

1997 - 3 contracts

1998 - 4 contracts

The following is a list of 46 conservation practices that will be offered, along with life spans and cost-share rates. It is anticipated that the most frequently requested practices will be 194, 362, 561, 393, 590, 595, 329, 558, 620, 359, 633, and 638.

CONSERVATION PRACTICE LIST
EQIP ELIGIBLE - LIVINGSTON COUNTY

TYPE*	PRACTICE NAME & UNITS	CODE	PAYMENT TYPE	LIFESPAN YRS.	COST-SHARE RATE %	INCENTIVE PAYMENT** (dollars/unit)
s	Access Road (Ft)	560	C/S	10	0.75	
s	Agricultural Waste Transfer (no.)	190	C/S	10	0.75	
s	Animal Trails and Walkways (ft.)	575	C/S	10	0.75	
s	Barnyard Water Management (ac.)	194	C/S	10	0.75	
s	Clearing & Snagging (ft.)	326	C/S	10	0.75	
lm	Conservation Crop Rotation (ac.)	328	Incen	3		5/ac
lm	Contour Farming (ac.)	330	Incen	3		12/ac
v	Cover & Green Manure Crop (ac)	340	C/S	1	0.75	
v	Critical Area Planting (ac.)	342	C/S	5	0.75	
s	Diversion (ft.)	362	C/S	10	0.75	
s	Fence (ft.)	382	C/S	10	0.75	
v	Filter Strip (ac.)	393	C/S	3	0.75	
v	Forest Site Preparation (ac.)	490	C/S	5	0.75	
lm	Forest Stand Improvement (ac.)	666	Incen	3		12/ac
s	Grassed Waterway (ac.)	412	C/S	10	0.75	
s	Heavy Use Area Protection (ac)	561	C/S	10	0.75	
s	Lined Waterway or Outlet (ft.)	468	C/S	10	0.75	
s	Manure Field Piles (no.)	193	C/S	10	0.75	
lm	Nutrient Management (ac)	590	Incen	1		10 Or 20/ac
s	Obstruction Removal (ac)	500	C/S	10	0.75	
v	Pasture & Hayland Planting (ac)	512	C/S	3	0.75	
lm	Pest Management (ac)	595	Incen	1		10 or 20/ac
s	Pipeline (ft)	516	C/S	10	0.75	
lm	Prescribed Grazing (ac)	528A	Incen	3		7/ac
lm	Record Keeping (ac)	991	Incen	1		0.25ac
lm	Residue Management, Mulch Till (ac)	329B	Incen	1		12/ac
lm	Residue Mgt., No-till & Strip Till (ac)	329A	Incen	1		12/ac
s	Roof Runnoff Management (no.)	558	C/S	10	0.75	
s	Spring Development (no.)	574	C/S	10	0.75	
s	Streambank & Shoreline Protection (ft.)	580	C/S	10	0.75	
lm	Stripcropping-Contour (ac.)	585	Incen	3		12/ac
lm	Srtipcropping-Field (ac)	586	Incen	3		10/ac
s	Subsurface Drain (ft.)	606	C/S	10	0.75	
s	Terrace (ft)	600	C/S	10	0.75	
v	Tree/Shrub Establishment (ac.)	612	C/S	5	0.75	
s	Trough or Tank (no.)	614	C/S	10	0.75	
s	Underground Outlet (ft.)	620	C/S	10	0.75	
sys	Waste Management System (no.)	312	none			
s	Waste Storage Facility (no.)	313	C/S	10	0.75	
s	Waste Treatment Lagoon (no.)	359	C/S	10	0.75	
lm	Waste Utilization (ac)	633	Incen	1		10 or 20/ac
s	Water & Sediment Control Basin (no.)	638	C/S	10		
s	Wetland Development or Restoration (ac.)	657	C/S	10	0.75	
lm	Wildlife Wetland Habitat Mgt. (ac.)	644	Incen	3		5/ac
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The following are some of the major resource concerns in the Conesus Creek Watershed and the percent that will be treated by management and structural practices.

Concern	% Structural	% Management
Sheet and rill erosion	25	75
Gully erosion	90	10
Barnyard run-off	90	10
Manure run-off	50	50
Under utilization of grasslands	25	75
Forest land in need of management	10	90
Run-off of fertilizer and pesticides	25	75
Nutrient and pesticide leaching		100
Bunk silo leachate	75	25
Loss of Riparian Areas		100
Loss of Wetland & Wildlife Habitat	50	50
Tree Planting		100

E. Impact on Ability to Meet State and Federal Environmental Laws

The implementation of the planned conservation practices will allow farmers requesting assistance in the priority area to meet all local, state or federal environmental laws. There will be more regulation in the future that will impact farms in the area, as watershed regulations are implemented.

Existing Assistance Resources Available

A. Local Producers

Producers in this priority area have been willing to participate in government cost-share programs in the past. Most farmers are well aware of the water quality concerns of Conesus Lake water users, and of how their actions may impact water quality. With

In addition to the expected EQIP funds, other existing conservation programs that will help accomplish the goals and objectives in this priority area include the Conservation Reserve Program (CRP), Forest Incentives Program (FIP), Wetland Reserve Program (WRP), and Wildlife Habitat Incentives Program (WHIP). Nearly 100% of the farmers in the area participate in USDA programs and have implemented conservation compliance plans to help control sheet and rill erosion. This has not solved all of the problems, and has not addressed gully erosion and water quality problems associated with animal agriculture and run-off and leaching of nutrients and pesticides. The Livingston County Soil and Water Conservation District has also received money the last two years for upland watershed treatment from New York State Water Quality funds.

There are a number of agencies and persons in the private sector that will have roles in accomplishing the goals and objectives. The Natural Resources Conservation Services (NRCS) can provide planning and engineering assistance, but staffing levels have been reduced in recent years to a point where it will be difficult to get the job done. The Livingston County Soil and Water Conservation District (SWCD) can provide technical and clerical assistance and assist in taking cost-share applications. They can also assist in the education effort. The Farm Service Agency (FSA) can provide administrative and education support, as well as take cost-share applications. The Cooperative Extension Service (CES) can assist in the education effort and assist producers who wish to implement ICM practices. The US Fish and Wildlife Service (FWS) can assist in planning wetland restoration projects. The NYS Department of Environmental Conservation (DEC) can assist in planning wildlife and forest management practices. They can also refer non-point source complaints to NRCS and the SWCD. The local Farm Bureau can assist by informing its members in the priority area of the programs available. Local government agencies such as the Planning and Health Departments also have a role in informing landowners of assistance available. The private sector can also provide valuable assistance. There are a number of certified crop advisors already working in the area that can help prepare waste utilization, nutrient management, and pest management plans. There are local contractors and engineers that can design and install conservation practices to NRCS specifications. The Conesus Lake Association can help in the information effort.

Soil Conservation Technician to accomplish the goals in this priority area, along with the other two top priority areas. The present staff consists of a District Conservationist. There are the services of a Civil Engineering Technician available, but they are shared with six other counties. The SWCD needs one additional staff year of technical assistance. Present staff consists of a District Manager and one part-time clerk. The District Manager can spend up to 30% of his time on technical assistance. The CES presently has an Agricultural Agent in the county, plus regional crop and livestock specialists that are available. The FSA presently has several program assistants, the County Committee, and the County Executive Director. There may be some disruption of services due to anticipated FSA office consolidations. The DEC has a wildlife biologist, forester, and water quality specialist available to assist.

Technical, Educational and Financial Assistance Needs

A. Technical Assistance Funds Needed by NRCS Staff

1997	1998	1999	2000	2001
\$15,000	\$20,000	\$20,000	\$25,000	\$25,000

B. Educational Assistance Funds Needed

1997	1998	1999	2000	2001
\$2,500	\$2,500	\$2,000	\$1,500	\$1,000

It is anticipated that the first several years will need a rather large educational effort to get the word to producers of what the program is trying to accomplish, and to inform them of the sign-up dates and practices offered. This can gradually be reduced in the last several years, as most producers become familiar with the program. We will need mailings, news articles, group meetings, and individual contacts to educate the producers in the area as to the objectives of the program.

C. Financial Assistance Funds Needed

1997	1998	1999	2000	2001
\$ 75,000	\$100,000	\$75,000	\$75,000	\$50,000

D. Training Needed by Non-NRCS Persons

There should not be a lot of training for non-NRCS persons needed. An exception would be for a new SWCD employee. Other agency representatives will need to be informed of the operating procedures, but should be able to pick up the needed information quite quickly. Additional training to contractors in layout and design, as well as contractor check-out procedures will be needed, especially in the first two years. Engineers and crop consultants will also need to be trained in NRCS specifications for ICM, nutrient management, pest management, waste utilization and design of waste storage facilities.

E. Cooperative Agreements Needed with Other Agencies

A cooperative agreement will be definitely needed with the Livingston County SWCD to provide technical, educational, administrative and clerical assistance. Other cooperative agreements that may be needed are with FSA, CES, DEC and the US Fish and Wildlife Service.