NEW YORK STATE OF OPPORTUNITY | Department of Agriculture and Markets

NEW YORK STATE OF OPPORTUNITY | Soil and Water Conservation Committee

Agricultural Environmental Management

Cayuga Lake Watershed

September 28, 2019

Andrew M. Cuomo
Governor

Richard A. Ball
Commissioner

Greg Albrecht
AEM Coordinator/NMP Specialist

Crops grown to feed the cows

Manure nutrients collected & stored

Manure nutrients fertilize the crops

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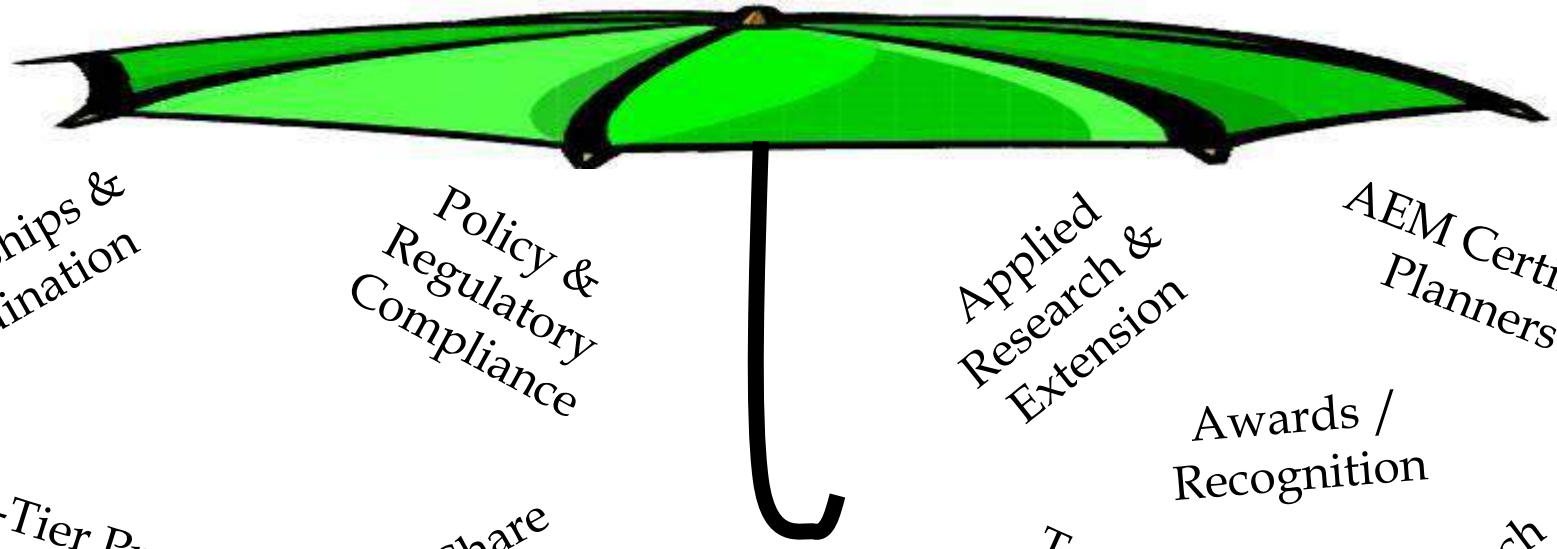
Agricultural Environmental Management (AEM)

locally-led by Soil and Water Conservation Districts

www.agriculture.ny.gov/soilwater/aem

Protect and enhance the environment and the viability of agriculture in New York State.



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AEM 5-Tier Approach

AEM Tier	Purpose	NRCS 9 Step Process
Tier 1 – Inventory (Questionnaire)	Basic farm info and interests	1. ID Issues & Opps 2. Determine Objectives 3. Inventory Resources 4. Analyze Resource Data 5. Formulate Alternatives 6. Evaluate Alternatives 7. Make Decisions
Tier 2 – Assessment ("Tier 2 Worksheets")	Identify existing stewardship, resource concerns, and opportunities	
Tier 3 – Planning	Develop conservation plans	
Tier 4 – Implementation	Implement conservation practices based on the plans	8. Implementation
Tier 5 – Evaluation	Evaluate plans, practices, and programs	9. Evaluation

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AEM Tier 2 Assessment Worksheets

Core

- Watershed Site Evaluation
- Agriculture & the Community
- Soil Management
- Manure & Fertilizer Mgmt
- Manure & Fertilizer Storage
- Waste Disposal
- Pesticide Use
- Pesticide Storage, Mix & Load
- Farmstead Water Supply
- Stream & Floodplain Mgmt.
- Petroleum & Oil Product Storage
- Forest Management
- Irrigation Water Management

Livestock

- Livestock Heavy Use Areas
- Silage Storage
- Process Wash Water
- Management of Feed Nutrients
- Water-Bourne Pathogens
- Pasture Management
- Livestock Odor Management

plus

GHG Mitigation Opportunities

Equine

Greenhouse

Vineyard (www.vinebalance.com)

Fruits & Vegetables

Long Island

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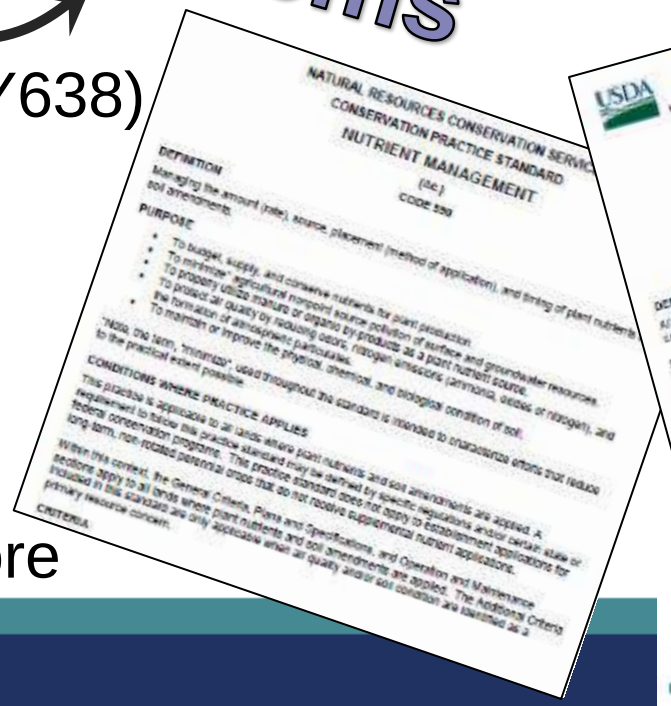
Many NRCS Standards are used in AEM Tier 3 Plans

www.nrcs.usda.gov/technical/efotg

- Nutrient Management (NY590)
- Cover Crop (NY340)
- Conservation Tillage Practices
- Buffer Practices
- Conservation Crop Rotation (NY328)
- Grassed Waterway (NY412)
- Water & Sediment Control Basin (NY638)
- Manure Storage Facility (NY313)
- Manure Transfer (NY634)
- Compost Facility (NY317)
- Heavy Use Area Protection (NY561)
- Vegetated Treatment Area (NY635)
- Prescribed Grazing (NY528) and more

Planned and implemented as systems



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Ag Best Management Practice Systems

BMP SYSTEM NAME	BMP SYSTEM NAME
Access Control System	Pathogen Management System
Agrichemical Handling and Storage System	Petroleum and Oil Products Storage System
Composting System – Animal	Prescribed Rotational Grazing System
Erosion Control System – Structural	Process Wash Water Management System
Feed Management System	Riparian Buffer System
Integrated Pest Management System	Silage Leachate Control and Treatment System
Irrigation Water Management System	Soil Conservation System – Cultural
Livestock Heavy Use Area Runoff Management System	Stream Corridor and Shoreline Management System
Manure and Agricultural Waste Treatment System	Waste Storage and Transfer System
Nutrient Management System – Cultural	

Funding Programs to Help Advance AEM on Farms

- Locally-led and sponsored by your Soil & Water Conservation District
  - AEM Base Program
  - Agricultural Non-Point Source Pollution Abatement and Control Program (AgNPS)
  - Climate Resilient Farming (CRF)
  - CAFO Waste Storage and Transfer System Program
  - Source Water Buffer Program
  - Conservation Reserve Enhancement Program (CREP)
  - State Aid to Districts
- Other Programs from NYSDEC, USDA-NRCS, USDA-FSA, Cornell, USEPA, and others….
  - NRCS EQIP
  - Cornell/NYS Dairy Advancement Program

+ Significant, on-going investment by farmers.

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Progress Through the AEM Tiers

In the Cayuga Lake Watershed

AEM Tier Work in the Cayuga Lake Watershed	Total Completed
Tier 1 Inventory	208
Tier 2 Assessments	179
Tier 3 Plans	98
Tier 4 BMP Systems (in addition to AgNPS, CRF, and CAFO Programs)	53
Tier 5A Assessment Updates	25
Tier 5B Plan/BMP Evaluations	37

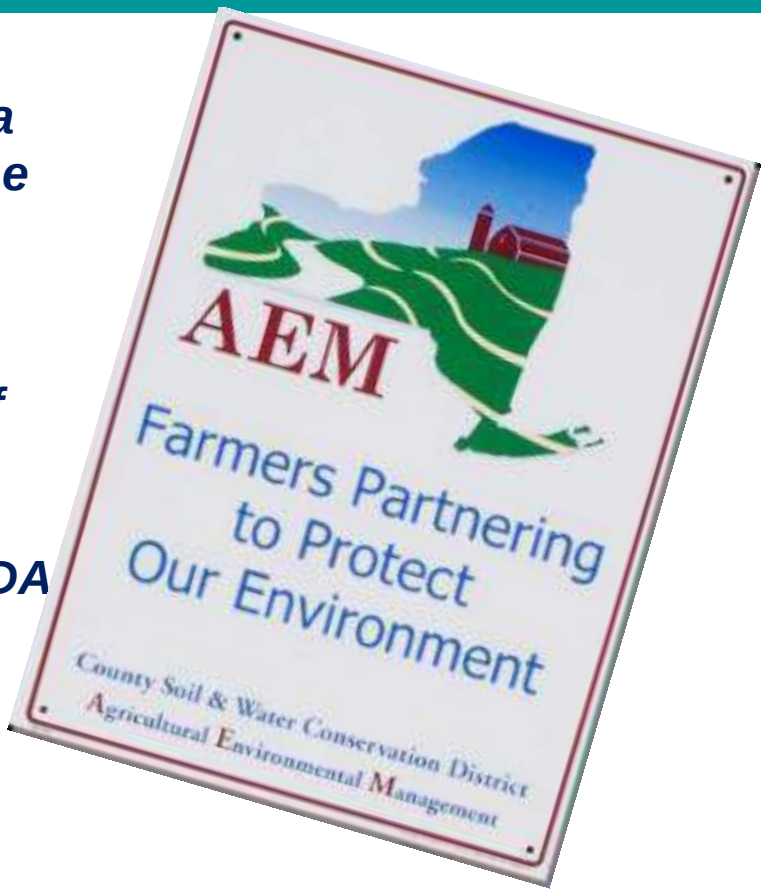
+ approx. 150 BMP implementation projects via the AgNPS, the CRF, and the CAFO Storage programs

- ***~$11.5M from NYS***
- ***~$7M from farmers***
- ***across the full range of BMP Systems***

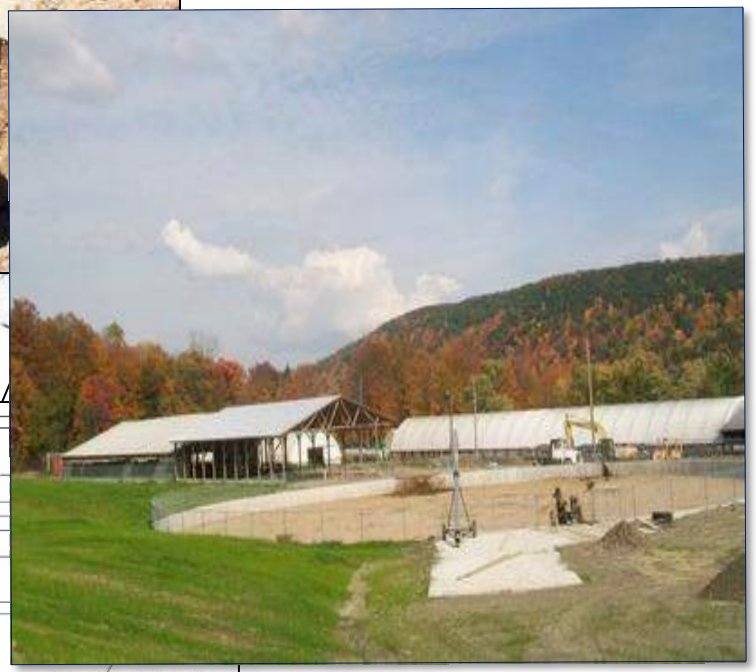
+ significant addition if USDA effort is included

+ all CAFO regulated farms implemented

+ education, outreach, partner activities, program evaluation, and reporting



Farmstead Facilities Plan and Practices



Manure Storage and Transfer System
Waste Storage Facility Standard (NY313), Waste Transfer Standard (NY634), etc.

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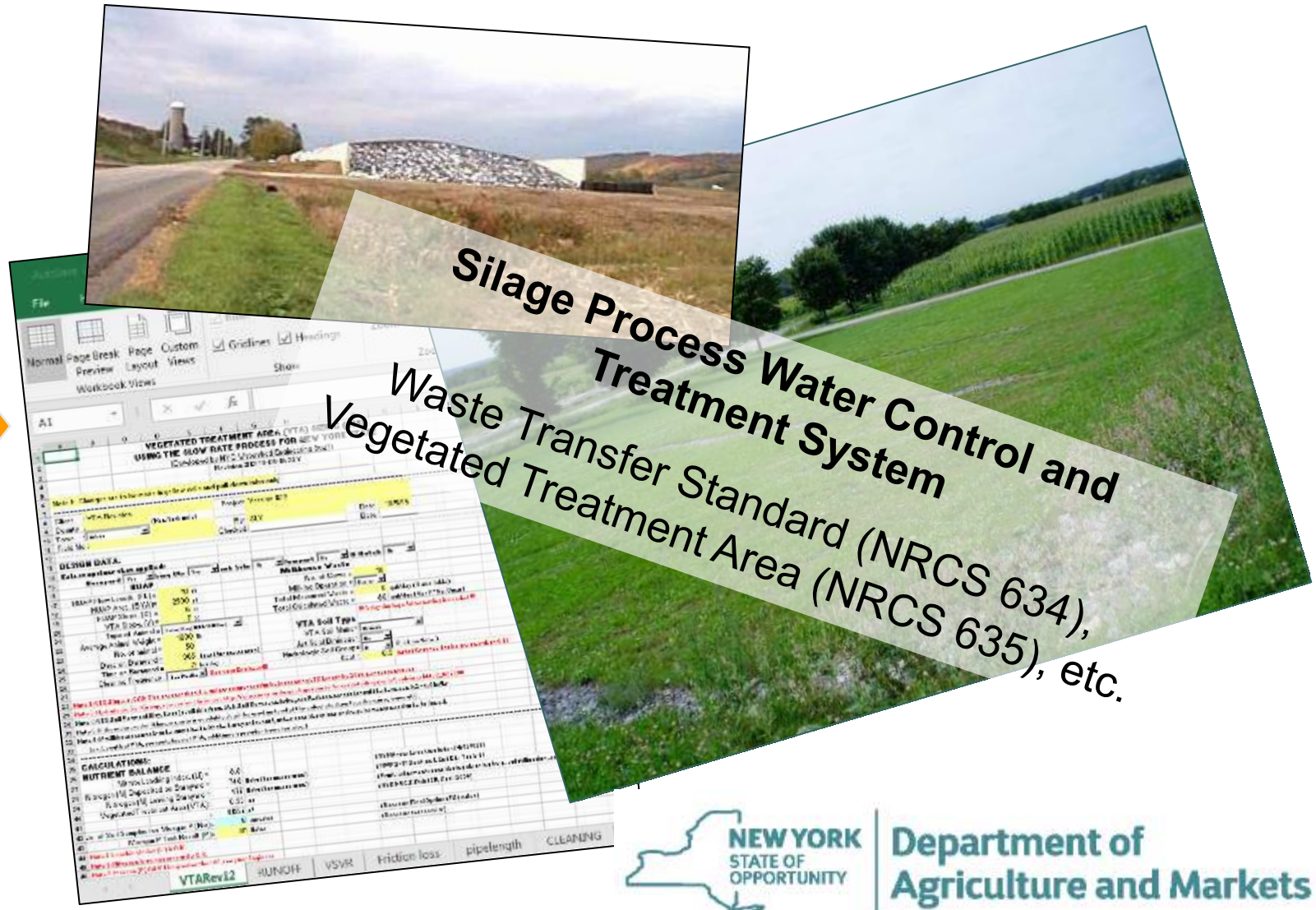

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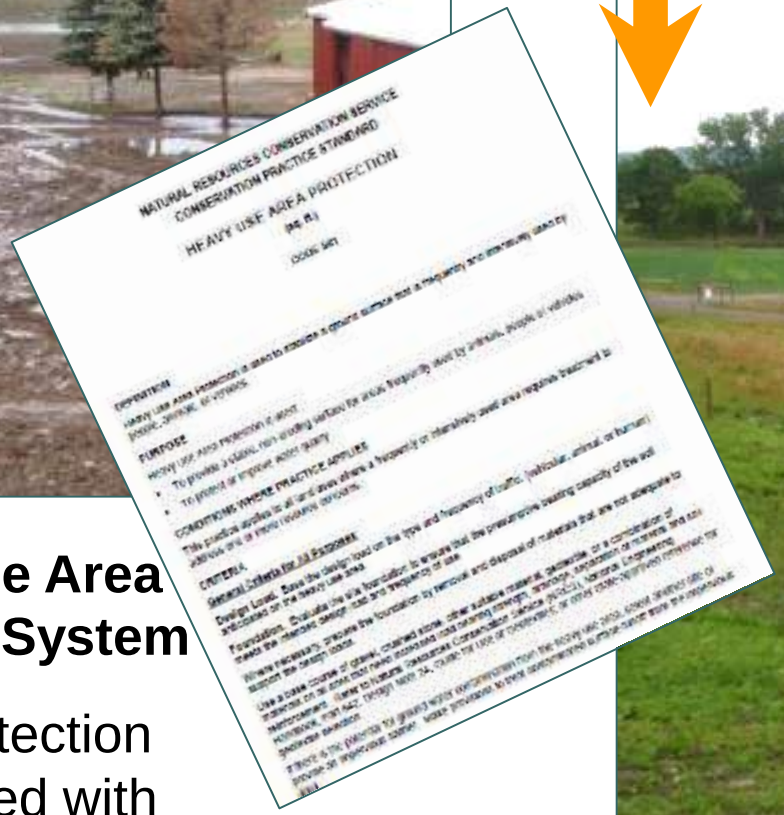
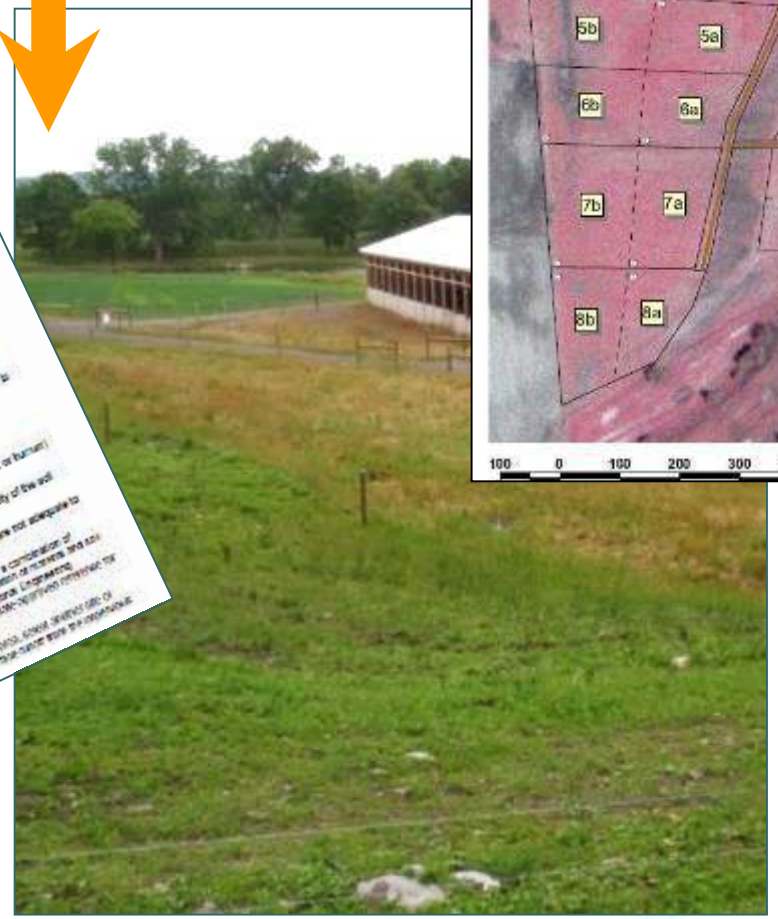
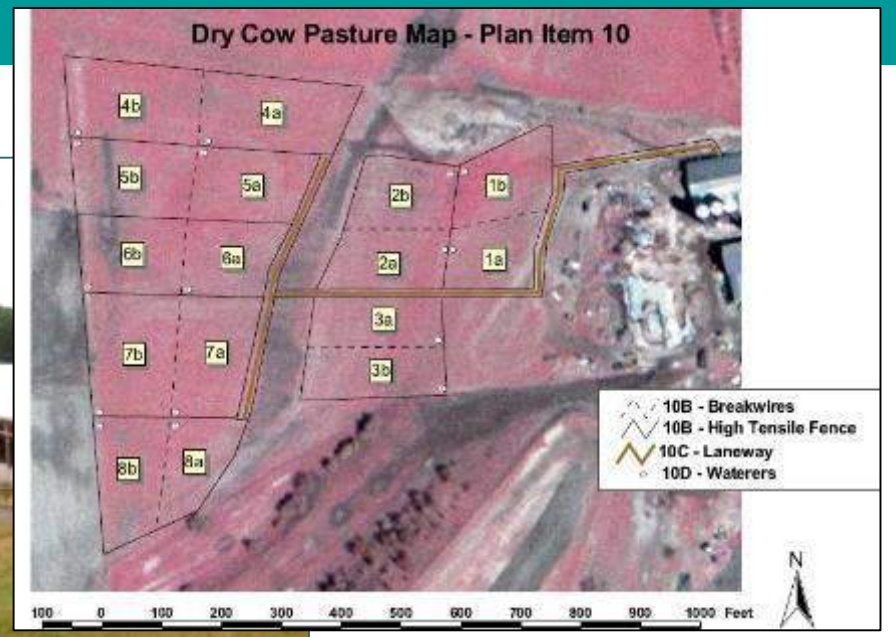

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
HEAVY USE AREA PROTECTION
(Ac.)
CODE 561

DEFINITION
Heavy use area protection is used to stabilize a ground surface that is frequently and intensively used by
PURPOSE
Heavy use area protection is used
- To provide a stable, non-eroding surface for areas frequently used by animals, people, or vehicles.
- To protect or improve water quality.

CONDITIONS WHERE PRACTICE APPLIES
This practice applies to all land areas where a heavy use area is needed.

CRITERIA
General Criteria for All Purposes
Design Load. Base the design load on the type and frequency of traffic, (vehicular, animal, or human)
Location. Situate the site to minimize the
Foundation. Evaluate the site foundation to ensure that the preparations meeting capacity of the soil
Where necessary, ensure the foundation by removal and disposal of materials that are not adequate to
Use a base course of gravel, crushed stone, other suitable material, geotextile or a combination of
Reinforcement. Refer to Natural Resources Conservation Service (NRCS), National Engineering
If there is the potential for ground water contamination from the facility see NRCS, local, state, or tribal





Livestock Heavy Use Area Runoff Management System

Heavy Use Area Protection (NRCS 561) integrated with Prescribed Grazing (NRCS 528), Roof Runoff Structure (NRCS 558), etc.

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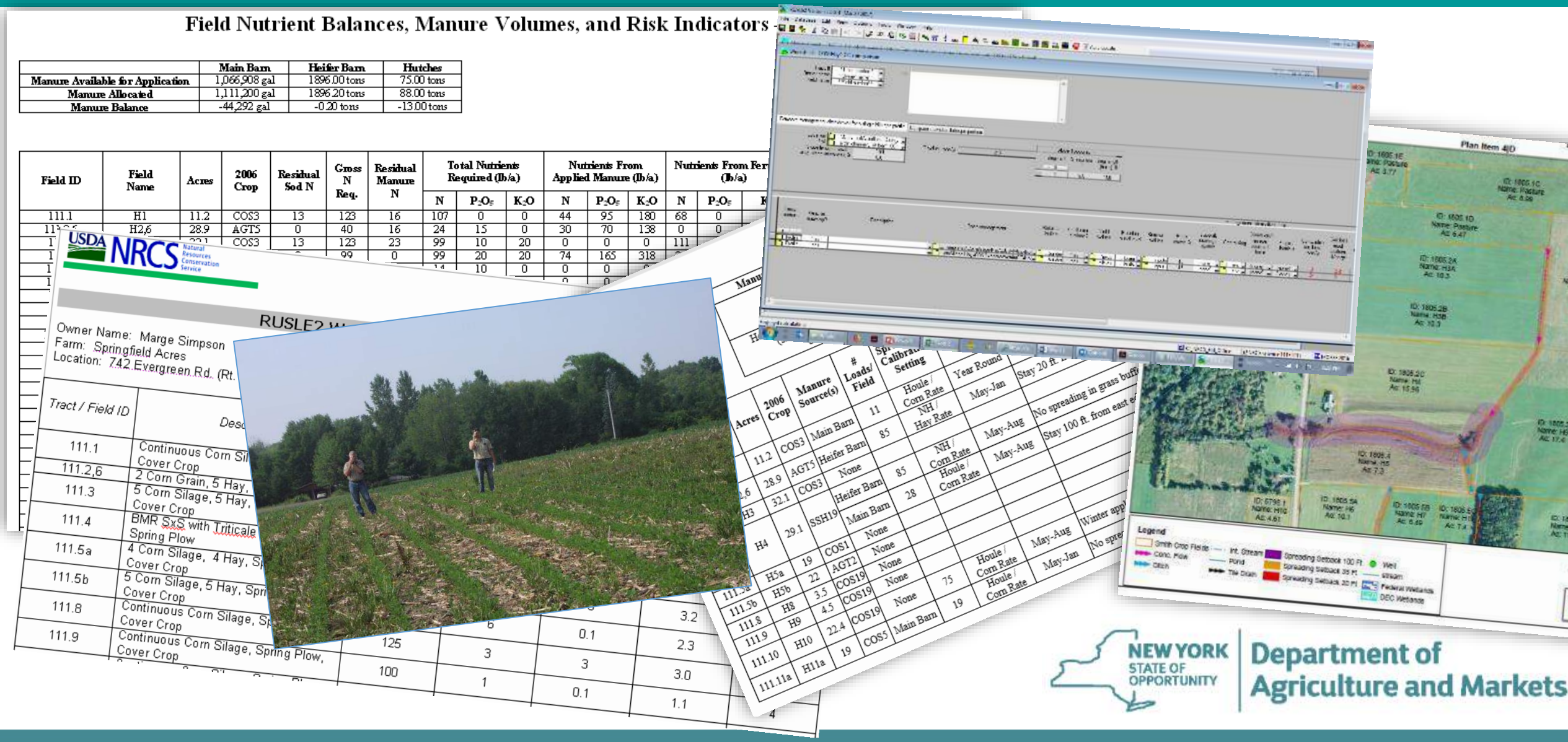
Soil Conservation & Nutrient Management Planning



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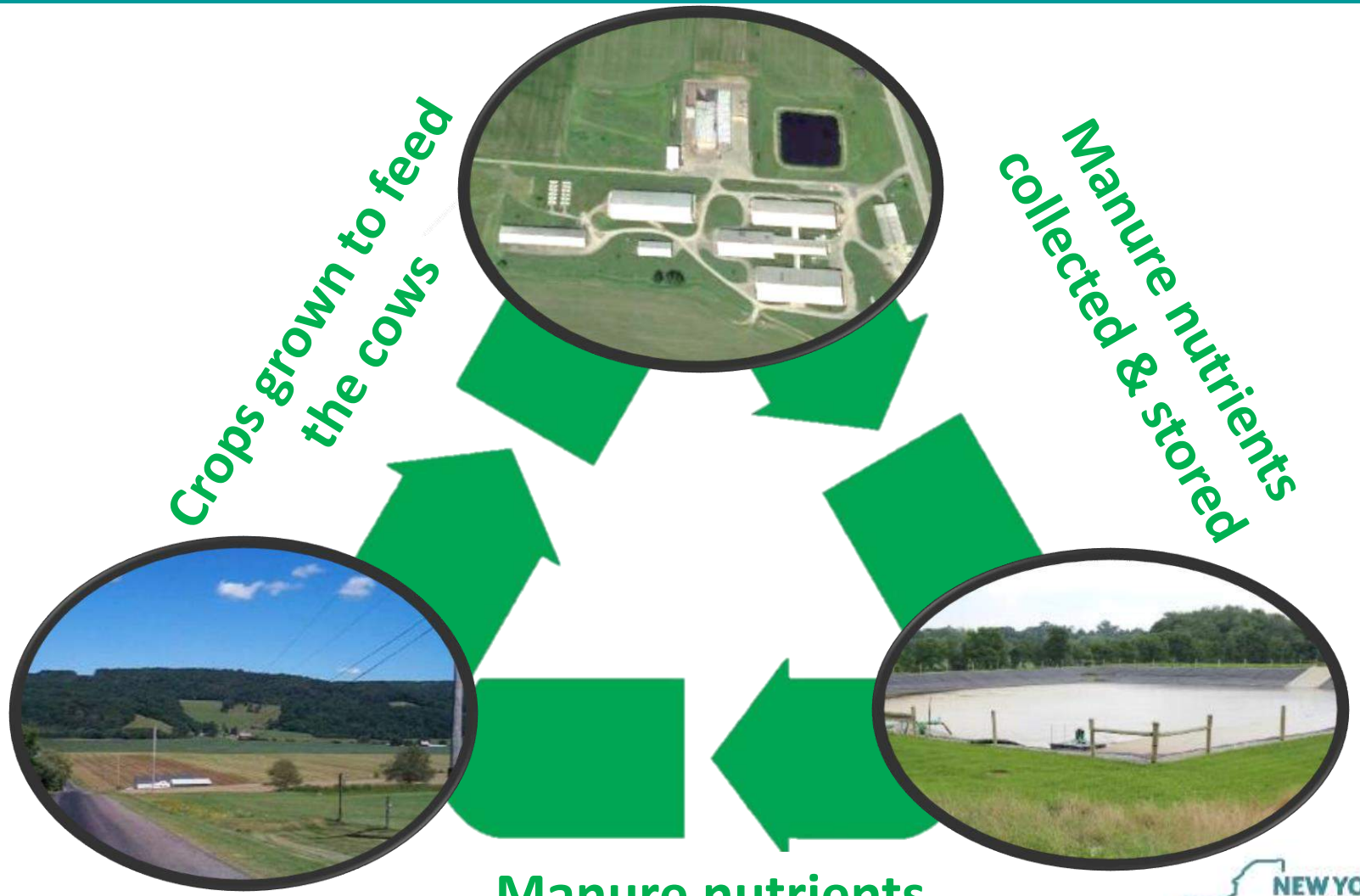
Multiple Barrier Approach

Nutrient Management Systems

Conservation Tillage Practices, Strip Cropping (NRCS 585), Grassed Waterway (NRCS 412), Filter Strip (NRCS 393s), Cover Crop (NRCS 340), Nutrient Management (NRCS 590), Buffer Practices, etc.



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Protecting and enhancing the environment and the viability of agriculture in New York State.

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NYS Soil and Water Conservation Committee

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