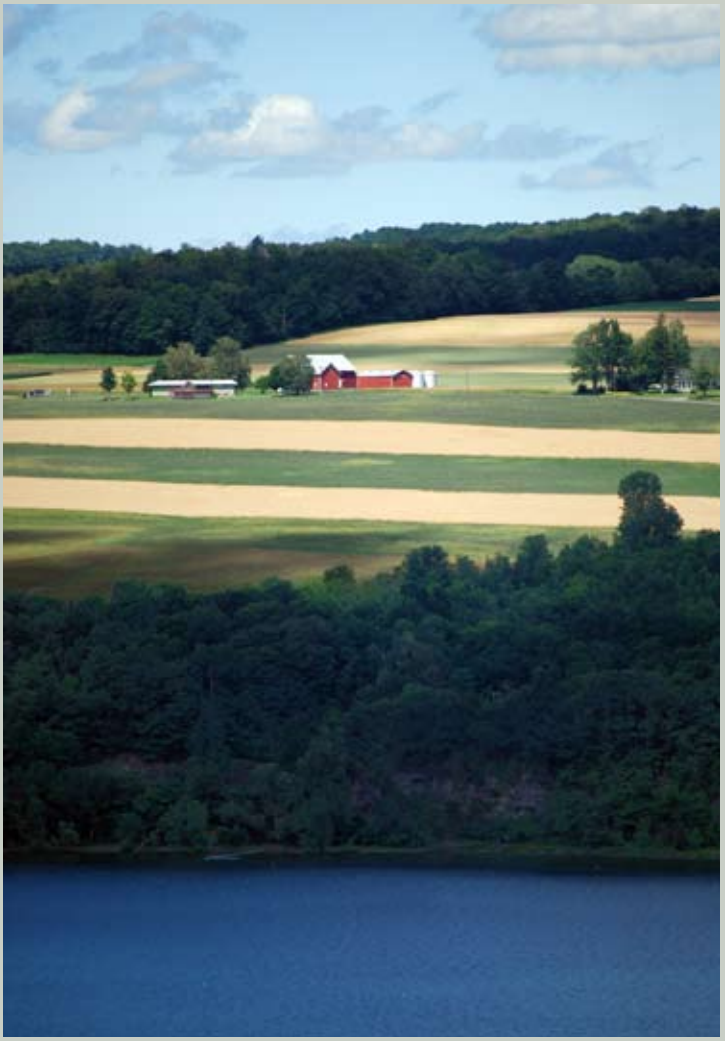
AEM

Agricultural Environmental Management

2007 - 08 Annual Report



Investing In Our Future: Farms, Food & Fuel in New York State

David A. Paterson, Governor

Patrick Hooker, Commissioner
NYS Department of Agriculture & Markets

Dennis Hill, Chairman
NYS Soil & Water Conservation Committee

Agricultural Environmental Management

Cortland County SWCD

Mike McMahon (above) of E-Z Acres Farms in Cortland County, along with all the farmers featured in this report, proudly display their AEM "Farmers Partnering to Protect Our Environment" roadside signs.

The signs are being awarded to exemplary AEM farmers around the state by County Soil and Water Conservation Districts (SWCDs).

Core Concepts

- Voluntary, incentive-based
- Customized farm by farm
- Based on watershed needs
- Locally led and coordinated
- Confidential assessment and planning
- Enhances farmer environmental awareness
- Promotes agriculture's environmental benefits

Framework

Farmers work with local AEM resource professionals using a tiered approach:

Tier 1 – Inventory current activities, future plans and potential environmental concerns.

Tier 2 – Document current land stewardship; assess and prioritize areas of concern.

Tier 3 – Develop conservation plans to address concerns, opportunities and farm goals.

Tier 4 – Implement plans coordinating financial, educational and technical assistance.

Tier 5 – Evaluate to ensure the protection of the environment and farm viability.

Cover Layout

Left: Strip cropping protects water quality and offers scenic farmscapes around Owasco Lake in Cayuga County, SWCC.

Top: Spring corn sprouts up amidst the previous year's crop residue that protects and enriches the soil, SWCC.

Center: Jersey calves on the Fleming Homestead Farm in Cayuga County, SWCC.

Bottom: The next generation of farmers walks the land at Flegel Farm in Greene County, Jen Rausch, Educator.

Investing in Farms for Our Future

With ever-growing public interest in everything from food safety and water quality to carbon footprint and climate change, consumers want to know where their food comes from and how it is produced. Nearly 8 million acres of New York land is in the care of farm families who produce the fresh food, green energy and other products that we need every day. For nearly 15 years, AEM has supported New York's farmers in their efforts to farm cleaner and greener, while remaining economically viable into the future.

Farms protect water quality and wildlife habitat, while providing open space and recreational opportunities enjoyed by residents and tourists alike. Farms are also the backbone of local economies, generating jobs and revenue while helping keep taxes from rising. In this time of skyrocketing energy and transportation costs, supporting agriculture is more important than ever to safeguard a strong economy, local food supply and natural resources.

New York's 58 County Soil and Water Conservation Districts and their local AEM partners deliver the resources and technical services that help farm families meet environmental goals, while meeting consumer demands to remain competitive in the global marketplace.

State Funding

The commitment of New York farmers to protect natural resources, particularly our drinking water, runs deep. More than 12,000 farm families take part in AEM, spending millions annually to implement conservation practices. This collective effort upholds agriculture as a preferred land use to protect New York's soil and water resources. With production costs rising, it is often difficult for farmers to afford needed conservation practices on their own. AEM connects farmers with cost-share opportunities that can help bring conservation goals to reality.

"As a taxpayer, I am happy to invest public funds in the conservation efforts of New York farmers," says Emily Svenson, Chair of the Hyde Park Conservation Advisory Council. "This helps farmers protect the resources we all enjoy, while ensuring a fresh, healthy food supply."

AEM prioritizes conservation needs and coordinates state and federal funds to get the job done. Nearly $24 million of state funding is under contract to develop AEM plans and implement 2,220 conservation practices on farms statewide. In addition, USDA Farm Bill programs provided nearly $40 million in 2007 for financial and technical assistance to New York farmers. For their part, farmers contributed more than $7 million toward state sponsored projects between 2007 and 2008, and millions more through federal and local programs.

AEM's competitive grants, funded through the State Environmental Protection Fund, have provided over $73 million since 1994 to help farmers plan and implement over 4,400 conservation projects.

AEM farm plans ensure that the highest priority water quality concerns are addressed first. Common projects include systems to manage barnyard runoff and pasture management practices such as livestock fencing and alternative water supplies.

Advancing Conservation

Practicing What He Preaches

Barb Silvestri, NYS SWCC

Herkimer County District Manager, Ted Teletnick has worked diligently with local farmers over the years to get conservation on the land, while also implementing a wide array of practices on his own farm. In recognition of his longstanding commitment to protecting the environment, the District Board of Directors selected Ted, owner of the Depot Farm, to receive the 2007 Herkimer County 'Conservation Farmer of the Year Award.'

Over their 88 years of farming, the Teletnick family has installed a long list of conservation practices including rotational grazing, permanent seeding, nutrient management, manure storage, and most recently the planting of a stream buffer under the Conservation Reserve Enhancement Program (CREP). "Establishing the stream buffer that prevents my beef cows from having access to the stream was the best thing I ever did on the farm," said Teletnick.

AEM Base Funding

Launched in 2005, AEM Base Funding has increased the number of new farms involved in AEM and advanced more farms through the AEM framework from year to year. The State Environmental Protection Fund provides non-competitive grants for Soil and Water Conservation Districts to prioritize watershed concerns, document environmental stewardship, develop and implement conservation plans, evaluate effectiveness, and conduct educational outreach efforts.

In the first three years of the program, Districts were eligible to receive up to $40,000 to assist farms with their conservation efforts. As a result:

- 4,421 farms began the AEM process.
- 2,440 farm assessments were completed.
- 919 conservation plans were initiated.
- 240 farms received technical assistance to install practices.
- 322 farm evaluations were conducted.

These results show that farmers are advancing through the process and are positioned to compete for state and federal cost-share funds to implement conservation practices.

In addition, 105 public outreach efforts were launched to promote District AEM Programs and showcase the environmental stewardship of farmers in their communities. Twenty AEM communications workshops were held around the state to help agricultural professionals enhance public understanding and support for New York farms. As a result, Commissioner Hooker presented the 2007 AEM 'Agriculture in the Media Awards' to nine County Soil and Water Conservation Districts and two AEM partners. The awards recognized their success in fostering public awareness of agriculture's benefits to the environment, the economy and the community through their local press.

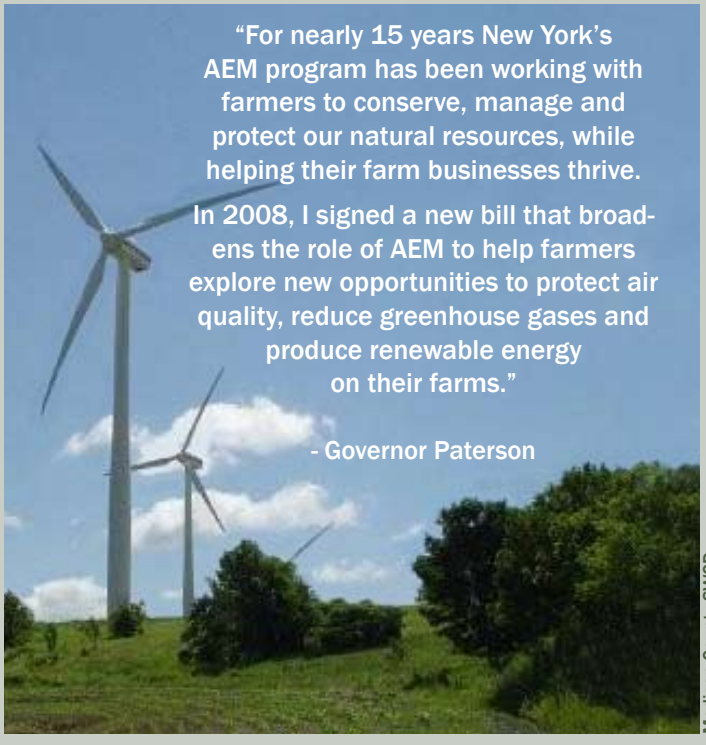
In the fourth year of the program, Districts will update their AEM Strategic Plans that direct the Base Funding at the local level. Seven Districts with AEM Certified Planners on staff will receive additional funds to pilot an enhanced approach to improve the quality and quantity of conservation on the land.

Charting the Course to Energy Independence

Governor Paterson recently unveiled new legislation that recognizes AEM's potential beyond protecting water quality, and takes a more holistic and proactive approach to on-farm resource management. The new law connects farmers with expanded opportunities to produce renewable energy and further reduce greenhouse gas emissions for all New Yorkers.

Many traditional AEM practices help farms to conserve energy and reduce petroleum consumption while also providing water quality benefits. For example, prescribed grazing systems and no-till plantings cut down on machinery use, and nutrient management decreases the need for fossil fuel-based fertilizers. A growing number of farmers are now producing energy on-site with wind turbines, anaerobic digestion and biomass crops. Strengthening the relationship between agriculture and renewable energy helps keep farmers farming by reducing their input costs while diversifying into profitable new opportunities.

"Environmentally balanced and economically sustainable energy independence may be the biggest challenge our generation faces, but it will be our legacy," said Commissioner Hooker. "Through AEM, New York's agricultural community is ready, willing and able to step up and meet this challenge."



Madison County SWCD

Measuring Achievements

Watershed Success: Farmers Doing Their Part

Herkimer County AEM farmers in the Steele Creek Watershed have improved drinking water quality for the Village of Ilion's 10,000 residents, while also benefiting struggling fish habitats. In 2001, the Steele Creek reservoir system was plagued with algae blooms as well as taste and odor problems that made water treatment difficult and very expensive. Degraded water quality resulted in the closing of a water intake for the Village of Ilion Public Water Supply. Steele Creek had long been one of the most populated rainbow trout streams in Central New York, boasting a crop of 1,000 - 2,000 rainbow trout per acre. But as water quality deteriorated, fish in the Steele Creek were struggling to survive and reproduce.

Monitoring indicated that poor water quality was linked to elevated levels of nitrogen and phosphorus, which accumulate in water bodies as a result of lawn fertilizer and pesticide applications, faulty septic systems, stormwater runoff, as well as agricultural runoff. Given that 54% of the land in the watershed is agricultural land, the County Water Quality Coordinating Committee (WQCC) identified agriculture as a primary focus of their Watershed Improvement Strategy.

> "The AEM efforts of farmers in the watershed are saving the village thousands of dollars each year on water treatment costs."
>
> - Bruce Morgan, Ilion Water Treatment Supervisor

When rain falls, it flows across the land, into groundwater and streams, and eventually into rivers and lakes. In the process, it can wash contaminants into the water. While there are no perfect land uses, well managed farms can actually protect water quality as they contribute far less polluted runoff to water bodies than most land uses. The conservation efforts of Herkimer County farmers have demonstrated that where agricultural runoff concerns do occur, they can be remedied by implementing AEM practices.

The Herkimer County Soil and Water Conservation District applied for State AEM Base Program funding to develop a five-year AEM Strategic Plan. In partnership with the Steele Creek Workgroup and County WQCC, the Steele Creek Watershed was identified as their highest priority.

As a result, the Steele Creek Watershed Agricultural Planning Project:

- involved more than 75% of the farms in this watershed.
- conducted 26 farm inventories and 19 farm assessments on 7,624 acres.
- completed 12 Comprehensive Nutrient Management Plans (CNMPs) for farms posing the greatest environmental concern.

As their next step, the District successfully applied for $210,000 in State AEM cost-share funds to help six farmers implement conservation practices. In addition, USDA Natural Resource Conservation Service funding supported the installation of even more practices.

AEM conservation practices and activities included:

- diversion ditches
- water and sediment control
- roof water management
- milkhouse waste systems
- manure management
- waterways
- stream buffers
- stripcropping
- cover cropping
- conservation tillage

Water sampling conducted since 2003 shows a significant decrease in phosphorus levels from .087 mg/l to .011 in 2008. Ilion Water Treatment Plant supervisor Bruce Morgan reports, "There has definitely been an improvement in the phosphorous levels since AEM practices have been installed, and the need for chemical applications to control algae has been reduced." Morgan went on to say, "The public water supply intake that was closed as a result of algae blooms and degraded water quality has been reopened."

This partnership effort is a shining example of how farmers, municipalities and residents can all benefit from the AEM program.

Partnering to Protect Our Environment

Barb Silvestri, NYS SWCC

As lifelong farmers, Terry Jones (above) and his family know living off the land requires hard work and constant consideration of natural resources. Over the years, they have turned to the Herkimer County Soil and Water Conservation District many times for technical advice in management decisions for their 150 cow dairy farm located in the Steele Creek Watershed.

This year, they implemented conservation strip tillage on their 800 acres of corn and soybean cropland to reduce erosion and cropping expenses, while adding more diversity to crop rotations. "AEM practices help us protect the environment and reduce fuel and other production costs to help our bottom line," Jones said.

The Jones family also updated their manure storage to a retrofitted system that takes advantage of the farm's hillside slope. Waste is pushed to a concrete pad at one end of the barn and fed through a customized auger with a pump, into the downhill storage. They take advantage of the manure as fertilizer, applying it on their hay in the fall and on cornfields in the spring as prescribed in their CNMP. The application occurs when plants can use the nutrients most, reducing the potential for runoff.

The family's commitment to environmental stewardship earned them the District's 2007 Conservation Farmer of the Year Award and an AEM "Partnering to Protect Our Environment" sign to display.

Farming in Harmony With the Environment

Farmers with a Plan

While AEM supports the voluntary stewardship efforts of farms of all types and sizes, it is also the vehicle by which environmental regulations have been effectively implemented on New York's larger livestock farms. Nearly all of the 600 regulated Concentrated Animal Feeding Operations (CAFOs) in New York are family-run businesses that have had their roots in farming for generations.

These regulated farms follow Comprehensive Nutrient Management Plans (CNMPs) to control runoff, conserve soil and recycle nutrients. These complex, science-based plans assess environmental risks and identify site-specific conservation practices to address concerns while meeting farm business objectives.

- CNMPs are developed and annually updated for farms by Certified AEM Planners according to USDA Natural Resources Conservation Service (NRCS) standards, research from top universities, and state and federal policies.
- Plans have been developed for all 147 large CAFOs and 97% of the State's 453 medium-sized CAFOs.
- These plans are routinely spot-checked to assure the public, regulators and farmers of quality AEM planning.

Barb Silvestri, NYS SWCC

John Snavlin (right) of Snavlin Farms walks his farm as he reviews his farm plan with Onondaga County Soil and Water Conservation District AEM Planner, Brian Hall.

AEM Planners are certified by NRCS and the State Department of Agriculture and Markets to develop CNMPs for regulated farms, as well as farms participating in state and federal programs. The AEM Planner Certification Program, in place since 1999, is coordinated by the State Soil and Water Conservation Committee (SWCC) in cooperation with NRCS, Cornell University, Cornell Cooperative Extension, and the Northeast Region Certified Crop Advisor Program (CCA).

- AEM Planner Certification is an on-going, performance-based process. For initial certification, individuals must achieve CCA status, pass an NRCS web-based course, attend an intensive four-day training, and have three plans successfully reviewed by CNMP Specialists.
- Re-certification involves maintenance of CCA accreditation, continuing education, and successful biennial quality assurance review.
- There are 45 Certified AEM Planners in New York working through private and public sector agricultural service organizations.

CNMPs typically cost approximately $10,000 to develop, $5,000 a year to update, and hundreds of thousands of dollars to implement and maintain, all towards the goal of protecting natural resources. In partnership with the State Environmental Facilities Corporation, funds have been made available to reimburse regulated farms for the costs of preparing and updating CNMPs.

- Since 2005, 479 reimbursement requests totaling over $2.7 million was provided to farmers for their initial plan development costs.
- More than 850 annual CNMP updates totaling over $1.5 million was provided for the 2005-07 cropping seasons.

Conservation Buffers Lead the Way

The AEM program has a solid history of coordinating agricultural, ecological and social interests to advance conservation, positioning AEM to play a key role in the new Ecosystem-Based Management (EBM) initiative. EBM guides multiple state agencies toward a common goal of promoting ecosystem health. Coordinating efforts will cultivate a new planning approach to encourage decision-making based on a holistic understanding of ecosystems.

In partnership with the Jefferson County Soil and Water Conservation District, five farms in the Sandy Creek Watershed received State EBM funding to improve water quality by restoring conservation buffers along tributary streams to Sandy Creek and Stony Creek. Projects involved fencing cows out of the streams, providing alternative water supplies, and planting trees, shrubs and grasses in streamside buffer areas. On some farms, EBM funds supplemented the farmer costs of participating in the USDA Conservation Reserve Enhancement Program (CREP) stream buffer program to address specific needs. For example, this partnership made the buffer project financially possible for the Ber-Bon Farm, a small dairy located on a branch of Sandy Creek, which is the main source of drinking water for the Village of Adams.

This EBM project demonstrates the importance of state funding to supplement the farmer costs of participating in the federal CREP program, as well as the value of expanding the number of watersheds where cost sharing is available.

Jefferson County SWCD

Buffer Benefits:

Tree plantings will provide shade to improve stream temperatures and fish habitat. Roots hold the streambanks in place, reducing erosion. Mixed vegetation filters runoff before it enters the stream and establishes wildlife corridors, improving biodiversity. Farmers also benefit from improved herd health and increased bio-security on the farm.

AEM Award Winners

Farming For The Future

With three generations of the Jeffres family farming, experience shows that protecting the environment and being a good neighbor help to maintain a thriving farm business. Winners of the 2007 AEM Award, the R.L. Jeffres & Sons Farm and the Wyoming County Soil and Water Conservation District were recognized for their ability to protect water quality while maximizing the potential of the family business.


American Agriculturalist

Farming for nearly a century, this family has a long-standing commitment to conservation. In fact, the Jeffres were the first farmers in the county to partner with their District back in 1941, and one of the first farms to participate in AEM. District Manager Greg McKurth said, "The family has implemented a tremendous number of conservation practices, and they are always working to maintain and improve them."

The Jeffres' 7,800 acre crop farm grows corn, peas, dry beans, snap beans, beets, carrots, alfalfa and wheat. Using Integrated Pest Management, they scout and assess insects to limit pesticide use. More than 30 acres of buffer strips have been planted along streams. They planted cover crops, installed strip crops diversion ditches and over 100 miles of drainage tile to minimize soil erosion and nutrient runoff, while maximizing crop yields. The family is also part owners in a 2,000 cow dairy, completing a Comprehensive Nutrient Management Plan to conserve soil, recycle nutrients, and save on fertilizer costs.

"When you live off the land, there is no greater resource than the soil and water that surrounds your business," said Commissioner Hooker. "Farmers like the Jeffres recognize this, and are working through their District AEM programs to produce wholesome products and protect our environment."


American Agriculturalist

The Fessenden Dairy and the Cayuga County Soil and Water Conservation District were the proud recipients of the 2008 AEM Award. This sixth generation farm strategically combines traditional conservation techniques with cutting-edge technology to maximize the farm's benefits to the environment.

Governor Paterson said, "The Fessenden family exemplifies the vital role of New York farmers as integral to a strong economy, a healthy environment, and an affordable, local food supply for all New Yorkers."

As neighbors to the village of King Ferry, the 650-cow dairy continually works to reduce manure odors. "The Fessendens care about the people around them and the environment," said Sandy Huey, District Watershed Program Manager. Recently, the Fessendens implemented an innovative waste management system. Animal manure solids are recycled into heat-treated bedding for the cows, or composted and marketed by Ronda Fessenden as certified organic compost. A new concept is underway to manage the liquid nutrients, and through a grant from the USDA Conservation Innovation Program a system has been engineered to reduce greenhouse gas emissions by 31 times. The Fessendens share the carbon credits generated with Ithaca-based Environmental Credit Corporation. Similar projects are underway on five other New York dairies.

The Fessendens are forging the way for other farmers by pioneering new conservation practices. With guidance from their District AEM program, they planted nearly 53 acres of grass waterways and buffer strips to protect Paines Creek. They also raise 1,200 acres of corn silage and alfalfa for feed on carefully designed contours, terraces and strips. "Farmers have always been stewards of the land, carefully conserving the natural resources that they rely on to earn a living," said Dennis Hill, State Soil and Water Conservation Committee Chairman. "With new environmental technology, many farmers are becoming community-level ecologists – managing air, soil and water quality. The Fessenden Dairy is an exemplary model of this new generation of farms."

The annual award is sponsored by the New York State Department of Agriculture and Markets, American Agriculturist Magazine and the Empire State Potato Growers.

AEM

Partners

Adirondack Council
American Dairy Association & Dairy Council
American Farmland Trust
Champlain Watershed Improvement Coalition of NY
Citizens Campaign for the Environment
Cornell Cooperative Extension (CCE)
Cornell Pro-Dairy Program
Cornell Small Farms Program
Cornell University
County Soil & Water Conservation Districts
Environmental Defense
Environmental Facilities Corporation
Finger Lakes-Lake Ontario Watershed Protection Alliance
Keuka Lake Watershed Protection Program
Long Island AEM Stewardship Committee
Lower Hudson Coalition of Conservation Districts
Northeast Certified Crop Advisor Program
NY Association of Conservation Districts
NY Center for Dairy Excellence
NYC Watershed Agricultural Program
NY Farm Bureau
NY Farm Viability Institute
NY Rural Water Association
NYS Agri-business Association
NYS Agricultural Agents Association of CCE
NYS Agricultural Mediation Program
NYS Cattle Health Assurance Program
NYS Conservation District Employees' Association
NYS Department of Agriculture & Markets
NYS Department of Environmental Conservation
NYS Department of Health
NYS Department of State
NYS Energy Research & Development Authority
NYS Horse Health Assurance Program
NYS Integrated Pest Management Program
NYS Soil & Water Conservation Committee
NYS Sustainable Viticulture Program - VineBalance
NYS Water Resources Institute
NYS Wine & Grape Foundation
Skaneateles Lake Watershed Agricultural Program
SUNY College of Environmental Science & Forestry
Upper Susquehanna Coalition
US Environmental Protection Agency
US Fish & Wildlife Service
USDA Farm Service Agency
USDA Natural Resources Conservation Service
Wappingers Creek Watershed Program

New York State Soil & Water Conservation Committee

www.nys-soilandwater.org

10B Airline Drive, Albany, NY 12235
Phone: 518-457-3738
E-mail: Barb.Silvestri@agmkt.state.ny.us

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