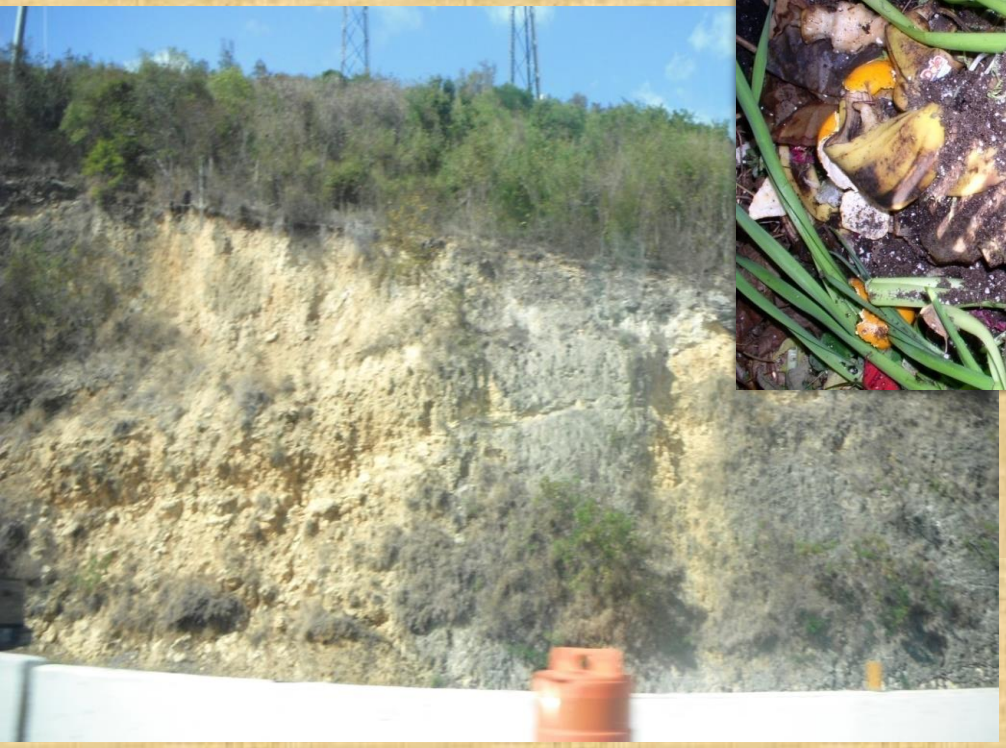
Organic Material in Socks & Blankets



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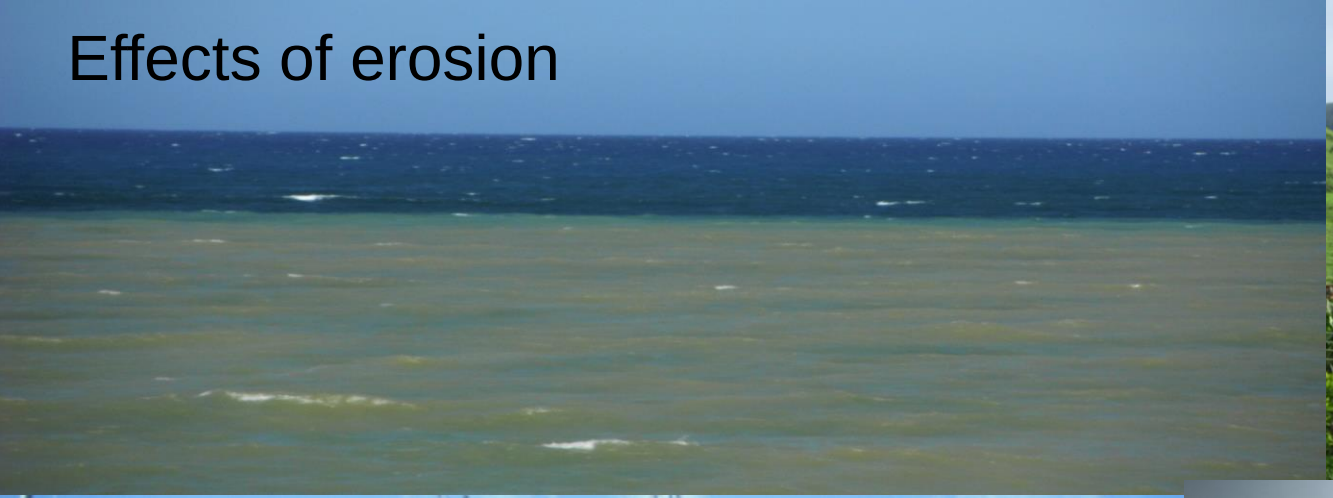
Using Compost to build soils, reduce erosion and improve soil moisture retention

- Soil and Organic Material Erosion Control interface – Building soils
- Natural nutrient and OM cycling
- Explore the use of compost based BMPs with different soil types in different climates
- Use of Socks and blankets
- How can we find good Organic matter
- Use of different organic material in different applications
- Visual Aids

Effects of erosion




CAT

The Quality of Composts & Organic Material Implications for Use

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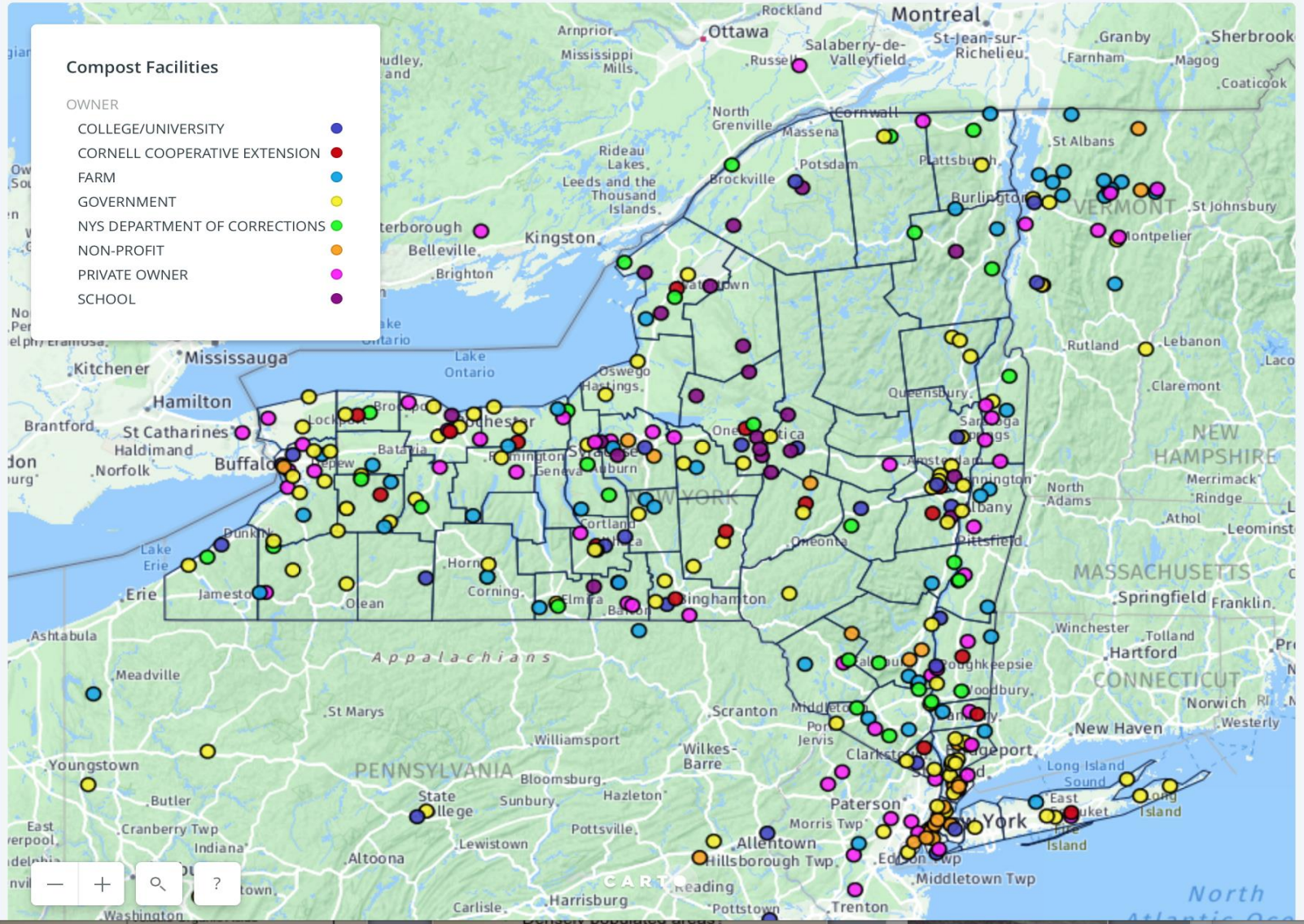
Why Organic Material

- Moisture holding capacity
- Nutrients
- Long term effect
- Controls Erosion
- Covers bare soil
- Improves tilth

To search the map: Hovering over a dot displays the facility name and services. Clicking on a dot displays all information available about the facility. To search the map for a facility, click on the magnifying glass (bottom left) and enter the city and state of the general area you are searching for the facility.



Gov's Island

Compost Parameter	Typical NYS Range		Description
PHYSICAL PROPERTIES	**Dairy***	**Poultry****	
Water holding capacity (%)	88-243	88-173	The amount of water that can be retained by compost and is available to plants.
Organic matter (%)	18-70	24-54	Material in compost that came from, or is, living matter and is composed of plant residues, microorganisms, and humus. Organic matter can often be used to determine the extent of decomposition in a compost pile. Very low organic matter may indicate heavy mixing of non-organic soil matter.
Carbon to nitrogen ratio (C:N)	11-19	4-16	A value obtained by comparing total carbon to total nitrogen. This value is one of several factors used to measure the rate of compost decomposition, though it should never be used as the only indicator.
Density (lb/ft^3)	38-58	30-60	Provides a measure of how easily air and water can move through a compost pile. Lower means better flow and higher means poorer flow.
Moisture (%)	23-53	51-78	Measure water content. Moisture content changes over time as organic matter is broken down, but ideal range is 60% to 80%.
Inert or oversize matter (%)	1-11	1-10	Any material that does not have nutritive of chemical value in compost, such as rocks, pebbles, glass, plastic, and other debris or matter.
PLANT NUTRIENTS	**Dairy***	**Poultry****	
Total nitrogen (%)	1-3	1-7	A measure of total nitrogen. This value includes both organic and inorganic forms of nitrogen in compost. In mature composts, most nitrogen should be organic, which indicates that a compost is mature.
Organic nitrogen (%)	1-3	1-7	The fraction of total nitrogen that is chemically associated with carbon in some form. In mature composts, organic nitrogen should explain most of total nitrogen presence.
Phosphorus (%)	0.2-1	0.3-2	An important plant macronutrient and mineral. In excess, a potential environmental contaminant.
Potassium (%)	0.2-2	0.3-3	An important plant macronutrient and mineral. Important for water movement into and out of plant cells.
Calcium (%)	1-6	6-15	An important macronutrient. Component of plant cell walls and enzymes.
Magnesium (%)	0.4-1	0.5-1	An important macronutrient. Important part of plant energy production from sunlight.
Nitrates (ppm)	<2-878	<2-2033	A form of inorganic nitrogen that is readily available to plants.
Nitrites (ppm)	<2-3	<2-<2	A form of inorganic nitrogen produced under certain conditions from ammonia that is toxic to plants. Elevated levels in compost may cause damage to plants.
Chloride (ppm)	137-	270-	Plant micronutrient. Important for cellular water transport and plant energy

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Chloride (ppm)	137-6650	270-10471	Plant micronutrient. Important for cellular water transport and plant energy production.
Sulfates (ppm)	<4-898	55-3060	A form of sulfur, which is a plant macronutrient. Important for general plant functions.
Copper (ppm)	26-572	16-93	Plant micronutrient, but toxic to plants at elevated levels. If copper sulfate is used in agricultural settings, then compost should be tested for copper.
Iron (ppm)	1106-13886	293-10765	Plant micronutrient.
Zinc (ppm)	99-349	171-597	Plant micronutrient, but toxic to plants at elevated levels.
Ammonia	4-18	644-2347	Toxic to plants. In compost, animal excretions are a common source. A source of available nitrogen.

HEALTH CONCERNS	**Dairy***	**Poultry****	
Cadmium (ppm)	1-4	2-5	A potential health risk and potential environmental contaminant.
Arsenic (ppm)	<6.5-14	<6.5-15	A potential health risk and potential environmental contaminant.
Fecal coliforms (most probable number/gram)	<3-6580	<3-7	An indicator or relative health risk from bacteria that grow in conditions matching that of the human digestive tract. Note – Many fecal coliforms don't cause illness, but grow in similar conditions as those microbes that do.
Salmonella (most probable number/4 grams	1.2-3.0	1.0-1.1	An indicator of relative health risk. Note – only select species of *Salmonella* cause illness, and conditions must also be ideal for sickness to occur.

PLANT RESPONSE	**Dairy***	**Poultry****	
% germination	88-105	9-102	Percent of cress germinating in control vs compost (diluted to standard salinity).
% growth	57-102	12-113	Weight of cress grown in control vs compost (diluted to standard salinity). Expressed as %.
Weed seeds	0-16	0-12	Weed seeds are undesirable in gardening, potting soils, and other applications. Weed seed counts are valuable for ensuring low values.

Crop Requirements & Soil Testing

- Test soil nutrients
- Organic Material-Can you have too much
- pH
- Know crop requirements

Improves Highly Compacted Soils

Hydro-seed with Compost/Soil Mix


March 2007

Application to 1:1 ROCK SLOPE
2” compost mulch w/native seed mix
Barton Creek Development – Austin, TX
AUGUST 17, 2002

8 MONTHS LATER
IRRIGATION INSTALLED, NEVER USED


DEC 2 2004

West Cypress Hills on October 05, 2004. Before Compost Application


JAN 11 2005

Soil placed on top of Compost??

Wetland Mitigation in Adirondack Park

Establishing Vegetation

Compost Socks


OCT 16 2003

Filter Tubes Installed for Storm Water Protection

Tree Establishment


3 years without amendment


3 years


GL100

Tree Planting without Compost


2017/03/09

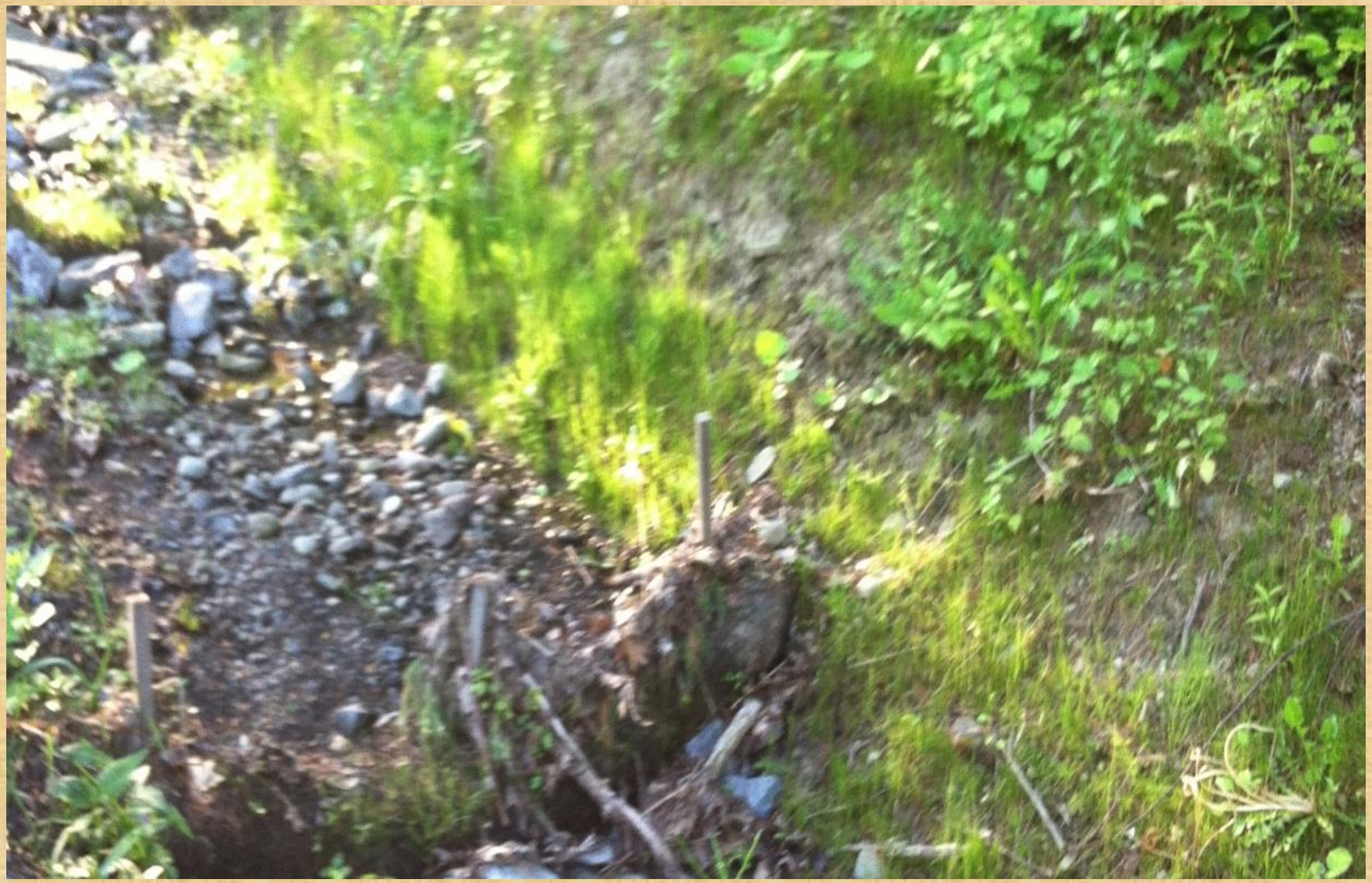
Brooktondale


Dryden


Undercut bank


4 months later

Socks in road ditches



Eroding Stream Bank

Swale at Upper Buttermilk


MINISINK SITE


COMPOST
SOIL NEEDS IT
FEED THE SOIL
Landscaping
Backfilling
Cornell Waste Management Institute
Land Spreading
Top dressing
Gardening
SPREAD IT AROUND

Landscaping Project


YANMAR
CAUTION

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Homer

Recycling Organics Makes Good Sense!

Healthy Soils =
Healthy Food!

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