PRIORITY AREA ASSESSMENT REPORT

CANASERAGA CREEK

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LIVINGSTON COUNTY
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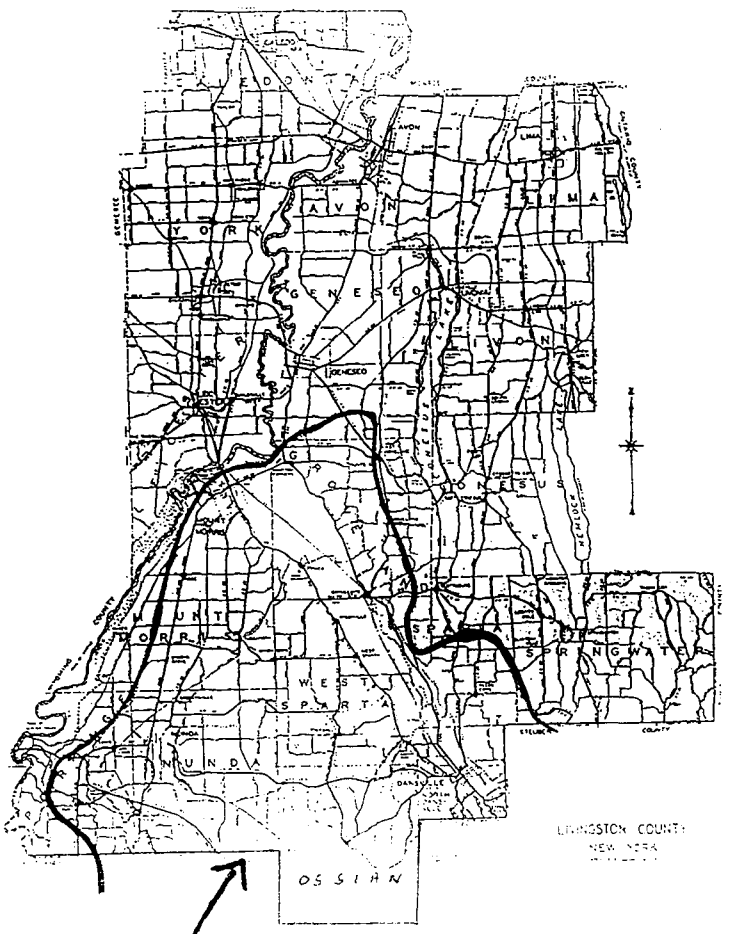

Canaseraga Creek Watershed

The Local Work Group in Livingston County Reviewed the County Resource Assessment and selected the Canaseraga Creek Watershed as the #2 priority area. This watershed was also mentioned in the Livingston County Water Quality Management Strategy, completed August 26, 1992, and appears on the 1996 Priority Waterbodies List by DEC. 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

The soils in the Canaseraga Creek Watershed vary widely as to drainage, texture, and productivity. The Canaseraga Valley itself contains more of a variety of soil types than the Genesee Valley. They range from Teel and Hamlin soils that are nearly level, deep, well to moderately well drained alluvial soils to poorly to very poorly drained Walkill and Wayland soils. There is also a considerable area of Palms-Carisle mucks. There are more poorly and very poorly drained areas than in the Genesee Valley. There are still considerable wetlands in the valley, but many have been converted over the years. There is a productive area of Lansing and Conesus soils above the east side of the valley in Groveland which are deep, moderately well drained silt loams. Also east of the valley in Sparta, is an extensive area of Bath and Valois soils, which are deep, well drained channery silt loams and gravelly loams. West of the valley there is a rather large area of deep, well drained Chenago and Valois gravelly loams in Portage and Chenago, Stockbridge and Valois gravelly loams in Ossian. All of these areas are intensively farmed with a mixture of dairies, cash grains, vegetables and livestock operations. There is a large area of Darien and Ovid soils west of the valley in Mt. Morris and West Sparta that are somewhat poorly drained, medium textured soils. These can also be productive if managed properly. They are best suited to dairy and livestock operations. The rest of the watershed, consisting of large areas of Nunda, West Sparta and Mt. Morris contain poorer soils that have been going out of intensive farming in recent years. These soils include Lordstown, Volusia, Mardin, Niagara and Collamer. Some of these areas would be suited to grassland farming. There is a potential to encourage grass-based beef and small dairy operations in these areas. Most of the soils in this priority area are in low in lime.

Sheet, rill, and gully erosion are all a problem in this watershed. Because of the steep topography, water is quickly concentrated and causes ephemeral and gully erosion. Water management practices are an essential part of any conservation system. Strip cropping is also used extensively in the area, often in conjunction with diversions and waterways. Stream bank erosion is a problem on the Canaseraga, Keshequa and Sugar Creeks, but not to the extent found on the Genesee river. Wind erosion is sometimes a problem in the Canaseraga Valley.

Because of the wide variation in the soils of this priority area, agriculture has tended to concentrate on the better soils It is still very strong in the Canaseraga Valley, in Groveland, and in parts of Sparta, Mt. Morris, Ossian and Portage. On the poorer soils, farms are going out of business or are operated by part-time farmers. There are still about 96 active farms in the area, with a nearly equal number of dairy, cash crop and livestock operations. Cropland makes up 47% of the watershed, although threre is considerable acreage of idle cropland. There is not a lot of concentrated urban development in the watershed. Most of the new homes are single family homes on individual lots, along existing roads. Overall, agriculture is strong in many parts of this priority area and should remain competitive. Most of the areas containing the better soils are enrolled in agricultural districts.

B. Water

There are at least three major streams in the Canaseraga Creek watershed. These are Sugar Creek, Keshequa Creek and the Canaseraga Creek. Sugar Creek is an excellent trout stream, as is a part of Canaseraga Creek and some tributaries of all three main creeks. There are no lakes in the watershed, but there are still considerable wetland areas in the Canaseraga Valley and in Portage.

The Village of Nunda, state prisons in Groveland and part of the Village of Dansville use surface water sources for drinking. Most of the rest of the watershed relies on ground water as a source of drinking water. A lack of adequate ground water affects agriculture and development in parts of West Sparta. There are two dairies in the watershed that milk over 1000 cows, and a number of other rather large dairies. Manure run-off and leaching is a problem in some areas. Run-off and leaching of nutrients and pesticides is a problem in the Canaseraga Valley. The 1996 DEC Priority Waterbodies List and the 1992 Livingston County Water Quality Management Strategy list sediment in streams, loss of riparian vegetation, failing on-site septic systems, chemical spills from industry in Dansville, and a hazardous waste site as serious water quality problems in this priority area.

C. Air

Air quality is generally good in the area. There have been complaints of odors associated with spreading of manure, as more of the 32 dairy farms in the watershed install manure storage facilities. Wind erosion can be a problem in the Canaseraga Valley. Huge clouds of dust have been observed over the valley during extensive tillage operations in dry periods.

D. Plants

There are 32 dairies in the Canaseraga Creek Watershed. Many of these farms utilize pasture to some extent, because the dairies tend to be smaller and there are a lot of soils that are not suited for corn production. There is also a lot of pasture used for sheep, beef cattle, and dairy replacements. There are 7425 acres of pasture land in the area, plus many acres of of idle or abandoned cropland or hayland. There are several intensive rotational grazing systems already in use in the watershed. There is the potential for many more systems to be planned and implemented. At least half of the soils are best suited to grass production. A lot of idle farms could support grass- based beef, sheep and dairy operations.

There are 59,531 acres of forest land in the watershed (39.8%). These include four large areas of state owned land; Sonyea State Forest, Canaseraga State Forest, Ossian State Forest, and Rattlesnake Hill Wildlife Management Area. Most farms also contain extensive patches of woodland. Some of this is rather hard to manage because it is growing on steep hillsides and gullies. There is a good opportunity to improve productivity on private woodlands through improvement practices.

Riparian areas have been reduced over the years, especially on the productive soils in the Canaseraga Valley. In many parts of the valley, land is farmed to the very edge of creeks and drainage ditches. This has contributed to increased siltation, accelerated stream bank erosion, and increased run-off of manure, fertilizer, and pesticides. A priority should be to increase riparian areas in the watershed.

There are 1137.5 acres of DEC regulated wetlands in the priority area. Many of these are in the Canaseraga Valley. Many other extensive wetland areas in the valley have been previously drained. Many smaller wetlands on farms on the uplands were drained in prior years. There is considerable potential to restore wetlands in upland areas, as farms go out of business on the poorer soils. There is less opportunity to restore wetlands in the valley because this area is still intensively farmed.

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

E. Animals

The Canaseraga Creek Watershed has the second highest concentration of dairy cattle in the county. There are 6200 milk cows, plus a similar number of dairy replacements on 32 farms. Average size of dairies is 200 cows, but cow numbers range from 30 to over 1000. It is expected that more of the smaller dairies will go out of business in the future, while the remaining dairies will continue to grow. One of the factors that holds down the size of dairy operations in this priority area is less extensive areas of productive soils, as compared to other areas. The implementation of intensive rotational grazing systems can help the smaller dairies remain competitive, and provide opportunities for new dairies to locate in the area. There are a number of small beef and sheep farms in the watershed. There is an excellent opportunity to promote livestock farming on former dairy and crop farms. Barnyard run-off and milking center wastes are a problem on many dairies, and manure run-off and bunk silo leachate is a problem on the larger dairies.

The area has a large deer herd and turkey population. The Canaseraga Valley used to be a major stop for migrating waterfowl, but this use has declined as wetlands have been drained. Other important wildlife species include pheasant, fox, coyote, gray squirrel, raccoon, cotton-tailed rabbit, and ruffed grouse.

There are no known threatened or endangered animal species in the area.
(DEC may supply list later)

H. Human

Agriculture is a very important part of the economy in this priority area. Ninety-seven active farms provide employment for many persons. There are also a number of agriculture related support businesses. Dansville has a large manufacturing company and several smaller companies. The largest employer in the watershed is the state prison system, with over 1000 employees working at two prisons in Groveland.

Nearly 40% of the county's population live in this priority area. Median family income is probably lower than the county average. The highest percentage of limited resource farmers are located in this watershed.

There are cultural resources throughout the areas, but are especially prevalent around the Canaseraga Valley.

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 40% of the dairy farms (up from 20%)
2. Waste management, nutrient management and waste utilization plans on 50% of dairy farms.
3. Nutrient management and pest management plans on 25% of the other farms.
4. A 50 percent increase in the use of conservation tillage systems, such as zone till and mulch till.
5. Six intensive rotational grazing systems installed.
6. A 5 to 10% increase in riparian areas.
7. Practices to control barnyard run-off, milking center wastes, and leachate from bunk silos installed on 75% 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 25% reduction in off-field sediment delivery.
10. Seventy-five acres of wetland restoration.
11. Practices to benefit upland wildlife installed on 100 acres.

B. Number and Length of Contracts

There are 96 farms in the Canaseraga Creek Watershed. It is anticipated that about 30%, or 30 farms will be under contract over the next five years. 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 - 5 contracts
1998 - 7 contracts
1999 - 8 contracts
2000 - 6 contracts
2001 - 4 contracts

C. List of Conservation Practices

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	
Im	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	
Im	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	
Im	Pest Management (ac)	595	Incen	1		10 or 20/ac
s	Pipeline (ft)	516	C/S	10	0.75	
Im	Prescribed Grazing (ac)	528A	Incen	3		7/ac
Im	Record Keeping (ac)	991	Incen	1		0.25ac
Im	Residue Management,Mulch Till (ac)	329B	Incen	1		12/ac
Im	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	
Im	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	
Im	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	
Im	Wildlife Wetland Habitat Mgt. (ac.)	644	Incen	3		5/ac
Im	Wildlife Upland Habitat Mgt. (ac)	645	Incen	3		5/ac
v	Windbreak/Shelterbreak Establishment(ft)	380	C/S	5	0.75	

* Type codes: lm=land management, s=structural, sys=system, v=vegetative
**Incentive payment represents a value not to exceed 75% of the actual cost

D. Expected Extent of Concerns to be treated by Structural or Management Practices

The following are some of the major resource concerns in the Canaseraga 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

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 dairy farms, especially as cow numbers continue to grow.

Existing Assistance Resources Available

A. Local Producers

Farmers in this priority area have always participated in government cost-share programs at at high rate. The ability of producers to pay their share of the cost varies greatly. There are some excellent managers and others who are struggling to make a living from farming. Most are interested in protecting the resource base, and with adequate incentives they will be willing to participate.

B. Federal, State and Local Partners

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.

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.

It is anticipated the NRCS will need a District Conservationist, Soil Conservationist and 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
$20,000	$20,000	$25,000	$30,000	$30,000

B. Educational Assistance Funds Needed

1997	1998	1999	2000	2001
$4,000	$4,000	$3,000	$2,000	$1,500

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 educated the producers in the area as to the objectives of the program. A larger effort will be needed for education in this priority area because of the higher percentage of limited resource farmers and others who have not participated in the past as much as producers in other areas.

C. Financial Assistance Funds Needed

1997	1998	1999	2000	2001
$ 125,000	$175,000	$200,000	$150,000	$100,000

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.