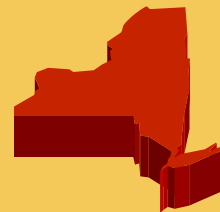


## Warren County Agricultural Environmental Management Program (AEM) Strategic Plan 2009-2012



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## **Introduction**

Over the past three years Warren County has made great strides in being recognized for its unique niche farms. The Adirondack Harvest program, farmers market groups, Cornell Cooperative Extension (CCE), the Greater Adirondack Resource, Conservation and Development Council (RC&D), USDA Natural Resources Conservation Service (NRCS), the New York State Soil and Water Conservation Committee and Warren County Soil and Water Conservation District (SWCD) are just a few of the active partnering agencies and community organizations that have worked to make this possible.

The Agriculture Environmental Management Program (AEM) has grown not only in Warren County but Statewide. The AEM program is also recognized federally as being an important program for voluntary sustainable farming. The following is a revision of the Strategic plan set forth for 2009-2012.

## **Vision**

The vision of the AEM program for Warren County is the sustained high quality of our agricultural lands and natural resources in the County. Included is the health and productivity of our soils, integrity of the lakes and streams and the health of the overstory and understory vegetation with in the County.

## **Mission**

The mission of the AEM program for Warren County is to promote stewardship for increased quality of natural resources as well as production on agricultural land within the County. Through promoting stewardship of our land and water resources through education and outreach and implementing best management strategies for soil and water quality we seek the enhancement of both traditional and non-traditional agricultural in Warren County.

## **Advisory Committee**

In 2005 members of the Warren County Water Quality Coordinating Committee (WC WQCC) and the Warren County SWCD Board of Directors approved the AEM 2005-2010 strategic plan put forth by the Warren County Soil & Water Conservation District on behalf of Warren County. A designated subcommittee acts as the Agricultural Coordinating Committee (ACC) initiated in 2005 for the Agriculture Environmental Management program. This core group of advisory members has grown to include Adirondack Harvest and Farmers markets representatives, the Greater Adirondack Resource Conservation and Development Council, Cornell Cooperative Extension, USDA Natural Resource Conservation Service, Warren County

Planning Department, NYS DEC, the Champlain Watershed Improvement Coalition NY, Warren County SWCD and other interested agencies, organizations and associations many of which are a part of the Warren County Water Quality Coordinating Committee.

### **Historical Prospective and Current Status**

Warren County probably reached its peak in traditional agriculture during the mid to late 1800's and from that point on agriculture continued to decline within the county. However, since the last AEM strategic plan (2005) the number of small farms through out the county has been increasing.

The 2002 Farm Census data for Warren County Agriculture stated that cropland and pasture account for approximately 30% of the agriculture in Warren County. As many as 40+/- of the farms identified are small farm businesses dealing with horses, sheep, beef cattle, goats, chickens, pigs, and exotic animals. There are also various field crops – vegetable, corn, and hay. Not to be excluded are those in greenhouse and nursery production.

Small farms (grossing under \$250,000) comprise about 90% of New York's farms. Particularly those that gross under \$10,000 per year have been fast growing in terms of numbers since the NY Agricultural Statistics Service 2006 report.

Also, due to the current landscape of Warren County, 95% of the land is forested, the major non-traditional agriculture is forestry, but included in that is Christmas tree production and maple syrup production.

New York is a major point of entry for commerce including agricultural products entering and leaving the United States which puts us at greater risk for non-native introduction of species. The management and control of invasive species (plant, insect, disease, and other) can be facilitated by spreading the word locally to farmers. As farmers who work with the land, animals, plants and the insects that feed on them, they can help in early detection and control.

In 2003, Governor Pataki signed legislation that called for an Invasive Species Task Force co-led by two New York State agencies the Department of Agriculture and Markets (DAM) and the Department of Environmental Conservation (DEC) to explore the invasive species issue and to provide recommendations. NYS Agriculture and Markets Law, under Article 14, grants the Commissioner of DAM the authority to prevent, control and eradicate alien insects, noxious weeds and plant diseases at the State level. Through the County's contact with farms through the AEM program we are in a position to assist in this endeavor.

## **Agriculture in Warren County**

Through the AEM program and the Adirondack Harvest program we are showcasing our quality small niche farms, cheese and maple producers, wool and associated products, tree farmers, and other local produce that are specific to our region in the North Country. In more recent history Warren County is not known for a significant number of farms or other large agricultural enterprises. However, the interest in maximizing our area's unique farms and enhancing our local flavor has provided a distinctive market and area attraction.

Over the past three years of the AEM program we have gathered information on farms involved with programs through NRCS, CCE, FSA and the Water Quality/ACC steering committee. Through the AEM program we have the resources to work with our farmers to develop conservation plans for minimizing soil loss and maximizing pasture.

The Adirondack Harvest Program and Farmers Market have been working together on promoting local products in the region. This year the some of the farms in the Northern Hudson Watershed an Agri-Tourism Grant to conduct a tour of area farms followed by a harvest dinner. They had a great turn out of over 70 people for the tour and sold out an Adirondack Harvest dinner at a local venue.

Watershed Associations for Lake George and Lake Champlain are very active in the Champlain basin and are a valued resource for information and means for education. Watershed management plans exist for several of the sub-basins, including Halfway Brook, also in the Southern Lake Champlain Basin and several of the smaller lakes in the Northern Hudson Watershed that also maintain active landowner associations. The Warren County Soil & Water Conservation District also conducted a preliminary assessment on horse trails within the county.

### 1) Tier 1&2

Thirty-Nine farms have participated in the AEM process since 2005.

### Tier 3a and 4

Ten farms have Conservation Plans developed for implementation, several of whom we have provided detailed designs, construction oversight or inspection.

### 2) Agri-Tourism Grant – Grant provided for a farm tour organized on Warren County farms in Northern Hudson Watershed with over 70 participants attending.

3) Agricultural Management Assistance (AMA)

Two cooperating ranches were assessed in Hudson River Watershed and both were funded for BMPs through AMA.

4) Environmental Quality Incentives Program (EQIP)

One farm has been funded to install new paddocks for rotational grazing in a native habitat.

5) Warren County Horse Trail Assessment

Six horse farms were assessed in the Hudson River Watershed, three horse farms in the Schroon River Watershed, and three farms in the Lake Champlain Watershed were assessed in regard to erosion on the horse trails.

6) Conservation Reserve Enhancement Program (CREP)

All Champlain Basin agriculture was included in this program by the Champlain Watershed Improvement Coalition of New York (CWICNY).

7) Wildlife Habitat Incentives Program (WHIP)

One plot of land is maintained for breeding bird habitat.

### **Priority Watersheds**

Most of the farms in Warren County fall into one of the two major watersheds the Southern Lake Champlain and Northern Hudson River. These watershed Planning Units have been prioritized based on their geographic location which encompasses most of Warren County. The majority of the farms in the Southern Lake Champlain Basin for Warren County are located in the Halfway Brook Sub-basin primarily in the Town of Queensbury and for the Northern Hudson River Basin in the Towns of Thurman, Chester and Johnsburg.

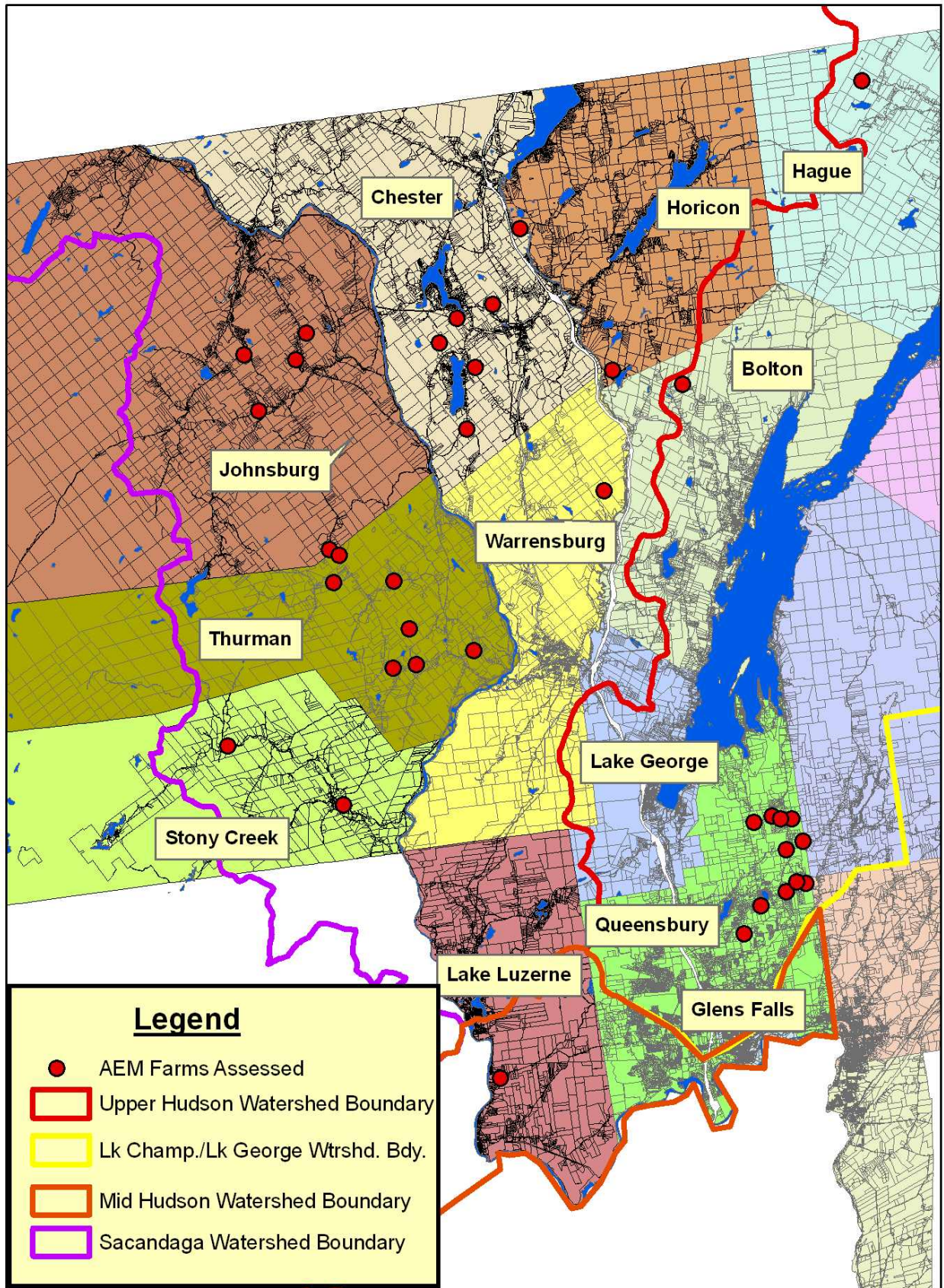
The number of farms located in the Northern Hudson watershed has made this watershed a priority in this strategy. However the PWL listing, public interest and necessity have also played a part in ranking these watersheds.

Planning Units and individual farms have also been ranked in Geographic Information systems (GIS) according to resource concerns identified in the Tier 2 AEM planning process to identify specific issues of concern for each watershed and farm. (See map)

As a result of analyzing our last three years of AEM farm visits and assessments, pasture, soil, manure and stream and floodplain management rank the highest in our Tier 2 priorities. Addressing these priorities with our farmers can help them to increase the amount of pasture and soil productivity through a custom designed rotational grazing plan, timely

manure spreading for maximum uptake of nutrients and, in turn, less nutrient and soil runoff to nearby waterbodies.

# Warren County AEM Priority Watershed Map



0 2 4 8 12 16 Miles

## **Northern Hudson River Watershed**

### ***Water Quality:***

According to the NYS Department of Environmental Conservation PWL the Hudson River is impacted immediately below Warren County. Preemptive measures to ensure water quality in the Hudson River in Warren County are essential to diminish overall impacts to the riparian system as a whole. The Schroom River is a sub-watershed within the upper Hudson River watershed and is a C(T) classified trout stream. According to the NYS DEC PWL, siltation causes precluded fish propagation and stressed survival.

Sources of pollutants are unknown but suspected to be de-icing materials, urban run off, agriculture, silviculture and construction

### ***GOALS / Desired Future Condition:***

Assessing the condition and needs of farms in this watershed will serve to educate farmers on best management strategies to help their farms grow in a sustainable way while mitigating future impacts.

### ***Accomplishments to Date***

Grants and funding for programs such as AMA and EQIP have been implemented for the Northern Hudson Watershed through NRCS programs. WCSWCD continues to work together with NRCS specifically through the development of the AEM program. Watershed Management plans have been developed on sub-basins throughout the Northern Hudson Watershed. Several active landowner associations are involved with the WC WQCC and have been working directly with WCSWCD. Through the AEM program we have conducted an inventory of agricultural concerns from farms that participated in the program, as well as the AEM advisory members and other cooperating members of the WQCC. Most of the farms in the Northern Hudson River Basin for Warren County are located in the Towns of Thurman, Chester and Johnsburg. Nine Conservation plans (Tier 3a) have been developed for farms in this watershed. Many of these plans have been successfully implemented over the last 3 years.

## **Southern Lake Champlain Watershed**

### ***Water Quality:***

The South Lake Champlain drainage basin includes both the Lake George and Halfway Brook sub-basins which are also listed individually on the NYS Department of Environmental Conservation Priority Waterbodies List (PWL). This section of the Champlain Watershed is listed as impacted for a wide variety of uses.

Possible sources of sediment and pollutants come from combined sewer overflow, deicing materials, possible agriculture, stream bank erosion, urban runoff, habitat modification, storm sewers and construction.

### ***GOALS / Desired Future Condition:***

Assessing the condition and needs of farms in this watershed will serve to educate farmers on best management strategies to help their farms grow in a sustainable way while mitigating future impacts.

### ***Accomplishments to Date***

Grants and funding to date for programs such as CREP, detailed in the *Historical Perspective* section, are few for the Southern Lake Champlain Watershed. There are some very active partners such as Watershed Associations for Lake George and Lake Champlain that are a valued resource for information and means for education. These groups are actively engaged with the WCSWCD and are involved through the WC WQCC with the AEM program. Concerns regarding the health of the streams and lakes in the basin have led to a history of cooperation among these watershed partners. Through the AEM program we have conducted an inventory of agricultural concerns from farms that participated in the program, as well as the AEM advisory members and other cooperating members of the WQCC. The majority of farms in the Southern Lake Champlain Basin for Warren County are located in the Halfway Brook Sub-basin primarily in the Town of Queensbury. Conservation plans (Tier 3a) have been developed for farms and implemented.

## **Agricultural Issues and Opportunities**

### **Goals**

The main goals for agriculture in Warren County are the increased and sustainable production of local goods and services in an environmentally friendly fashion.

#### **Economics and Community**

It is important that the community perceives farms as good neighbors and that there is a high level of community support for agriculture in our region in order to ensure the continuation of these local goods and services. It is also important that the community is aware of the environmental benefits of agriculture and its importance to a community.

The community benefits of agriculture range from self reliance on local products, reducing shipping costs and fossil fuel usage to exposure to invasive species from foreign produce. In addition to reducing this reliance on outside products, local agriculture adds an economic viability to the region while adding to the appeal of an area through the open space that agriculture can provide for wildlife and recreational opportunities at a farm.

#### **Environmental Factors**

Protecting environmental resources such as streams, groundwater, fertile farm land, wild forests or bird and animal migration goes hand in hand with protecting aesthetic resources. Improving management of our lands both farmed and urban can reduce potential for nutrient runoff and soil loss to nearby waterbodies. Sustainable farming can add both to the recreational attractions in the area and to community's ability to support its needs such as local products, unpolluted water, air or contaminated soils.

### **Existing Conditions**

#### **Soils and Nutrients**

Soils in both the Southern Champlain and Northern Hudson planning units identified tend to be highly erodible, well-drained, sand and silt. These sediments can aggrade into nearby streams and cause deltas in the lakes. Nutrification, problem / exotic species, salts, metals and pathogens are also listed on the PWL as types of pollutants from potential sources such as agriculture, silviculture, construction and other urban runoff sources.

#### **Other Natural Resource Concerns**

Natural resource concerns for Warren County agriculture stem from overgrazed land, improperly installed skid and access roads, lack of knowledge on the use of rotational graze systems and cover crops and stream side buffers. All of

these can result in excess erosion, decreased crop production, decreased soil productivity and poor pasture. These factors can also contribute to degraded water quality in nearby lakes and streams in Warren County.

### Invasive Species

Another concern is the introduction and control of Invasive species including plant, insect, disease, and other types of non-indigenous species. These pests can live in packaging when items are shipped from one region to another as well as take over in disturbed or highly managed lands. These species are not only problematic to deal with but can be a threat to the ecosystem's balance with native species. Invasives can warrant herbicide, pesticides and biological controls to keep at bay, adding yet another level of concern on disturbed and managed lands.

### Small Farm Concerns

There have been issues locally and throughout NYS, according to the Cornell Small Farms Task Group, obtaining an easily accessible, clear and reasonable set of rules and guidelines and licensing for small farms and markets. This includes small farms maintaining their businesses, looking to expand or diversify, as well as promote their products.

Rising costs of feed has also been identified by farmers due to the increased demand for corn for ethanol production.

## **Resource Recommendations (Objectives)**

Outreach, education, public participation and technical assistance are key points that the AEM Advisory Committee has encouraged in the building of the AEM team capacity.

### Outreach

#### *Existing Efforts through the AEM Program*

As a complete database for farms in Warren County did not previously exist before the start of the AEM program in 2005, one of the efforts of the Warren County SWCD was to locate and contact possible participants to the program. This entailed physically driving around the county to identify possible farms and creating a list of names and addresses.

The AEM Committee has sent out a series of 4 informational request letters by mail to approximately 72 identified farms. Phone calls were made as a follow up effort and the committee has had some success through newspaper coverage of the program and sign award press releases. A total of 54% of the farms we have contacted now participate in the AEM program.

The Committee has created a local brochure for our County AEM program which was mailed and made available at local events such as the Adirondack Waterfest and the Warren County Fair. Additionally, AEM hats were embroidered and purchased and given to our Tier 3a farmers.

### *New Efforts*

The local AEM brochure for our County should be updated on a timely basis to reflect new photos and current information for farmers. Keeping media relations with the local newspaper on current events and accomplishments is also another effective way to communicate the importance of sustainable agriculture within the community.

AEM embroidered gear helps to increase the program's visibility. For two consecutive years Warren County SWCD has won an award for their media efforts, this year's Silver Media award will be used to purchase embroidered T-shirts for the AEM Advisory Committee members.

Promotion of local products and our AEM program can also be done through our partners at the farmers markets and the Adirondack Harvest program, as well as working with CCE, County Planning, RC&D and SWCD. Getting the information out that AEM local effort helps farms, protects the environment and benefits the community is a high priority.

### Education

Only through the involvement of all the stakeholders, both farmers and government alike, can we come to develop a working relationship that will ensure all of our success and the protection and longevity of our natural resources.

Having assistance available to farmers within the community and providing seminars on guidelines, regulations and licensing for farms and sales to the public should be an ongoing occurrence. Farmers might benefit from courses on reducing their direct dependence on grain by making better use of grasslands and grazing in a rotational manner to get more from the pasture.

Small business management, Agricultural Value tax relief availability and small farm startup courses would also benefit farming in Warren County. In addition, the uses and opportunities of renewable energy use in farm production would be a valuable program to offer locally.

Through the cooperation of the AEM Advisory Committee we have agreed to have AEM pamphlets and information available at display tables at local events such as the farmer's market, County Fair, SWCD activities, the Adirondack

Waterfest as well as the many other activities which each of the stakeholders are involved.

Educational articles in the newspaper and outreaching through many of CCE and RC&D's educational events are all ways to communicate with our stakeholders. School events can also be an effective way to bring the message home to interested family members as well as educate the next generation of farmers.

According to *The Key Opportunities and Strategic Investments to Enhance Small Farm Viability in New York, Report and Recommendations* from the 2006 NY Small Farm Summit and the Cornell Small Farms Task Group :

"The following were identified as major opportunities to enhance the viability and sustainability of New York's small farms:

1. Marketing innovations to connect consumers with local and regional producers
2. Renewable energy technologies, energy crops and energy conservation
3. Enhanced utilization of grasslands resources for economic development and environmental protection
4. Integrated farming systems using appropriate technologies
5. Improved processing regulations, infrastructure and technologies for small farm meat and dairy products
6. Beginning farmer support"

More information is available at

<http://www.smallfarms.cornell.edu/pages/projects/working/SummitReportFinal.doc>

### Technical Assistance

As a voluntary program, we are only as powerful as the participation of our stakeholders, primarily the farmers working the land and making the decisions. Farming with environmentally sound methods can increase production and decrease costs. Farmers that are aware, willing to participate and understand the benefits of farming sustainably will be more willing to take initiative to improve high areas of concern.

By helping farmers reach their goals in a way that will make the most of the resources available through the land, water, farming and environmental programs available we can begin development and implementation of resource practices that will benefit everyone. It is only when the farmers understand the benefits and assistance that they will participate in this and other farm programs.

Through the program techniques such as rotational grazing, manure spreading and storage, and proper pesticide and fertilizer use and storage, skills of surveying, drafting, GIS, knowledge of stream buffers and stormwater drainage from barns and other structures are available. Through techniques such as these, AEM program can help the farmer meet their needs through Conservation Planning (Tier3a) and Implementation (Tier4) by coupling the concerns of the farmer with increased soil and water quality.

Best management practices to prevent erosion and sediment from skid trails and other access roads should be implemented during silvicultural practices. In addition, the use and storage of chemicals in any of the agricultural practices including Christmas trees, nursery, greenhouse, and field crops should continue to be considered.

As partners with the Adirondack Park Invasive Plant Program (APIPP) we can work together with our farmers to reduce the spread of exotic plants on fallow ground by planting cover crops. Using native stream side buffers, encouraging the use of native species in farming and early detection through educated landowners can prevent fouling of our waters, decreased maple and crop production and destruction of our forests and forest products.

Through this outreach and education and technical assistance farmers can become aware of what it takes to grow in a way that will ensure that the resources they depend on are intact for generations to come.

### **Local Team Capacity**

There are many partnerships that have been forged through the years particularly through the WC WQCC. These are ongoing, long term partnerships that have been fostered through continual cooperation among both agencies and organizations for betterment of the County's resources. The core subgroup from this organization has expertise ranging from education and grant writing to survey, design and construction oversight.

With two CPSEC certified staff at the District we are able to address the concerns of the farmer and can increase soil and water quality, native plantings and stream buffers and stormwater drainage from barnyards and paddocks.

The District Conservationist at NRCS has expertise on proper rotational grazing techniques, timely manure spreading and storage, and proper pesticide and fertilizer use and storage.

The District and NRCS staff are also skilled in surveying, drafting, GIS, and have access to soil, wetland and stream information and archive aerial photographs that can help the farmer to meet their needs.

Cornell Cooperative Extension and the Greater Adirondack RC&D are known for their educational skills and programs from the Cornell Small Farms Program, Master Gardeners and proper silvicultural technique workshops at CCE to their work with the Adirondack Harvest program.

The Adirondack Harvest program is heavily involved with the farm markets in the Adirondack Park and have taken the initiative help promote the local goods in the region and are a tremendous resource for forming and continuing relations with local farms.

The Warren County Planning Office operations can act as a resource. A small business program at ACC is offering a class where existing and potential small business operators can receive one-on-one technical assistance with a Warren County Planning staff person. Also offered is a small business loan program based on an applicant's business plan –there is flexibility in this loan and depends on the clients operations.

NYS DEC is a resource that can be utilized for wildlife, wetland and forestry information as well as permitting. The District works with them often and has a General Permit that can be utilized on private lands under SWCD supervision and project approval. We also work closely with the WQCC, CWICNY, APIPP and other watershed associations that can be a valued resource to help meet our goals.

### **Evaluation Strategy**

Being able to quantify results and effectiveness of a program can be an effective way to illustrate its value to stakeholders and funding sources. Some of the fundamental successes are hard to measure, such as community support and encouragement of local agricultural enterprises or buying local products that have been produced in an environmentally friendly manner.

Farmer's sales and participation of the community in farmer's markets, farm tours and natural resources awareness are all invaluable ways to judge the accomplishments within the County.

AEM sign awards are a crowning achievement for the farmers and a chance for them to be recognized by the community for the work they have accomplished to become an environmentally sustainable farm. The extent that best management practices are implemented can also be a measure of success, such as Tiered assessments completed or comparison of program participation levels this year versus last year.

Each year the results from the Tier 2 evaluations are compiled, helping to set priorities for the following year. Tier 3a conservation plan implementation and

effectiveness of the best management practices is also conducted through Tier 4 follow-up. In addition, farms and the level achieved are then recorded in a GIS mapping database that can assist with resource concern prioritization within each watershed.

Follow up phone calls and site visits to assist landowners with their plans can help assure that a quality program is being delivered. A review of programs being implemented compared to watershed needs is an assessment tool that can result in making changes in farming practices to fit the local conservation needs.

Other feedback and evaluation mechanisms include conservation program education attendance, inquiry and participation levels with the AEM program. Time permitting, a sampling of nutrients and/or physical observation of sediment in nearby waterbodies can help to mark the success of the program implementation over the years.

Each year the Warren County SWCD Annual Report displays the accomplishments of the AEM program that were achieved in the year end report as well as three separate presentations to the Warren County SWCD Board of Directors, Warren County Board of Supervisors and Warren County Water Quality Coordinating Committee. These kinds of presentations get the word out to all our partners that farming sustainably through AEM is a benefit to our local community.

**Budgeted Activities 2009-2012** *(See Annual Action Plan for yearly budget breakdown)*

Tier 1 and Tier 2 - initial contact, goals and farm assessment

Tier 3a - Conservation Plan Development to reach goals

Tier 4 - Implementation, survey, design installation, construction oversight and inspection of practices.

Tier 5a - Follow up reevaluation

Education

Outreach

Program Evaluation

Partnership Activities

Reporting

**Quarterly Timeline 2009-2012**

Quarter 1 (May -August)

Site visits, surveying, Tier 1, 2, 3a, 4 and 5a assessments, outreach and education, media, partnership activities

Quarter 2 (September - November)

Site visits, continue assessments, work with Adirondack Harvest and Farmer's market activities and other partnership activities

Quarter 3 (December- February)

Educational Efforts, reporting, updating databases, program evaluation

Quarter 4 (March-May)

Outreach, mailings, brochures, phone calls, 3a Plan writing