



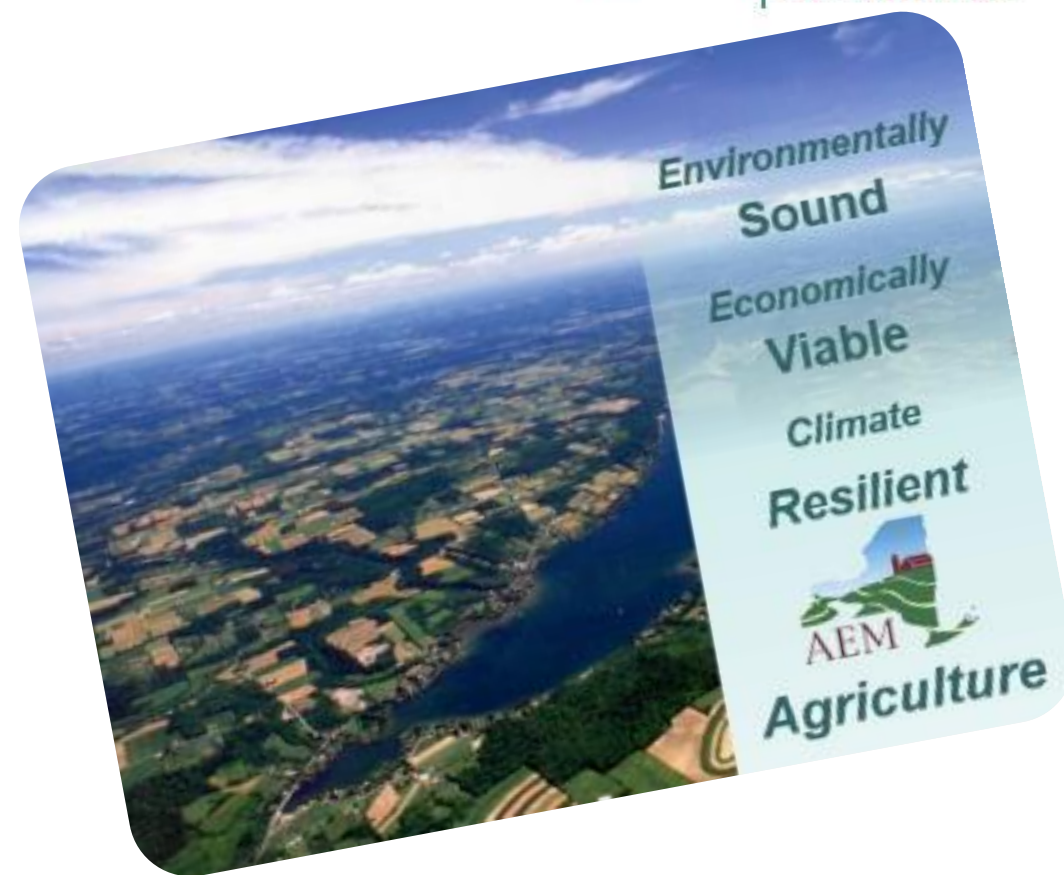
Department of
Agriculture and Markets



Soil and Water
Conservation
Committee

Agricultural Environmental Management

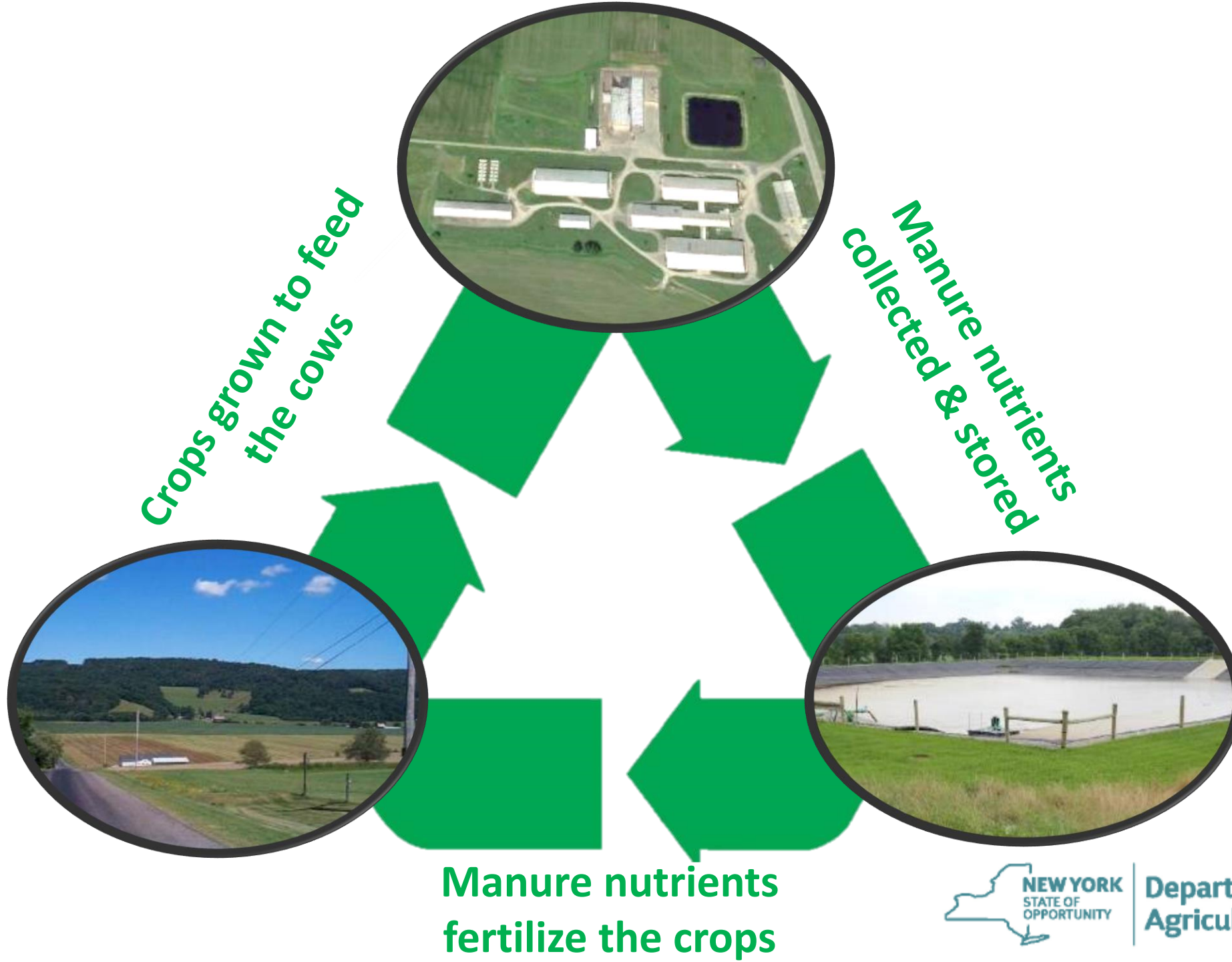
Cayuga Lake Watershed



Andrew M. Cuomo
Governor

Richard A. Ball
Commissioner

Greg Albrecht
AEM Coordinator/NMP Specialist

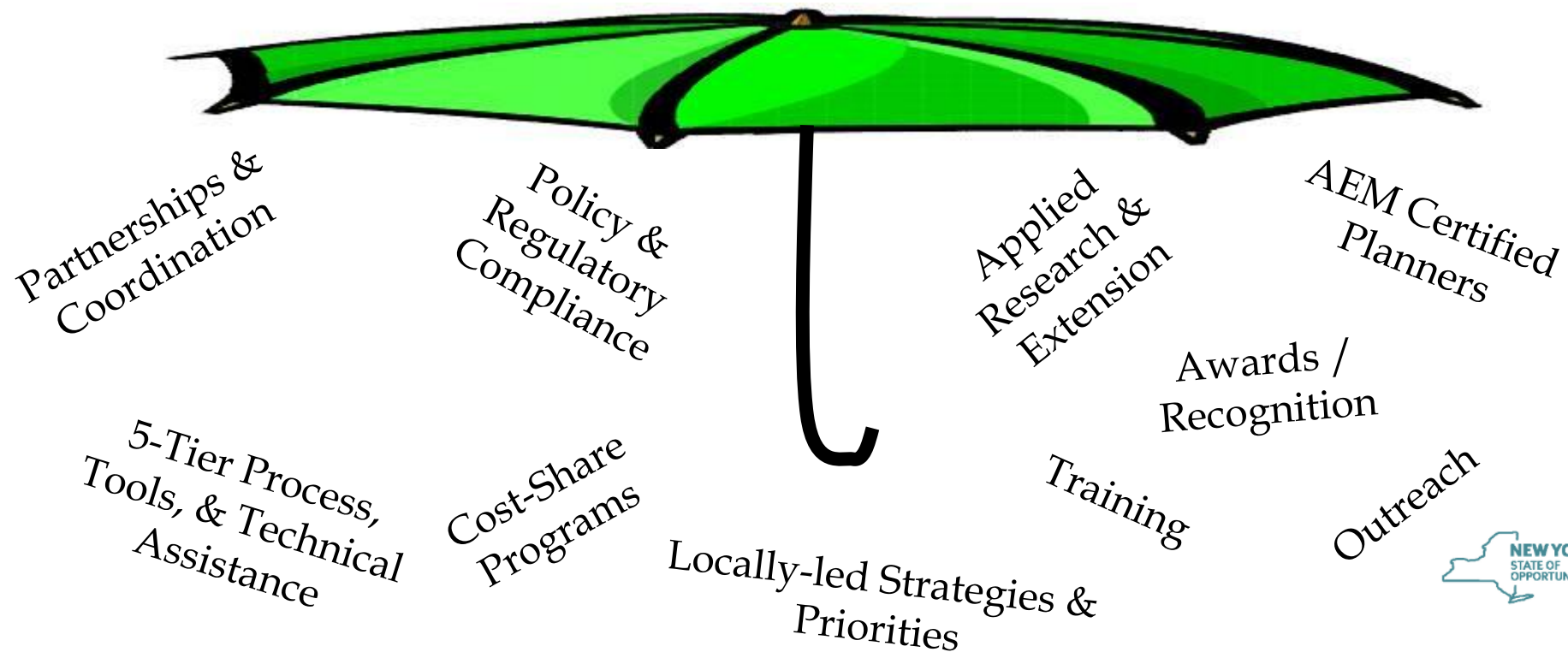


Agricultural Environmental Management (AEM)

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.



Department of
Agriculture and Markets

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 |



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-Borne Pathogens
- Pasture Management
- Livestock Odor Management

plus

GHG Mitigation Opportunities

Equine

Greenhouse

Vineyard (www.vinebalance.com)

Fruits & Vegetables

Long Island

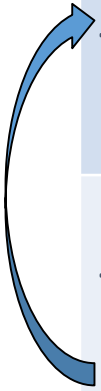
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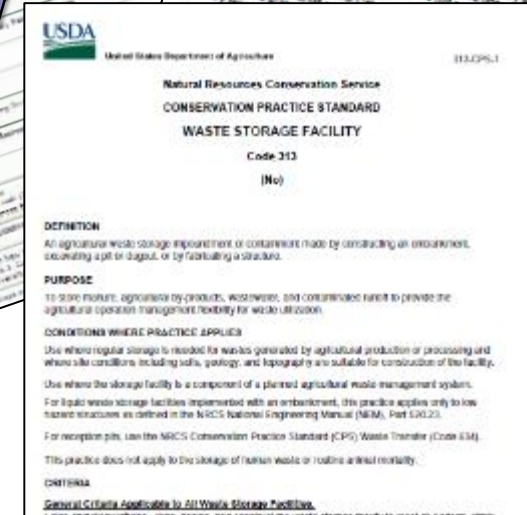
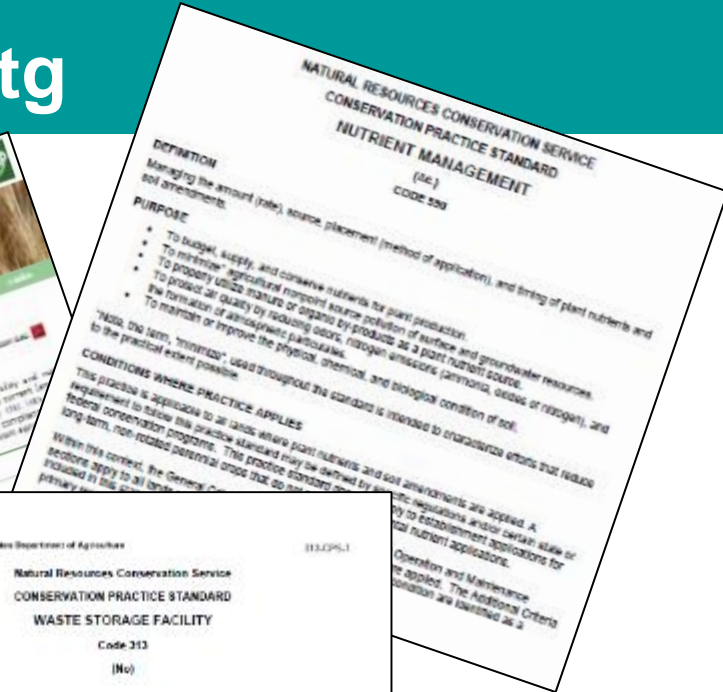
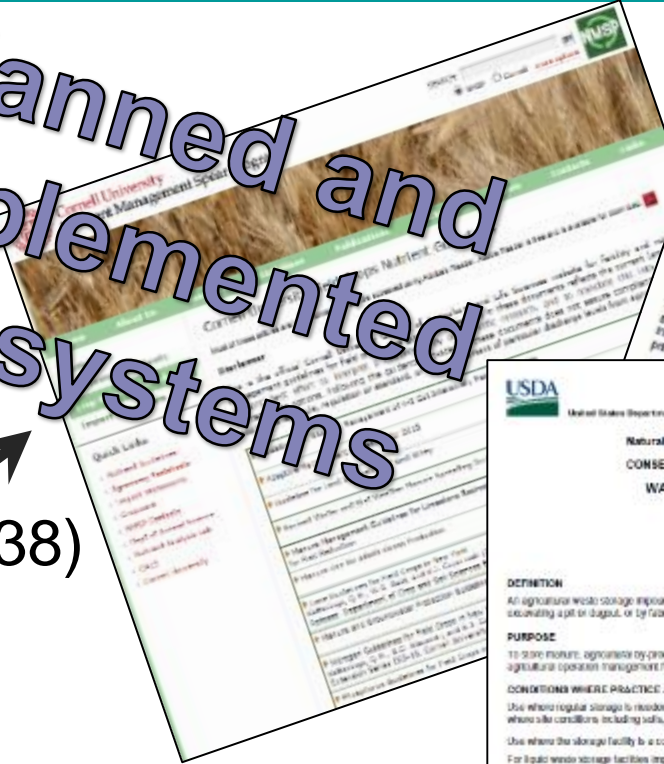


Many NRCS Standards are used in AEM Tier 3 Plans

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
 - Conservation Reserve Enhancement Program (CREP)
 - State Aid to Districts
- Other Programs from NYSDEC, USDA-NRCS, USDA-FSA, Cornell, USEPA, and others....
- + Significant, on-going investment by farmers.



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Agriculture and Markets**

Farmstead Facilities Plan and Practices

Farmstead Facilities

Farmstead Facilities

The following addresses concentrated sources around the farmstead at Springfield Acres. The narrative is supported by illustrations, documenting the existing conditions and planned BMPs for the farmstead.

By the end of 2006, the farm will extend the west end of the freestall barn to accommodate a total of approximately 190 milking cows, 40 dry cows, and 100 yearling to freshening heifers. The milking parlor will be expanded to a double-S. The plan for concentrated sources has been developed in accordance with these future business expansion plans.

1. Plan Items 1, 3, and 7

... were evaluated in April 2001 by Ned Flanders, N... SWCD, for an EQIP ranking. The milks... Heifers are kept in the tests... Road. Some of growth... area also has a

Barnyard - Plan Items 1, 3, and 7

Barnyard - Plan Item:

Existing Conditions
The facilities at Simpson's were evaluated by the Pleasanton City Engineer and the Contra Costa County SWCD. For an estimated \$10,000, heifers are kept in a small area of the barnyard. Some of the heifers are used for breeding purposes. The barnyard also has a large area of alfalfa hay stored in the barnyard. The heifers are kept in a small area of the barnyard. The barnyard also has a large area of alfalfa hay stored in the barnyard.

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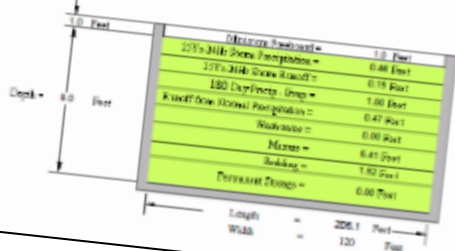
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Roof water runoff from the driveway and flow into the gutter will be moved to the back of the property and discharged into the storm sewer. The gutter will be installed and connected to the storm sewer. The gutter will be installed and connected to the storm sewer. The gutter will be installed and connected to the storm sewer.

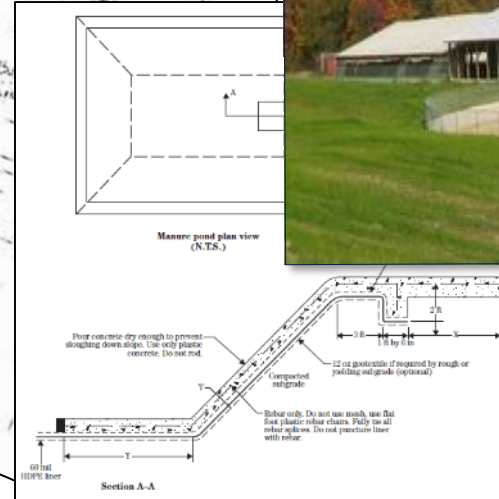
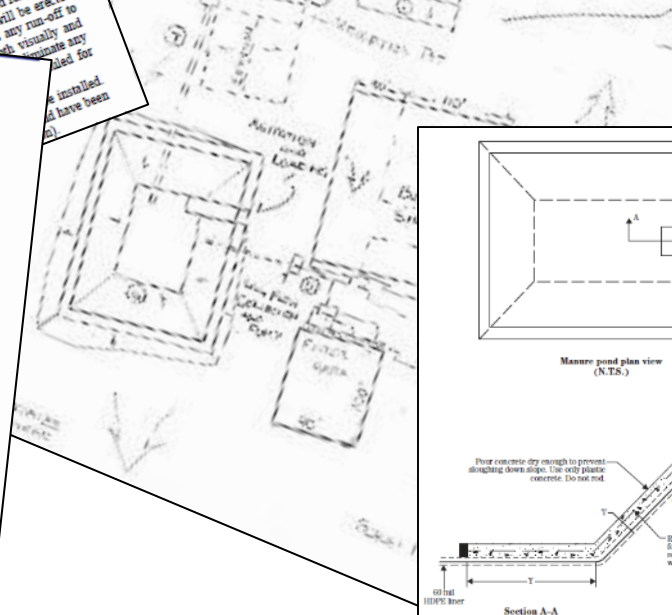
Uncovered Rectangular Storage Tank #1

| Capacity | Volume | Weight |
|--------------------|-----------------|--------|
| 133,661 Cubic Feet | 920,784 Gallons | |
| 37,683 Cubic Feet | | |

| Facility | Uncovered Rectangular | Storage Tank #1 |
|--|-----------------------|-------------------|
| Storage Period | 6 Months | |
| Wash Water | 0 Cubic Feet | 0 Gallons |
| Maint & Exit Privs. | 132,661 Cubic Feet | 900,784 Gallons |
| Bedding | 37,683 Cubic Feet | 291,121 Gallons |
| Fresh Water | 0 Cubic Feet | 0 Gallons |
| Normal Rain and 237-24Hr Storm Runoff from Drainage Area | 15,200 Cubic Feet | 113,696 Gallons |
| Normal Rain less Evap plus 237-24Hr Storm on tank surface area | 36,068 Cubic Feet | 280,785 Gallons |
| Total Volume to Store | 222,512 Cubic Feet | 1,684,388 Gallons |
| Rem Volume (if present) | 0 Cubic Feet | |
| Structural Volume (includes ramp if present) | 247,320 Cubic Feet | |



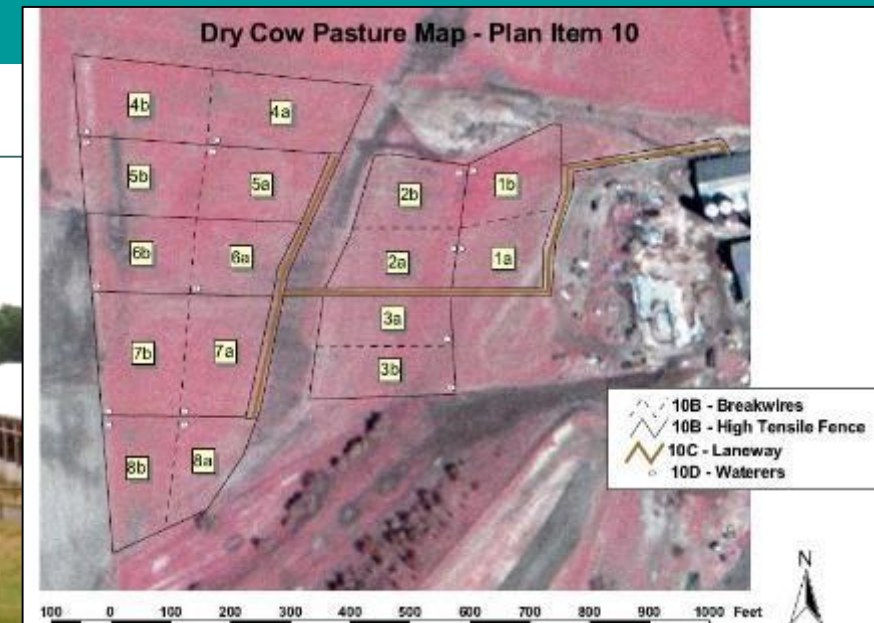
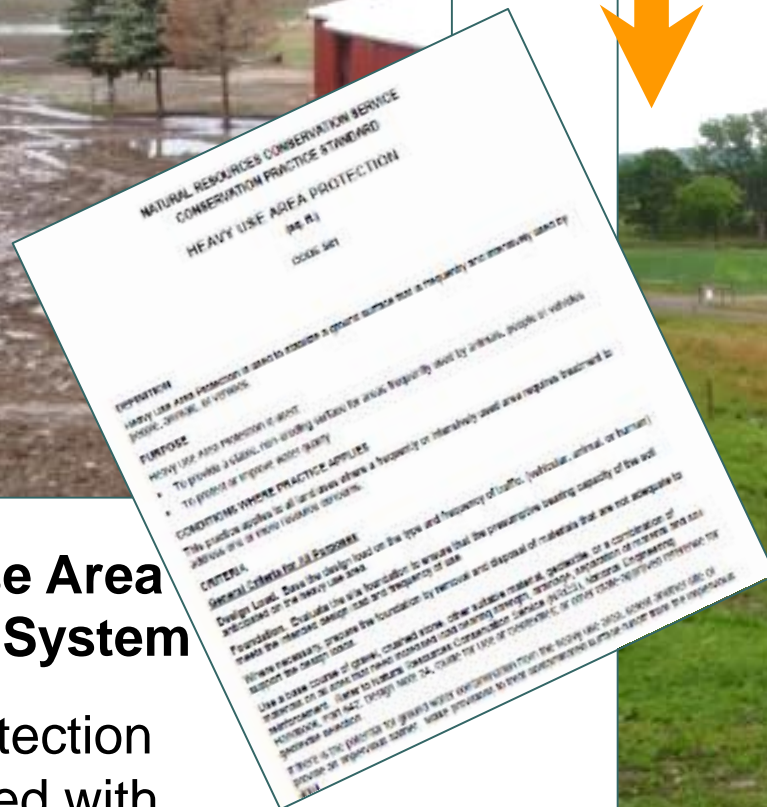
Waste Storage and Transfer System
Waste Storage Facility Standard (NY313),
Waste Transfer Standard (NY634), etc.

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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.



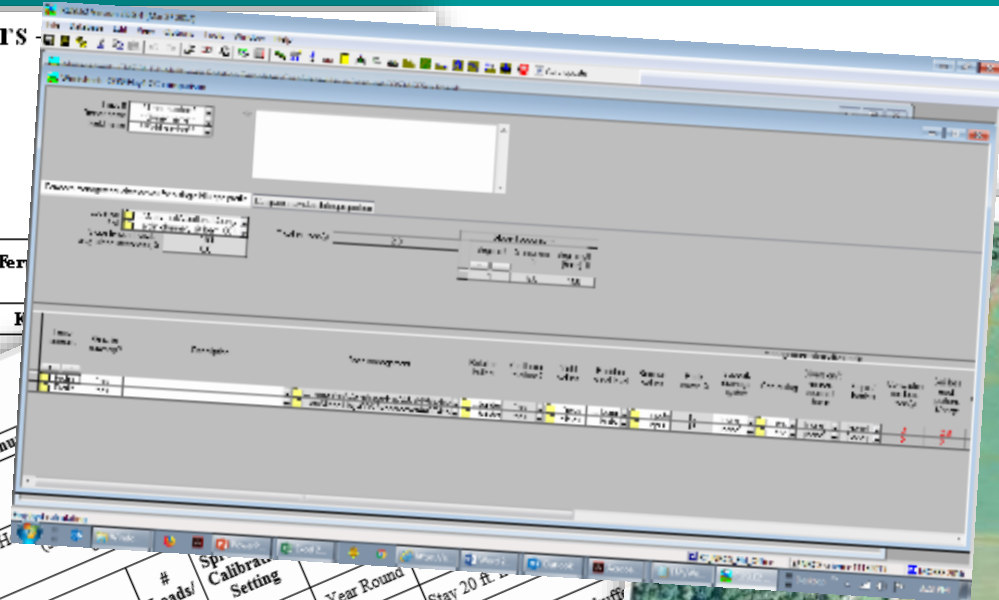
**Department of
Agriculture and Markets**

Soil Conservation & Nutrient Management Planning

Field Nutrient Balances, Manure Volumes, and Risk Indicators

| | Main Barn | Heifer Barn | Hutches |
|----------------------------------|---------------|--------------|-------------|
| Manure Available for Application | 1,066,908 gal | 1896.00 tons | 75.00 tons |
| Manure Allocated | 1,111,200 gal | 1896.20 tons | 88.00 tons |
| Manure Balance | -44,292 gal | -0.20 tons | -13.00 tons |

| Field ID | Field Name | Acres | 2006 Crop | Residual Sod N | Gross N Req. | Residual Manure N | Total Nutrients Required (lb/a) | | | Nutrients From Applied Manure (lb/a) | | | Nutrients From Fertilizer (lb/a) | | |
|----------|------------|-------|-----------|----------------|--------------|-------------------|---------------------------------|-------------------------------|------------------|--------------------------------------|-------------------------------|------------------|----------------------------------|-------------------------------|------------------|
| | | | | | | | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O | N | P ₂ O ₅ | K ₂ O |
| 111.1 | H1 | 11.2 | COS3 | 13 | 123 | 16 | 107 | 0 | 0 | 44 | 95 | 180 | 68 | 0 | 0 |
| 111.2,6 | H2,6 | 28.9 | AGT5 | 0 | 40 | 16 | 24 | 15 | 0 | 30 | 70 | 138 | 0 | 0 | 0 |
| 111.3 | H3 | 32.1 | COS3 | 13 | 123 | 23 | 99 | 10 | 20 | 0 | 0 | 0 | 111 | 0 | 0 |
| 111.4 | H4 | 29.1 | SSH19 | 0 | 99 | 0 | 99 | 20 | 20 | 74 | 165 | 318 | 0 | 0 | 0 |
| 111.5a | H5a | 19 | COS1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 111.5b | H5b | 22 | AGT2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 111.8 | H8 | 3.5 | COS19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 111.9 | H9 | 4.5 | COS19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 111.10 | H10 | 22.4 | COS19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 111.11a | H11a | 19 | COS5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Owner Name: Marge Simpson
Farm: Springfield Acres
Location: 742 Evergreen Rd. (Rt. 100)

| Tract / Field ID | Description | Acres | 2006 Crop | Manure Source(s) | # Loads/Field | Sp. Calibr. Setting | Year Round | Stay 20 ft. from edge |
|------------------|---|-------|-----------|------------------|---------------|---------------------|------------|------------------------------|
| 111.1 | Continuous Corn Silage, Cover Crop | 11.2 | COS3 | Main Barn | 11 | Houle / Corn Rate | May-Jan | No spreading in grass buffer |
| 111.2,6 | 2 Corn Grain, 5 Hay, 5 Corn Silage, 5 Hay, Cover Crop | 28.9 | AGT5 | Heifer Barn | 85 | NH / Hay Rate | May-Aug | Stay 100 ft. from east edge |
| 111.3 | BMR SxS with Triticale Spring Plow | 32.1 | COS3 | Heifer Barn | 85 | NH / Corn Rate | May-Aug | Stay 100 ft. from east edge |
| 111.4 | 4 Corn Silage, 4 Hay, Spring Plow | 29.1 | SSH19 | Main Barn | 28 | Houle / Corn Rate | May-Aug | Stay 100 ft. from east edge |
| 111.5a | 4 Corn Silage, 4 Hay, Spring Plow | 19 | COS1 | None | None | None | May-Aug | Winter apply |
| 111.5b | 5 Corn Silage, 5 Hay, Spring Plow | 22 | AGT2 | None | None | None | May-Aug | No spreading |
| 111.8 | Continuous Corn Silage, Spring Plow | 3.5 | COS19 | None | None | None | May-Aug | No spreading |
| 111.9 | Continuous Corn Silage, Spring Plow, Cover Crop | 4.5 | COS19 | None | None | None | May-Aug | No spreading |
| 111.10 | Continuous Corn Silage, Spring Plow, Cover Crop | 22.4 | COS19 | None | None | None | May-Aug | No spreading |
| 111.11a | Continuous Corn Silage, Spring Plow, Cover Crop | 19 | COS5 | Main Barn | 19 | Houle / Corn Rate | May-Aug | No spreading |



Department of Agriculture and Markets

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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Agricultural Environmental Management

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

Greg Albrecht

AEM Coordinator / NMP Specialist

Div. of Land and Water Resources

Dept. of Agriculture and Markets

NYS Soil and Water Conservation Committee

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