

Success Stories from
WV's Phase II WIP

&

Key Points
Phase 3

Sector

Wastewater:

12 plants upgraded to Chesapeake Bay nutrient standards

Corollary benefits: many plants increased flow capacity to be ready for growth, and were updated in the process (less day-to-day maintenance)



Can these new plants serve additional areas?

How can WIP 3 assist in getting service to these areas?

Sector

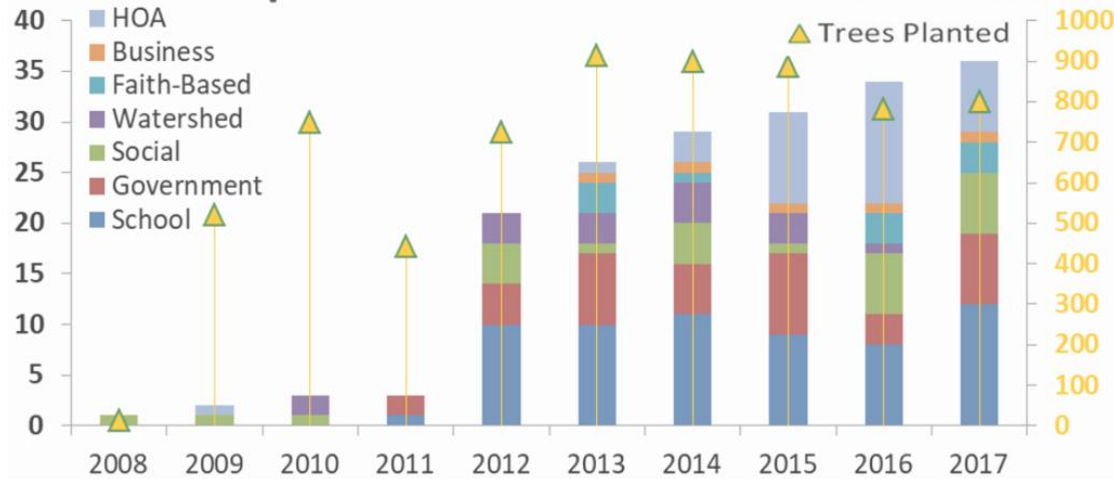
Developed Lands:

“Carla Hardy WV Project CommuniTree”

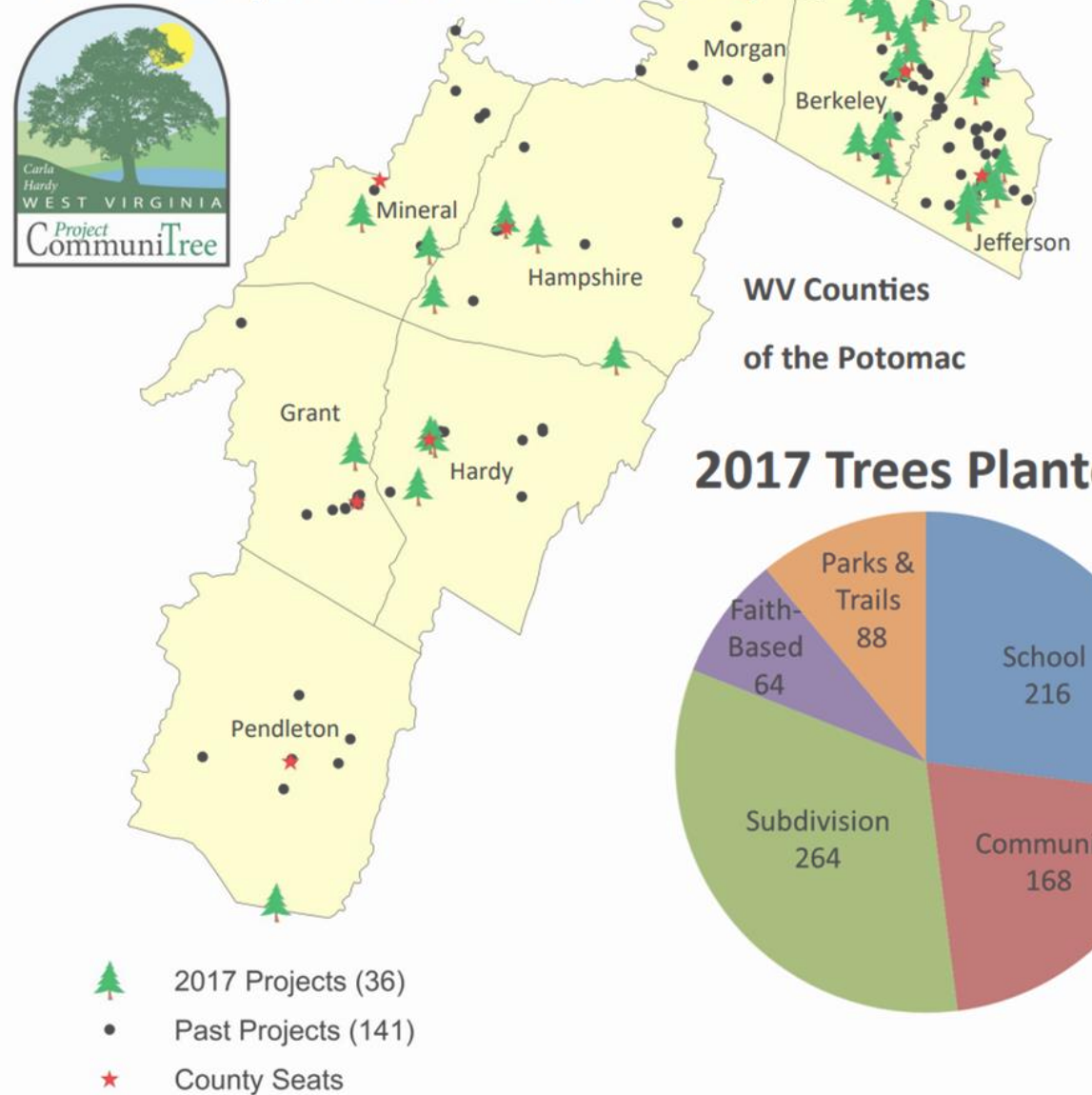
Corollary benefits:

- Air Quality
- Beautification and Quality of Life
- Increased Property Values
- Energy Efficiency
- Flash Flood Protection

CTree Groups



CTree Projects 2012-2017





Are you looking for
opportunities to build
civic infrastructure?

How can WIP 3 Assist?

Developed Lands:

Applies to new and redevelopment

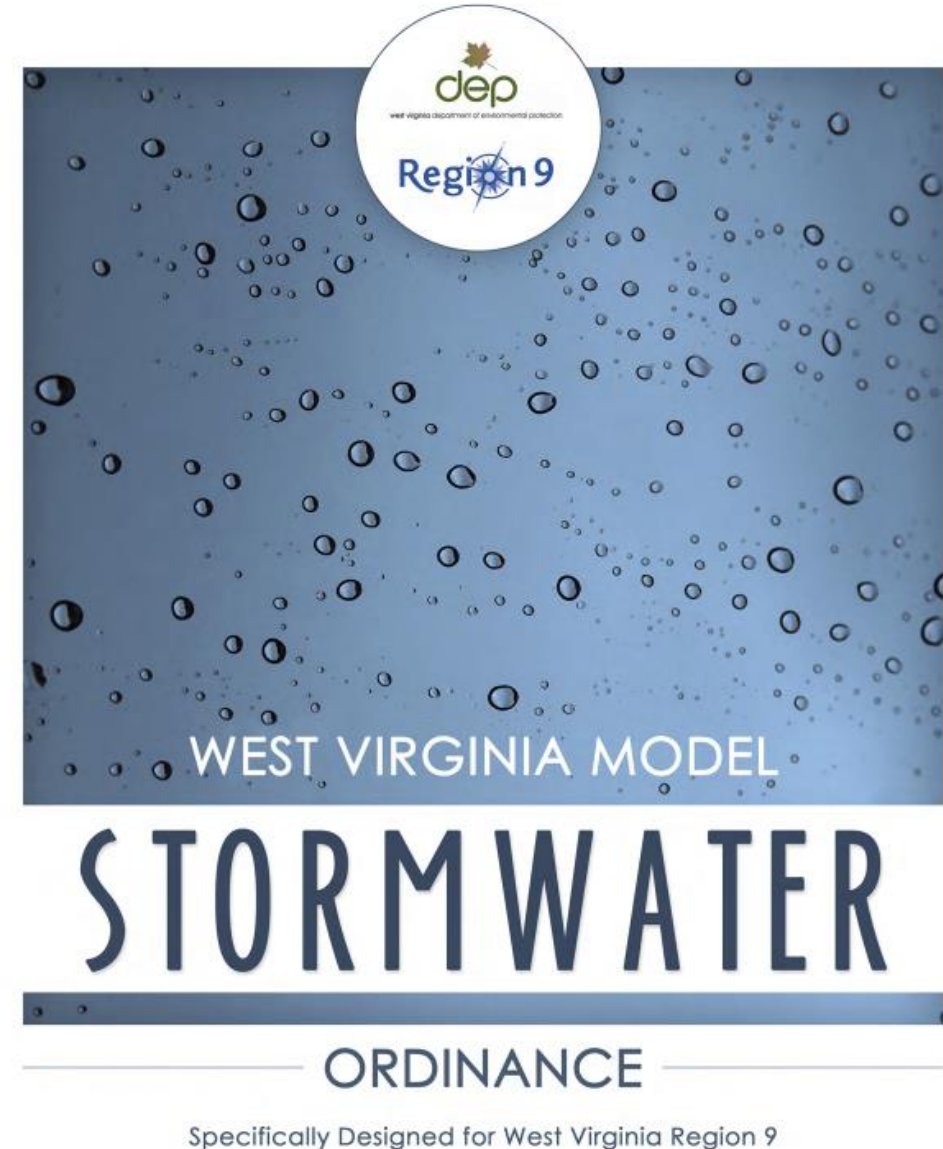
- 4 stormwater ordinances voluntarily created.
- 2 stormwater ordinances required modification.
- 1 Stormwater Ordinance partially modified

Corollary benefits:

- Reduces Flash Flooding Risk,
- Improves Water Quality

A Watershed group's role:

Become Local Champions for your community's stormwater program and initiatives.

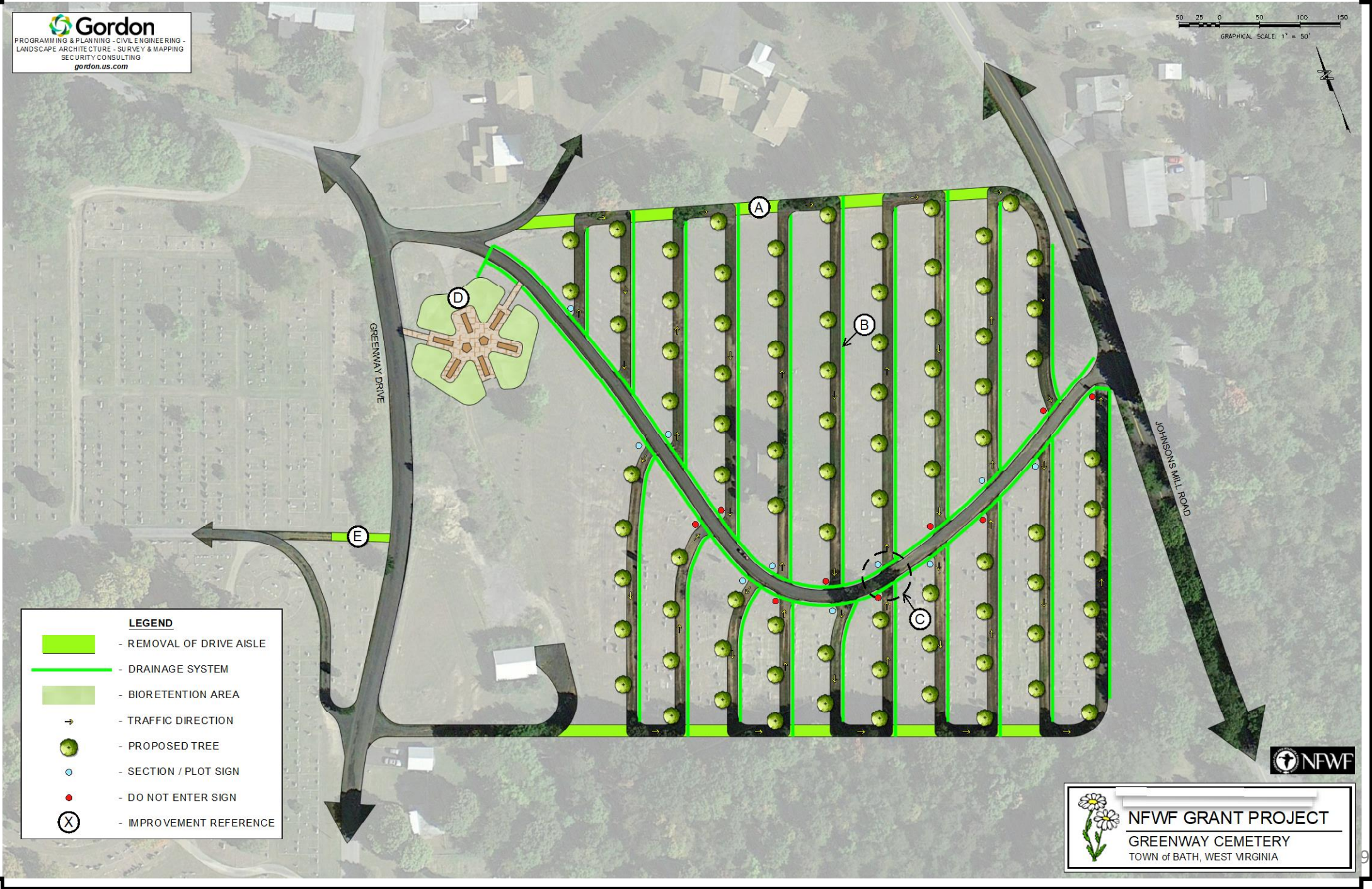






LEGEND

- REMOVAL OF DRIVE AISLE
- DRAINAGE SYSTEM
- BIORETENTION AREA
- TRAFFIC DIRECTION
- PROPOSED TREE
- SECTION / PLOT SIGN
- DO NOT ENTER SIGN
- IMPROVEMENT REFERENCE



NFWF GRANT PROJECT
GREENWAY CEMETERY
 TOWN of BATH, WEST VIRGINIA

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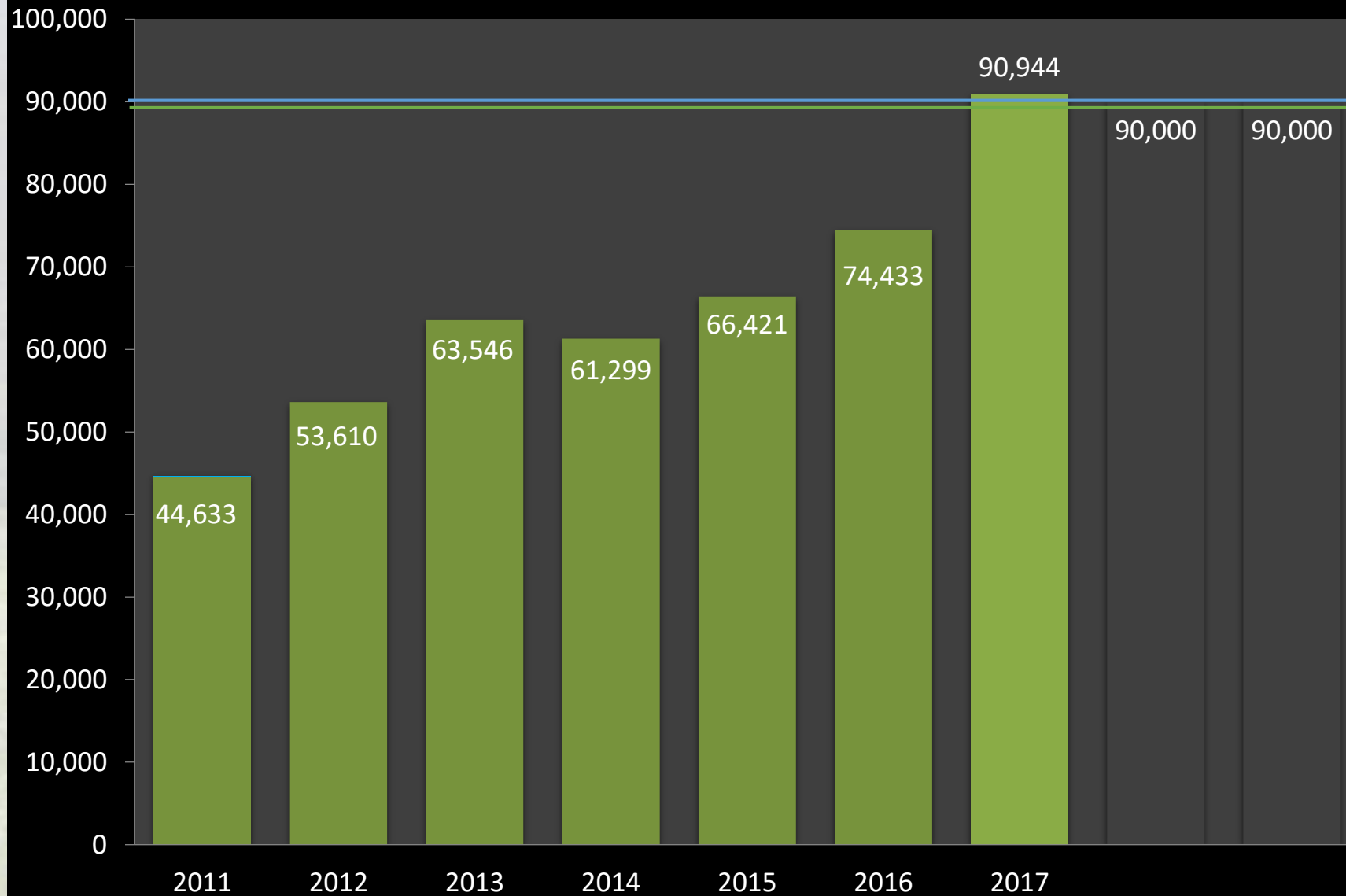
Nutrient Management Plans

Site-specific plan that utilizes soil test results, manure/litter analysis and producer goals to develop a written document that is designed in a way to minimize potential nutrient loss.



Nutrient Management (acres)

■ 2017 Goal ■ 2025 Goal



Stone Soup

it's what you bring
to the pot!



Envision Jefferson 2035 Comprehensive Plan

Infrastructure and Technology Recommendations (Goals 10 & 11)

1.	Require key stakeholders to coordinate planning and investment for both local and countywide infrastructure improvements.
	<ul style="list-style-type: none"> a. Require members of the development community and utility and service providers to collaborate regularly to plan for future infrastructure needs, while considering the impact on the individual consumer rates. b. Provide and encourage mechanisms to have consolidated water and sewer providers in the County.
2.	Bring natural gas into Jefferson County to grow the economy and increase the quality of life for the residents.
	<ul style="list-style-type: none"> a. Identify partners and funding sources for the expansion of natural gas services. b. Ensure that one or more compressed or liquid natural gas fueling stations is built to serve Jefferson County residents, businesses, and visitors. c. In coordination with Hagerstown Eastern Panhandle Metropolitan Planning Organization (HEPMPO), Jefferson County Schools, and Eastern Panhandle Transit Authority (EPTA), advocate for the wider utilization of natural gas as a fuel source for school buses and for EPTA.
3.	Create opportunities for the County's water and sewer providers to share resources and better coordinate their systems and administration.

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	<ul style="list-style-type: none"> a. Amend Subdivision and Land Development Regulations to require privately owned public water and sewer utilities to meet the local PSD standards, which would allow a local PSD to assume maintenance, and possible ownership in the future, with fewer upgrades and expenses. b. Provide opportunities for applicable homeowners associations and/or developers to enter into maintenance agreements for privately owned public water and/or sewer utilities with the applicable public utility providers in which the public utility providers will maintain new facilities. c. Coordinate with the County's utility providers to identify methods that would limit the expansion of water and sewer trunk lines to areas within the Urban Growth Boundary and/or Preferred Growth Areas. d. Encourage the PSDs to promote cooperation with the local development community to work toward cost sharing on infrastructure projects.
4.	Collaborate with Village residents, businesses and utility providers to identify ways to provide water and sewer utilities within Village and village expansion areas.
5.	Enact and enforce requirements for maintenance and inspection of individual, on-site septic systems on a regular basis.
	<ul style="list-style-type: none"> a. Initiate a dynamic education and informational program for County residents concerning well and septic maintenance and use practices. b. Pursue an amendment to the state code to allow residents who are required to connect to an extended water or sewer network to continue to utilize existing individual well and septic systems for the lifetime of the home system if there are no public health issues.

	c. Collaborate with local public utility providers to identify and provide incentives that would encourage property owners to transition from well and septic to a centralized system where and when needed to address public health issues.
	d. Find funding mechanisms to defray the costs of providing public utilities in areas where the provision of these utilities is necessary based on declining public health or environmental concerns.
6.	Coordinate with Region 9 and the County's public service providers to identify and seek additional funding sources that would aid in the construction of needed capital facilities and for the upgrading of existing facilities to meet newer federal standards.
	a. Continue to monitor and participate in planning efforts related to the implementation of the Chesapeake Bay Watershed Improvement Plan.
	b. Assess and evaluate the County's stormwater planning documents as best management practices in the field evolve.
7.	Identify ways that utility services can be regularly upgraded to meet the highest level of service and technology through coordination with local water, sewer, electric, gas, and telecommunications utility and service providers.
	a. Require all local electric, cable, and other utility providers to bury existing and new lines (serving new development) as a part of the regular maintenance and upgrading of their facilities.
8.	Encourage public entities to utilize alternative and renewable energy sources for a variety of energy needs.
	a. Enable the construction of renewable energy generation facilities by residents and businesses.
	b. Encourage County businesses and service stations to provide electric vehicle recharging stations within Jefferson County as soon as possible and use distinctive signage to guide residents and visitors to the charging stations.
	c. Develop regulations to enable cooperatives or communities to create a solar panel system that would feed multiple houses in the County.

	relocation site.
11.	Explore the creation of a reimbursement funding mechanism that would allow for pump stations and water mains that serve one subdivision to be oversized or expanded upon to serve nearby future development within the designated growth areas, not solely dependent on revenue from rate payers but also the development community.
12.	Explore policies in concert with the State legislature, Public Service District (PSD), and the municipalities to study and amend regulations related to water and sewer infrastructure development, including legislative options that would allow equitable distribution of cost sharing with entire development community along with rate paying base (i.e. Capital Improvement Fees).

Chapter 12: Consistency and the Interrelationships of the Plan Elements

Summary

Chapter 8A of the West Virginia Code states that one of the purposes of the comprehensive plan is to “Ensure that the elements in the comprehensive plan are consistent”. This chapter summarizes the interrelationships of the various plan elements. It is accomplished by summarizing the plan elements and the agency involvement necessary to address key issues that have been identified in Berkeley County. For further clarity, the following examples of the interrelationships among the plan elements are provided.

Parks, Recreation and Culture Plan Elements

- Acquire and construct at least 700 acres or more of park land as the county population continues to grow through the following actions:
 - Create regional parks of approximately 100 plus acres in both North and South Berkeley County.
 - Expand the W. Randy Smith Recreation Center in South Berkeley County by building Phase II and Phase III.
 - Build an Indoor Aquatic Center
 - Continue with plans to acquire property through hazard mitigation grants and convert Sportsman’s Paradise into a county park with public access to the Potomac River.
 - Develop an adult softball complex.
 - Continue to build biking/hiking trails throughout the Eastern Panhandle connecting all three counties.

Economic Development Plan Elements

- Protect sites near the interstate interchanges, along the rail lines, and in proximity to the airport for light industry and transportation related industries
- Make provisions, where appropriate, for home-based businesses by including standards in the Subdivision and Land Development Ordinance to mitigate possible light and noise issues
- Encourage existing owners of vacant retail and industrial properties to redevelop/revitalize them
- Support the revitalization efforts of the City of Martinsburg by encouraging the reuse of older buildings in the downtown for much needed office space
- Continue to develop and maintain a county-level database of all available development sites, including brownfields and other sites that could be redeveloped
- Continue to work with and support Berkeley County Public Schools, and all of the region’s secondary and post secondary educational providers to ensure a skilled workforce for existing and future businesses.
- Encourage the development of an adequate communications technology network in the county
- Work with the farming community to identify future role of agriculture in the county’s economy
- Enhance opportunities to establish historical, cultural and recreational tourism-related businesses.

Chesapeake Bay Program

Watershed Implementation Plan - Phase 3 Local County Meetings

During the months of June and July, the Region 9 Chesapeake Bay Coordinator hosted a series of meetings with each county in the Eastern Panhandle; Morgan, Berkeley, and Jefferson. The meetings were well attended and had representatives from a wide variety of new and traditional partners to focus on local priorities that can be included as strategies, or Best Management Practices (BMPs) in West Virginia's Phase 3 Watershed Implementation Plan (WIP-3).

Findings:

During the meetings several key themes emerged from all the three counties, as areas they would like to focus:

- 1) Source water protection implementation
- 2) MS4 Program assistance
- 3) Green Infrastructure implementation to reduce flash flooding risks.
- 4) Sanitary sewer inflow and infiltration assistance
- 5) Utility asset management

While the above themes were consistent throughout the communities, the list below is a compilation of other priorities discussed at these meetings.

Morgan Priorities:

- 1) Remediating privately owned sources of pollution to include failing septic and leaking storage tanks
- 2) Coordination of efforts to reduce duplication
- 3) More defined role of the West Virginia Department of Highways
- 4) Toxic Contaminant spill response assistance



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Manure de Force

99 million chickens and turkeys are raised in the Potomac Valley region annually. These poultry produce over 100,000 tons of manure, over half of which can not be absorbed into local soils, and can runoff to our waterways during rain events

Manure de Force will unite partners from West Virginia to restore balance to these sensitive soils by transporting excessive amounts of manure from areas with high levels of nutrient accumulation to areas with lower nutrient concentrations.

Partners



Located in Moorefield, WV, Eastern CTC will be conducting marketing research and mapping new sectors where poultry litter or biochar could be used.

Additionally, Eastern is administering the Chesapeake Bay Trust Grant.

Region 9

Region 9 will provide administrative oversight administrative on both the National Fish and Wildlife Foundation - Manure de Force and the Clean Water Act 604.B Grants.



WVU is working educating farmers in and out of the watershed on the proper use and application of poultry litter for nutrients and soil health.



The Conservation Agency is receiving \$50,000 from the National Fish and Wildlife Foundation to continue to perform and operate their existing Poultry Litter Transfer Cost Share Program. This Program distributes poultry litter from producers in the Chesapeake Bay Watershed to farms located outside of the watershed.



The West Virginia National Guard is leading the charge on the Patriot Guardians, a program designed to restore abandoned mine lands in West Virginia using poultry litter compost as a means to restoring soil quality to establish apple orchards and employee West Virginia veterans in the agriculture sector.



Patriot Guardians

Patriot Guardians is an integrated agriculture and economic diversification initiative involving partnerships with West Virginia State University (WVSU) Extension Service, the U.S. Department of Agriculture Appalachian Small Fruit Research Station at Kearneysville, NRCS, West Virginia University, Marshall University, Shepherd University and landowners and coal operators across the state.

The statewide initiative pools resources and creates an agriculture-centric system to assist West Virginians, particularly but not limited to veterans and military personnel, in:

- Providing agricultural education and training opportunities to veterans, Guardsmen/ women and all West Virginians
- Developing agriculture entrepreneurs, businesses and value-added companies
- Supporting veterans with PTSD and substance abuse, while transitioning West Virginians recovering from substance abuse back into workplace opportunities
- Collaborating with other private and nonprofit agriculture development groups

Connection to the Chesapeake Bay and Region 9

The Patriot Guardians program is currently working on establishing an apple orchard on an abandoned surface mine in Muddly, WV. This project achieves goals identified in the 2014 Region 9 sponsored "Feasibility Study and Business Plan

FUN-ding FACTS

- The program has secured abandoned mine lands pilot grant funding to develop a large-scale apple orchard project.
- Patriot Guardians has received \$80,000 to conduct testing on various forms of poultry litter compost through Clean Water Act Section 604.B funding.

soils and can subsequently leach into local waterways during rainfall events, causing algal blooms in the South Branch of the Potomac River and the Chesapeake Bay.

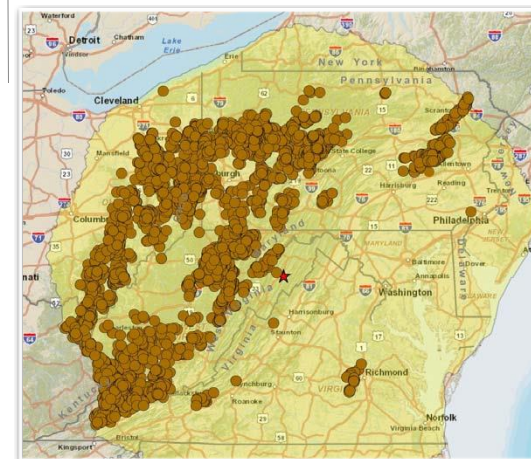
EDUCATION DIRECTOR

Melissa Stewart
melissa.l.stewart22.nfg@mail.mil
<<PHONE>>

AG PROGRAM DIRECTOR

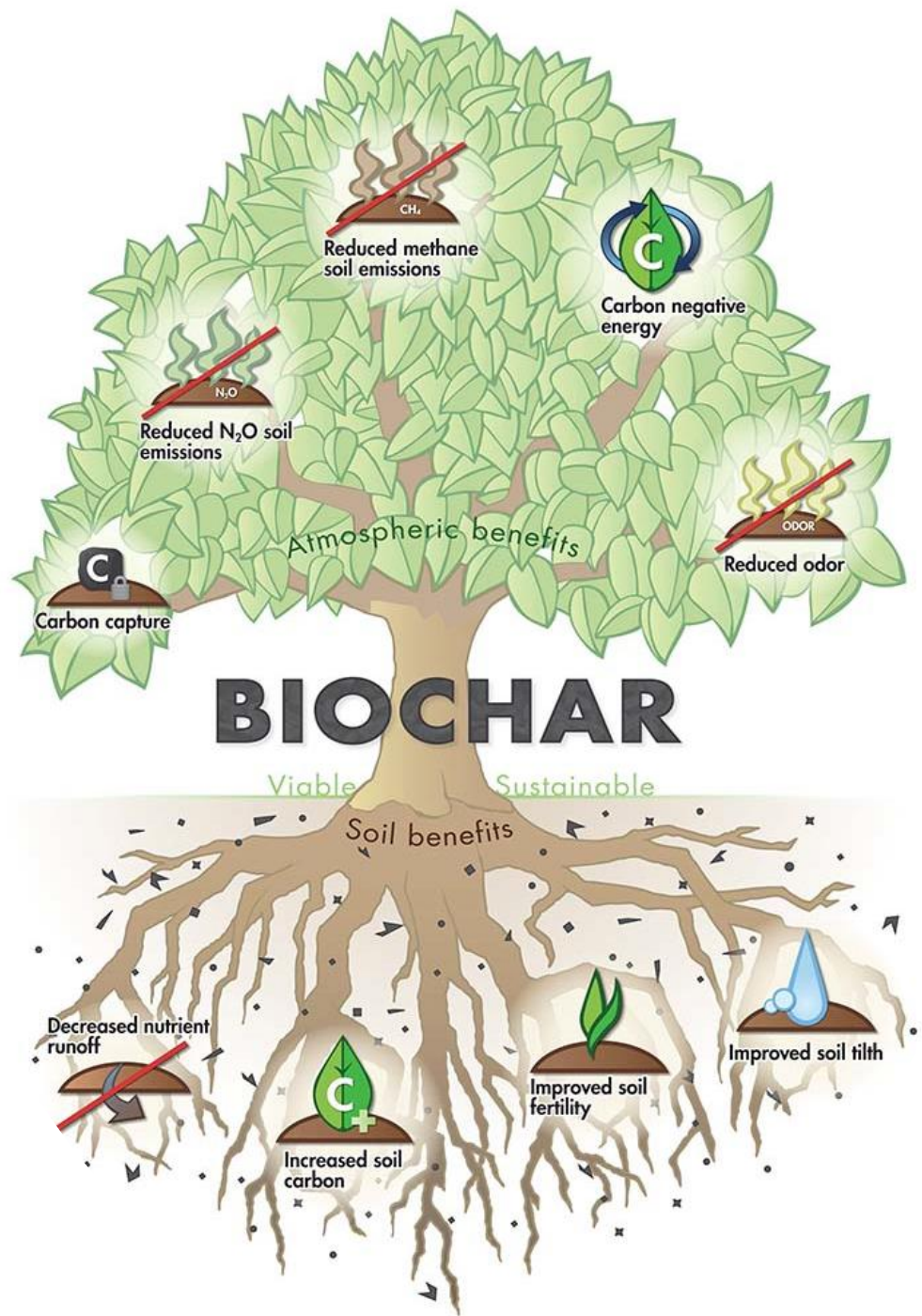
Mr. Darrell Sears
<<email>>
304-553-1874

Transporting poultry litter, a high nutrient manure and excellent soil amendment, from the rich soil region of the Potomac Valley to the poor soils found in abandoned surface mine lands could effectively solve two pollution issues in West Virginia, over-nutrication and runoff from unproductive abandoned mine lands. The use of poultry manure based soil amendments on post-mine lands can increase vegetative growth and restore the land to a condition capable of supporting land use activities prior to mining. By reusing these wastes, the WV National Guard can create significant sources of amendments to improve the soil quality and increase productivity for their orchards land on large land tracts of abandoned mine lands while reducing runoff contaminants in West Virginia.



Proposal for Poultry Growers of the Virginias to Process and Sell a Poultry Litter Product". The map on the right, found in the study, shows all abandoned mines with 300 miles of the region's poultry operations.

Poultry litter is one source of nutrient pollution in the Eastern Potomac Valley. These nutrients are unable to be absorbed by these rich



The background of the slide is a collage of four photographs. Top-left: A construction site with red soil and a black silt fence. Top-right: A long, winding silt fence in a wooded area. Bottom-left: A close-up of a gravel filter layer. Bottom-right: A culvert pipe with a large amount of red soil erosion around its entrance. The title 'In House Training' is centered over the top half of the collage.

In House Training

- **Developers/contractors**
- **Civil penalties could be reduced by 50%**
- **Differentiates between:**
 1. **Erosion**
 2. **Sediment**
 3. **Sedimentation**