

A close-up photograph of a sheep's face, looking directly at the camera. The sheep has thick, light brown wool. A green ear tag is visible on its left ear, and a white tag with the number '13' is on its right ear. A brown speech bubble with a white border is positioned in the upper right, containing the text 'Ewe care about clean water?'. In the background, two other sheep are visible in a grassy field under a clear sky.

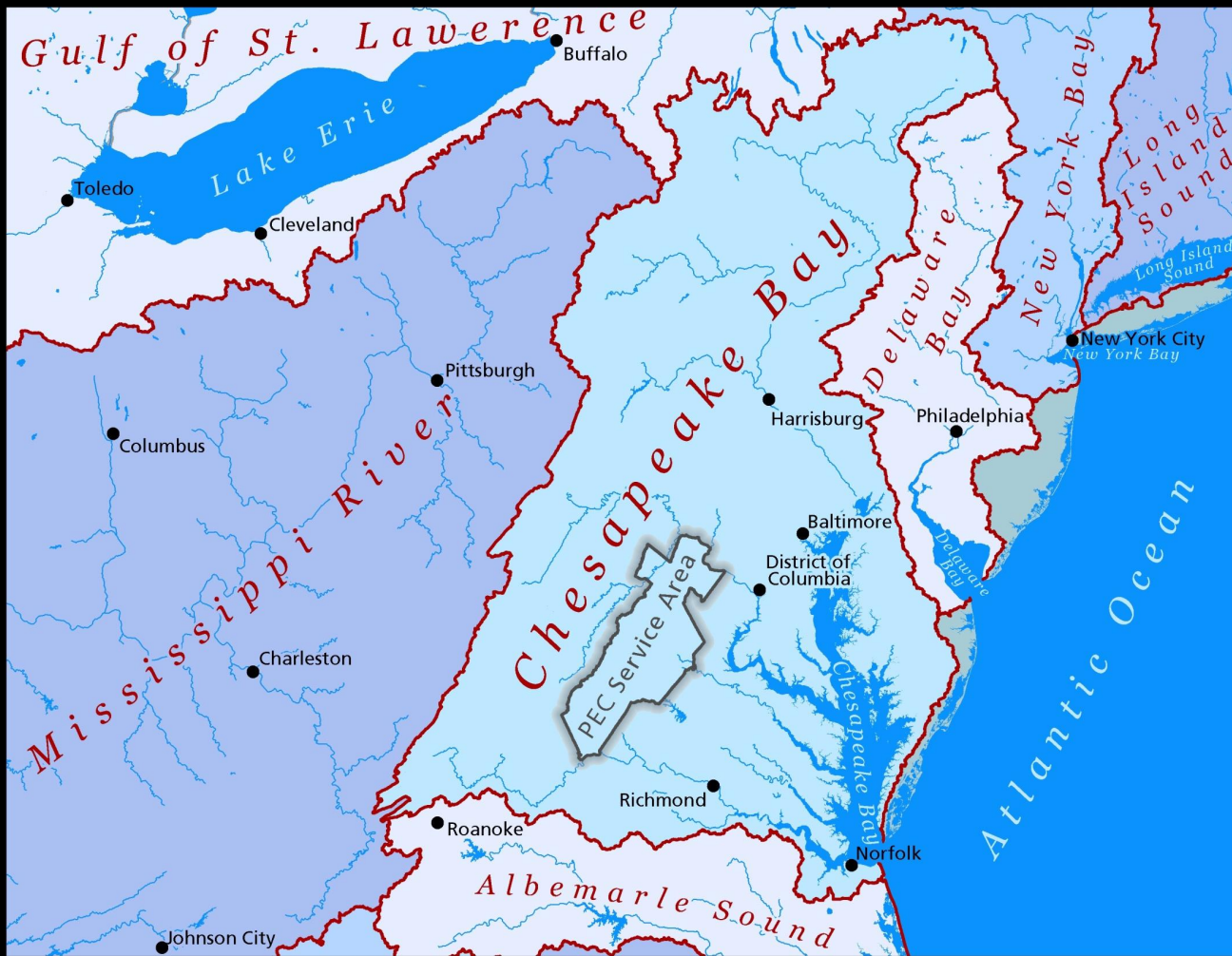
**Ewe care about
clean water?**

A Case Study in Renovating Worn-out Pastures

pecva.org/pastures

The Piedmont Environmental Council service territory



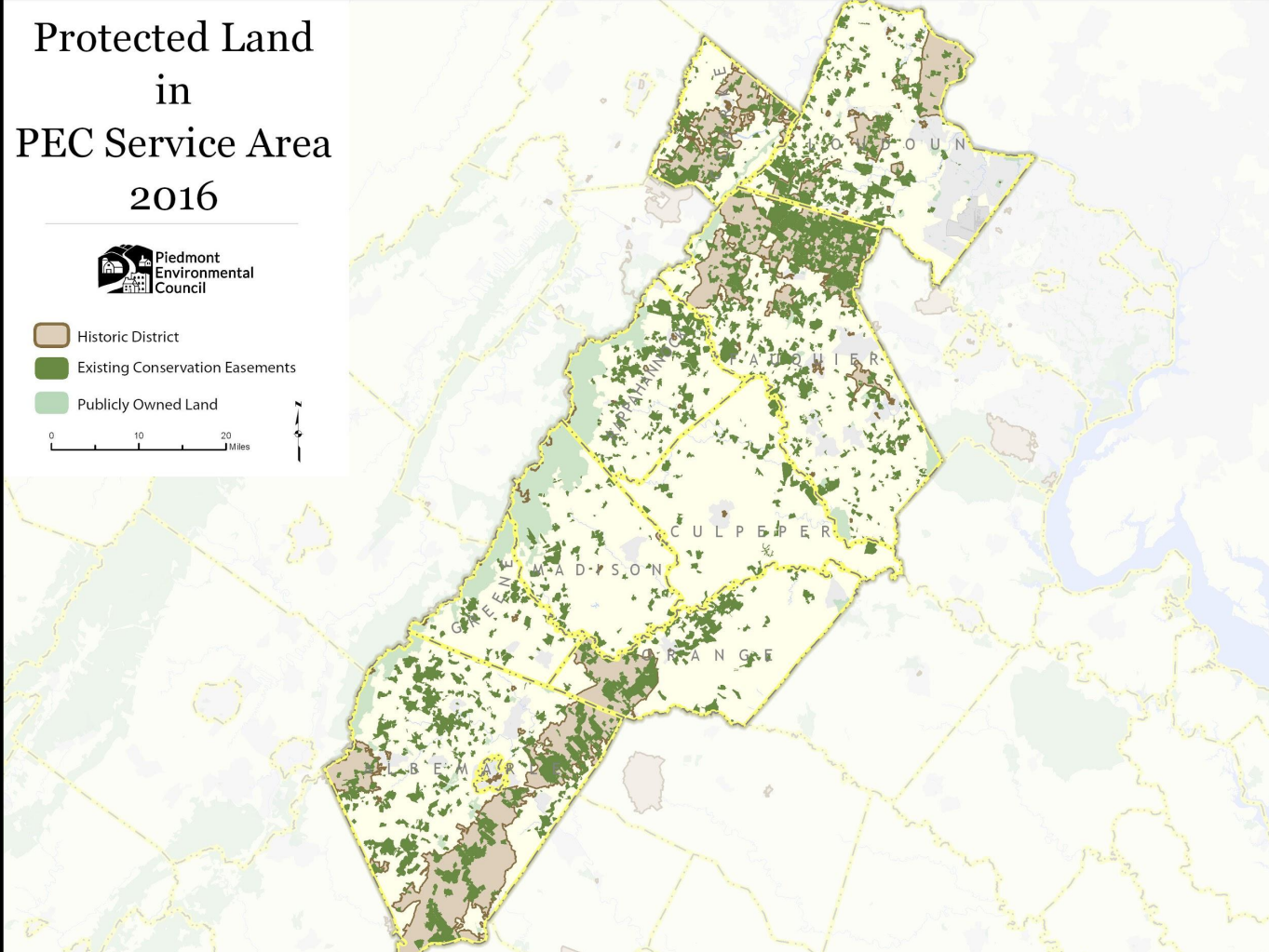


Protected Land in PEC Service Area 2016



-  Historic District
-  Existing Conservation Easements
-  Publicly Owned Land

0 10 20 Miles



Clean **water** depends on
what we do with the **land**.



Bean Hollow Grassfed

Location: Rappahannock County, VA

Established: 2012

Property size: 200 acres, 110 in pasture acres

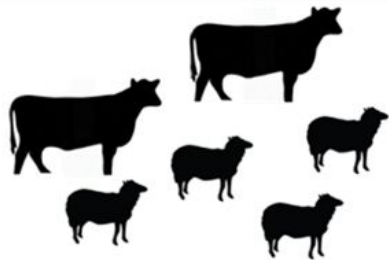
Animals: Cattle and sheep (Katahdin and Dorper)

Problem: Overgrazed pastures have led to poor soil health and reduced farm profitability.

A top-down view of a pasture showing signs of overgrazing. The ground is a mix of brown soil, scattered rocks, and sparse vegetation. A central patch of green grass is surrounded by a dense layer of dry, yellowish-brown grass stalks. The overall appearance is that of a degraded and undernourished pasture.

Overgrazed pastures

Livestock Overgrazing



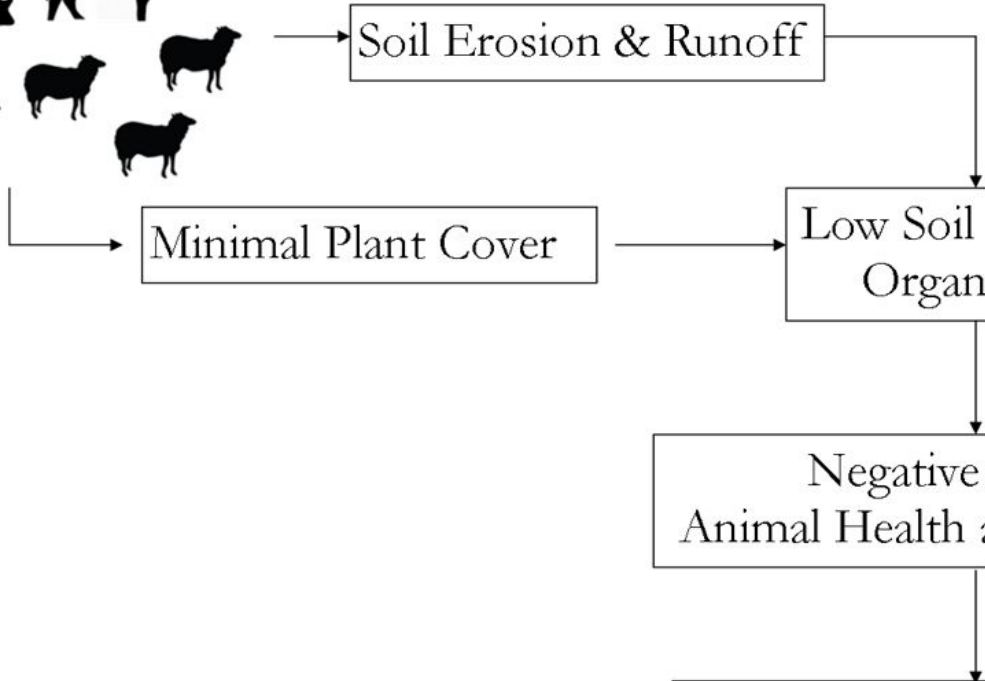
Soil Erosion & Runoff

Minimal Plant Cover

Low Soil Biology and Organic Matter

Negative Effect on Animal Health and Weight Gain

Reduced Farm Profitability \$





The Piedmont Environmental Council

Overgrazing: It's More Nuanced Than That

 SOUNDCLLOUD



pecva.org/pastures



Bean Hollow Grassfed

Innovations:

- Different watering and fencing system
- Native warm season grass planting
- Rotational grazing plan
- Mob-grazing cattle and sheep together

How exactly...

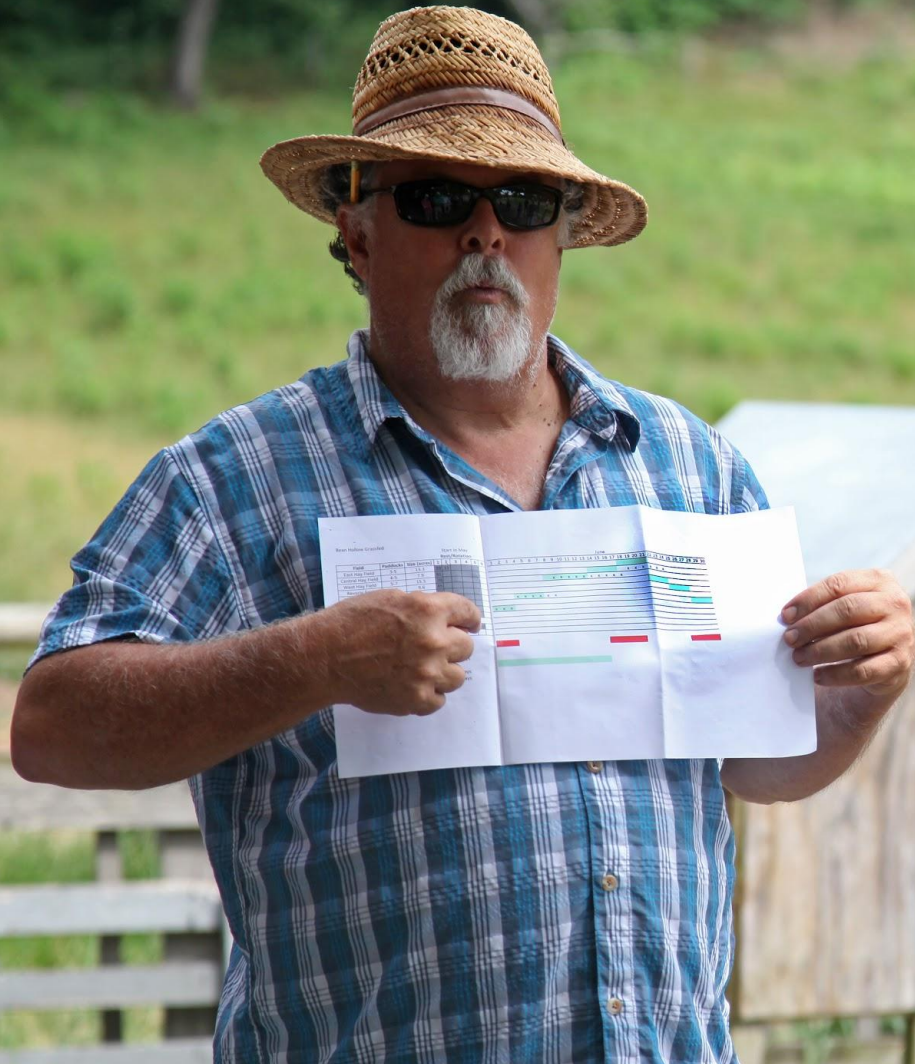
- 100 acres in 10 permanent pastures
- Sheep and cattle graze in one large mob
- Mixed cool season grasses and legumes
- Planted warm season grasses (Big Blue Stem, Indian Grass)
- Use polywire to create smaller temporary paddocks
- 2-4 acres
- 1-3 day use
- 30-50 day rest
- Stockpile fescue for winter
- Feed large round bales in pasture after stockpile





Watering and Fencing

Rotational Mob-grazing Plan



Run!!!!





The Piedmont Environmental Council

You Might Like That Salad

In album: Improved Soil Health Through Livestock and Pasture Dive..

1 month

Learning



pecva.org/pastures



Native Warm Season Grasses



The Piedmont Environmental Council



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Improved Soil Health Through Livestock and Pasture Diversity Album · 2017

1 month

Learning



1 Introduction to the Farmer/Scientist Mike Sands

▶ 13



2 Overgrazing: It's More Nuanced Than That

▶ 9



3 Why Graze Cattle and Sheep Together?

▶ 8



4 A Disturbance In The Field

▶ 5



5 You Might Like That Salad

▶ 12



6 Native Warm Season Grasses: Avoiding The Summer Slump

▶ 10



7 (Not) Making Hay

▶ 2



8 Aren't Those Just Weeds?

▶ 6



9 I Can See The Improvements

▶ 12



10 Three Tips For Getting Started

▶ 5



Infrastructure Investment

Investment	Cost
Fencing: exclusion, subdivision and livestock corridor	\$37,950
Water Sources	\$17,650
Native Warm Season Grasses	\$6,573
Total Cost	\$62,173
NRCS/Soil & Water Cost Share	\$42,299
Net Investment from BHG	\$19,874

Monitoring



Monitoring





Monitoring

Monitoring





Field Days

COMPLETED DATE
Oct 26, 2015
RECEIVED DATE
Oct 22, 2015

**PIEDMONT ENVIRONMENTAL
MIKE KANE
PO BOX 460
WARRENTON, VA**

Questions? Contact:
Rappahannock County Office
311 J Gay Street
P.O. Box 119
Washington, VA 22747
540-675-3619

LAB NUMBER	SAMPLE IDENTIFICATION	OR MA
286		
86718	WEST	5
86719	BIG TREE	4
86720	NO TREE	4
86721	NWSG	6

LAB NUMBER	SURFACE		depth (in)
	ppm	lb/A	
286			
86718			0-6
86719			0-6
86720			0-6
86721			0-6

Sample ID	Field ID
WEST	WESTFIELD

Analysis	P (lb/A)	K (lb/A)
Result	10	40
Rating	L+	V

Analysis	Soil pH
Result	6.0

Crop: Orchardgrass/Fescue-Clover Pas

Virginia Cooperative Extension



Bio

Report prepared for:
Piedmont Environmental Coun
Mike Kane
PO Box 460
Warrenton, VA 20188 USA
Report Sent: 10/29/2015
Sample#: 01-12192
Unique ID: NWSG
Plant: fescue
Invoice Number: 12896
Sample Received: 10/22/2015
mkane@pecva.org

Organism Biomass Data	Dry Weight	Active Bacteria (µg/g)	Total Bacteria (µg/g)
Results	0.790	48.4	1297
Comments	In Good Range	Below range	Above range
Expected Range	Low: 0.45 High: 0.85	90 180	600 1200

	Protozoa (Numbers/g)		
	Flagellates	Amoebae	Ciliates
Results	7283	175481	1754
Comments	Good	High	High
Expected Range	Low: 5000 High: 50000	5000 50000	0 100

Organism Biomass Ratios	Total Fungi to Tot.Bacteria	Active to Total Fungi	Active to Total Bacteria
Results	0.43	0.01	0.04
Comments	Low	Low	Low
Expected Range	Low: 0.5 High: 0.75	0.15 0.2	0.15 0.2

Cornell Soil Health Assessment

Mike Kane
PO Box 460
Warrenton, VA, 20188
Agricultural Service Provider:
None

Sample ID: Nn_681
Field/Treatment: NWSG field
Tillage:
Crops Crown:
Date Sampled: 10/20/2015
Given Soil Type: No Soil Type Given
Given Soil Texture: No Soil Texture Given
Coordinates: Coordinates Not Provided

Measured Soil Textural Class: Loam Sand: 42% Silt: 44% Clay: 14%

Test Results

	Indicator	Value	Rating	Constraint
Physical	Available Water Capacity	0.20	76	
	Surface Hardness	300	7	Rooting, Water Transmission
	Subsurface Hardness	300	46	
	Aggregate Stability	71.5	89	
	Organic Matter	5.9	97	
Biological	ACE Soil Protein Index	9.3	79	
	Respiration	1.20	98	
	Active Carbon	784	89	
	pH	6.2	88	
Chemical	Phosphorus	5.6	100	
	Potassium	100.7	100	
	Minor Elements <small>Mg: 147 Fe: 1.3 Mn: 10.3 Zn: 0.2</small>		56	Deficient Zinc

Overall Quality Score 77 High

REPORT NUMBER
15-295-0558
COMPLETED DATE
Oct 26, 2015
RECEIVED DATE
Oct 22, 2015

ACCOUNT
34005



13611 "B" Street • Omaha, Nebraska 68144 • Phone: 402-342-7171 • Fax: 402-342-7172
www.midwestlabs.com

PAGE 1/1

TODAY'S DATE
Oct 26, 2015

Cornell Soil Health Assessment

Sample ID: Nn_681
Field/Treatment: NWSG field
Tillage:
Crops Crown:
Date Sampled: 10/20/2015

Virginia Cooperative Extension

Soil Test Report

Biological Analysis

PIEDMONT ENVIRONMENTAL COUNCIL
MIKE KANE
PO BOX 1460

IDENTIFICATION
PIEDMONT ENVIRONMENTAL COUNCIL
MIKE KANE

Virginia Tech Soil Testing Laboratory

Overall soil health rating increase

Organic matter increase

Surface and subsurface compaction issues

Developed good plant forage community

Crop: Orchardgrass/Fescue-Clover Pasture (40%)	Results	0.43	0.01	0.04	0.15	100.7	100	
	Comments	Low	Amount	Type	Low	Fertilizer/A		
	Expected Range	Low 0.5	1-25	AG	0.5	Minor Elements	56	Deficient Zinc
	High 0.75	0.2	0.2		Comment			
Overall Quality Score							77	High



The Piedmont Environmental Council
Break the Paradigm

SOUNDCLOUD



pecva.org/pastures

A large flock of white sheep is gathered in a grassy field. In the background, there is a barn with a corrugated metal roof and several trees with autumn-colored foliage. A hillside covered in trees is visible in the distance under a clear blue sky. The word "QUESTIONS?" is overlaid in large white text in the center of the image.

QUESTIONS?