AEM

Agricultural Environmental Management

Cornell University Cooperative Extension Cayuga County

NRCS Natural Resources Conservation Service

GRAZE NY

What is AEM?

- Interagency program that provides one-on-one help to farmers to identify environmental risks on their farms.
- Farmers receive planning, design and help obtaining financial assistance to correct existing problems and prevent future ones

AEM OBJECTIVES

- AEM targets programs, technical, and financial resources for farms.
- Promote teamwork between farmers, agricultural service agencies and agribusiness.
- Increases farm awareness on potential environmental concerns.
- Increase awareness to non-farm community.

AEM 5 Tiered Approach

- **Tier I**
  -Questionnaire.
- **Tier II**
  -Worksheets.
- **Tier IIIA**
  -Plan.
  -Whole Farm, CNMP, Manure Management
- **Tier IV**
  -Implementation
- **Tier V**
  -Evaluation.

AEM Benefits Farms.

- **Documents farmer's stewardship.**
- **Helps identify concerns and problems.**
- **Assist farmers in complying with state and federal regulations (CAFO).**
- **Builds relationships between agencies and farms.**
- **Builds a plan to address environmental issues that farms face.**

Grant Funding Programs.

- Agricultural Nonpoint Source Abatement Control Program (NPS).
- Environmental Protection Agency (EPA).
- Great Lakes Basin Grant (GLB).
- Environmental Quality Incentives Program (EQIP) NRCS.
- Wildlife Habitat Incentives Program (WHIP).
- Conservation Project Financial Assistance.
- Conservation Reserve Enhancement Program (CREP) FSA.

Zone builder.

Conservation Tillage

-Conserving fuel while building soil organics, fertility and crop yields.

Tillage Demo

No-till planter

-Zone builder and No-till drill help in reducing compaction while increasing crop yields with low fertilizer and fuel inputs.

Prescribed Grazing Systems

-Highly vegetative pasture provides increased animal health and even distribution of manure.

-Hi-tensile fencing is installed to reduce access to water courses.

-Laneway installation improves water quality by not giving access to streams.

-Heard health is also improved due to proper rock sizing for footing.

Animal Trail and Walkway.

-Removes animals from sensitive areas.

-Reduced phosphorus load.

-Increase bank stability.

-Sediment loads are lowered.

-Buffer areas installed to reduce runoff.

-Foot health vs. Rock sizing.

GRAZE NY

-No-till seeder provides pasture and warm season plantings for animals and wildlife. No tillage techniques required for germination.

-Water is placed in paddocks with animals to reduce stress and slow foot traffic to barn.

Big Foot Baler.

-Greenhouse films and pots.

-Silage bags, bunk bags.

-Secondary plastics after recycling.

Fuel Containment.

-5 secondary fuel containments were installed in Cayuga Co.

-all containments were designed and stamped by a licensed engineer and EPA.

Heavy manure, roof and surface runoff caused animal health issues along with water quality concerns

Roof water collected by gutters

After

Heavy use area was excavated and filled with fabric and stone for easy scraping

Surface water diverted into grass swale

Before

Milkhouse Waste Storage.

-2500 gallon storage unit placed underground to collect milkhouse wash and rinsate from parlor.

-2in sump pump placed in tank to pump solution into manure spreader to be spread.

-Milkhouse waste is diluted once mixed with manure so that it is not at a concentrate.

Provides farm with storage to be able to spread when weather permits and according to their CNMP and/or CAFO plan

Manure Management

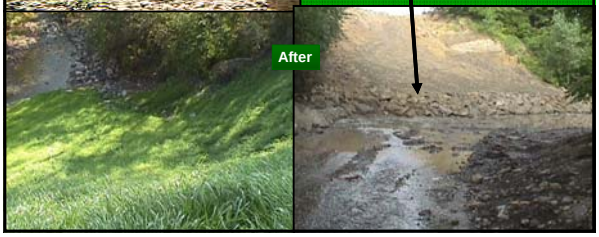
Contoured Grassed Waterway.

-Grassed waterways that are contoured to the topography of the land.

Streambank Stabilization.

-Vegetative cover suppresses erosion during storm events by a extensive rooting structure.

-Armament of toe of bank decreases water erosion.



Grassed Waterway Before.

-Site excavation is necessary to remove unwanted debris from channel.

-Shape and grade site for proper water movement.

-Proper sloping of the parabolic channel slows water given sediments and nutrients a chance to be filtered by vegetation.

Grassed Waterway After.

-Deep rooted & fast growing vegetation is planted to hold soil particles from being placed into water coarse.

-Tall Fescue, Orchard Grass, Bermuda Grass

-Shallow slope and vegetation slows velocity.

-Sediments are trapped by veg.

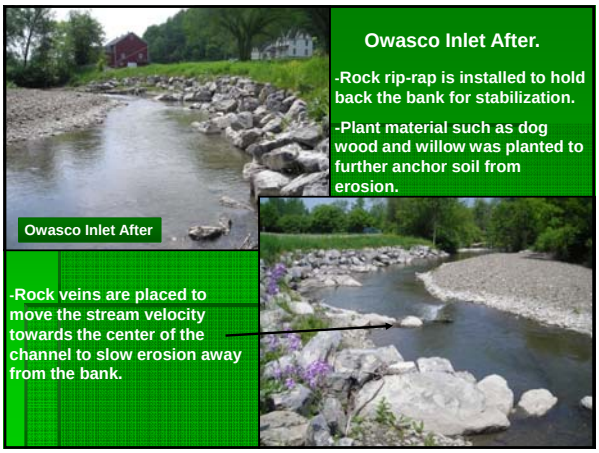
-Nutrients are used by plant material.

Owasco Inlet Before

Owasco Inlet Before.

-Heavy damage to streambanks due to storm events, crop land is lost along with sediments and nutrients which can cause issues later on.

-On average 70 tons of sediment per streambank mile per year is released do to erosion.


Owasco Inlet After.
-Rock rip-rap is installed to hold back the bank for stabilization.
-Plant material such as dog wood and willow was planted to further anchor soil from erosion.
Owasco Inlet After
-Rock veins are placed to move the stream velocity towards the center of the channel to slow erosion away from the bank.


Streambank Erosion on Fire lane 6B, Before


Streambank Erosion, After
-Streambank was sloped back, large gabion stone was placed in center of stream and sides of bank to slow water velocity. Bank was seeded conservation mix.

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