



Consolidating Wetland Program Gains: Outreach and Mapping

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Mapping and Outreach

The importance of wetlands outreach in West Virginia

- What is a wetland? More common terms - swamp, bog, slough, etc.
- Public understanding of wetlands
- Wetlands as an impediment
- Importance of wetlands



Mapping and Outreach

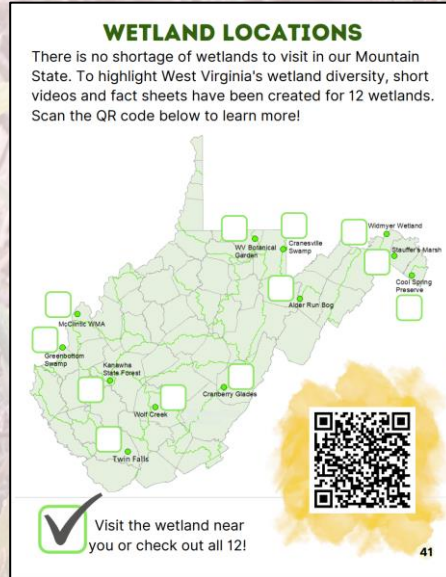
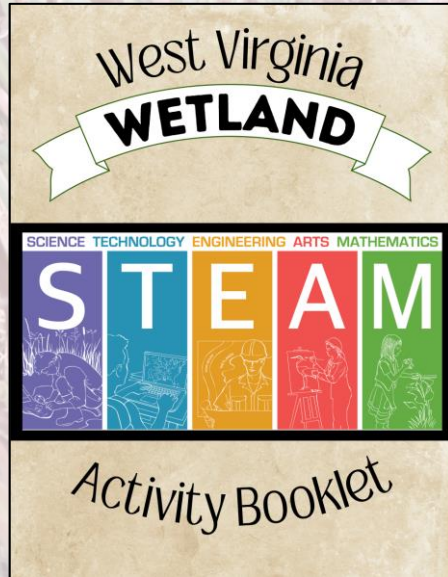
- Wetlands in Education

- Wetland education workshops: 3 held in 2023 June-August
 - 40 formal and 10 informal educators
 - Inspired teachers used a wetland curriculum in the classroom, set up Envirothon teams, and 2 set up professional development sessions for local educators (County Curriculum Coordinator)



Mapping and Outreach

- K-12 STEAM science booklet and on wetlands
 - 2,350 copies pocket-sized booklet distributed to students attending STEAM camps and WV educators who have expressed interest in wetlands
 - 48 pages



FORESTED SWAMP

Species Highlight

Did you know that rhododendrons are also nature's thermometer? Tell the temperature by looking at their leaves. Are they flat or curled?

Great Rhododendron

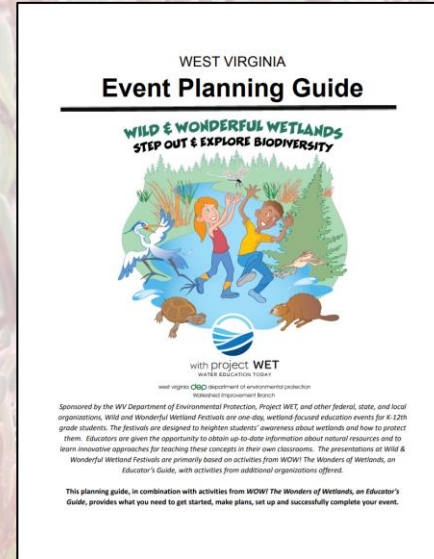
Rhododendron is West Virginia's state flower. It is also a beautiful pollinator in our wetlands, attracting butterflies and hummingbirds to feed on its nectar. It grows in acidic soils, moist dry forests, and in swamps.

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Air-filled stems act like snorkels to bring oxygen to the roots.

Mapping and Outreach

- Wetland Festival Planning Guide for Educators
 - Available online
 - Organizes wetland-themed study and activities
 - References in the guide: WOW! The Wonders of Wetlands an Educators Guide, Project WET Curriculum and Activity Guide 2.0, and Project Learning Tree - Explore Your Environment Activity Guide



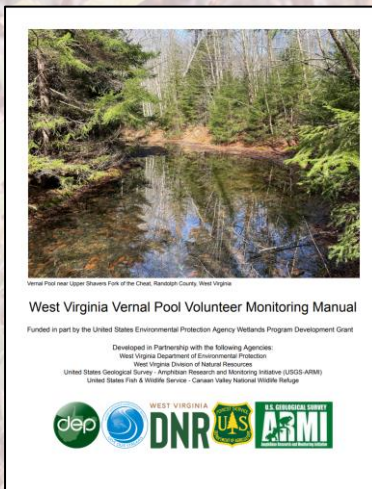
Mapping and Outreach

- Vernal Pool Citizen Science Program

- 10 vernal pool classes from 2023-2024, reaching 102 participants in 2023, plus dozens requesting materials
- Partners: WVDEP, WVDNR, USFWS, USFS, USGS ARMI, Northeast Partners in Amphibian and Reptile Conservation
- iNaturalist: 125 observers and 288 observations



Vernal Pools Citizen Science Class at WV Botanic Gardens 2/24/24



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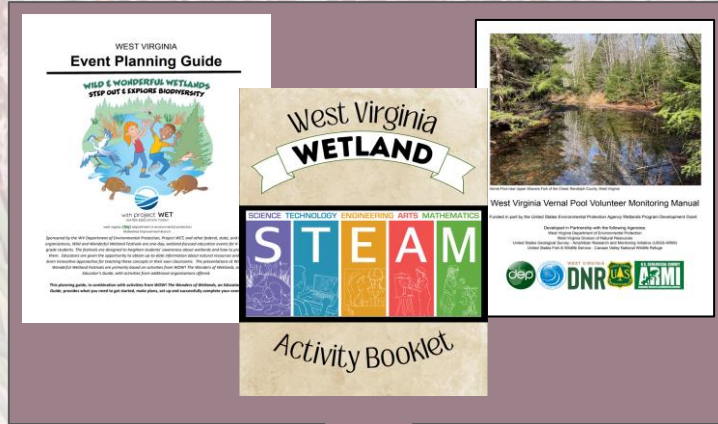
Program Growth and Continued Regulatory Support

- WVWRAM Training in WVDEP - small, connected staff (WQSAS), including connection to personnel outside of section
- Regulatory rollout
 - Combined with the 2019 training events, WVWRAM trainings have reached 194 environmental professionals
 - Provided to the USACE: WVWRAM Restoration Supplement, detailed criteria for wetland preservation eligibility, and recommendations for performance standards
 - Provided WQS with fact sheet on WVWRAM & CWA
 - Updated: WVWRAM manuals, database, and GIS Tool



Consolidating Gains

- Increased ability to apply robust scientific methods



Teacher Training
&
Public Education



Concerted Effort in
Wetlands
Regulation

Consolidating Gains

- Increased public understanding

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WVDNR

District 5 - Mason County

Directions: Five miles north of Point Pleasant or eight miles south of the city of Mason off state Route 62 via Fairgrounds Road (CR12), follow WVDNR signs.

Size: 3,655 acres

Terrain: 600 acres of farmland, 1,100 acres of brushland, 180 acres of wetland, 1,775 acres of mixed hardwood forest

Wild & Wonderful Wetlands



1. McClintic Wildlife Management Area
2. Green Bottom Wildlife Management Area
3. Kanawha State Forest - Spotted Salamander Wetland
4. Twin Falls State Park - Poke Hollow Wetland
5. New River Birding & Nature Center
6. Cranberry Glades
7. WV Botanic Gardens
8. Cranesville Swamp
9. Alder Run Bog
10. Widmyer Wetland
11. Stauffer's Marsh
12. Cool Spring Preserve



Kanawha State Forest Vernal Pool Workshop



Cranberry Glades

Cranberry Glades is a cluster of five boreal-type bogs in southwestern Pocahontas County, West Virginia. This area is high in the Allegheny Mountains at about 3,400 feet. Because of its unique flora and rare plant communities, it is protected as the Cranberry Glades Botanical Area, part of the Monongahela National Forest.

Fun Fact: Cranberry Glades is the headwaters of the Cranberry River, a popular trout stream, and is adjacent to the nearly 50,000-acre Cranberry Wilderness.



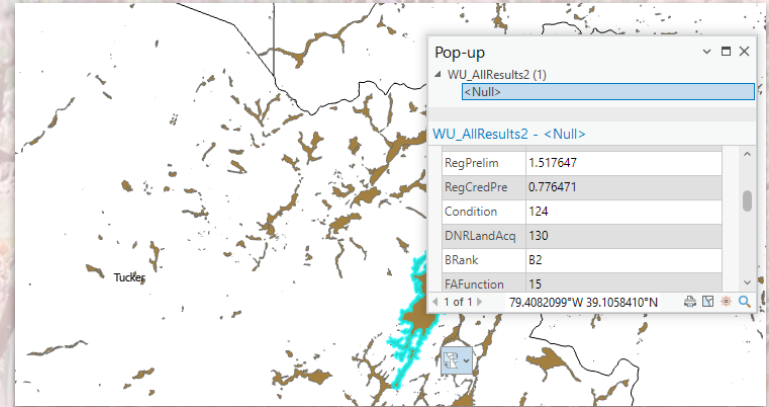
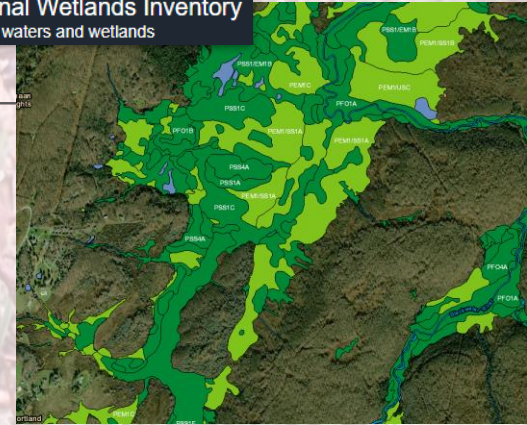
Cranberry Glades Fact Sheet

Consolidating Gains

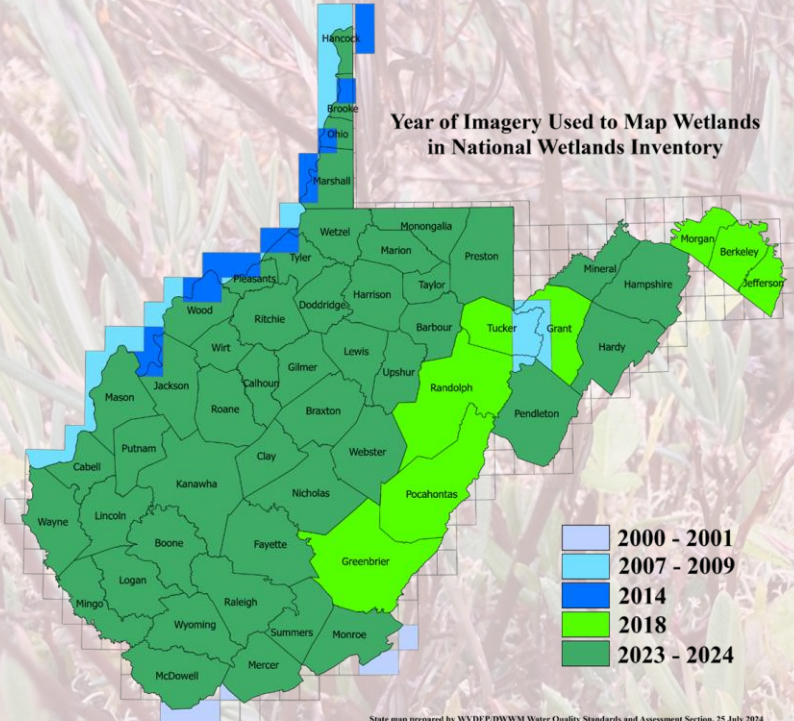
- Improved spatial wetlands knowledge



National Wetlands Inventory
surface waters and wetlands



Year of Imagery Used to Map Wetlands
in National Wetlands Inventory



State map prepared by WYDEP/DWWM Water Quality Standards and Assessment Section, 25 July 2024

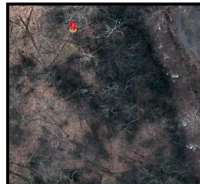
Consolidating Gains

- Building toward no net loss of wetland function
 - Regulatory rollout support, outreach, trained wetland specialists, interagency coordination
- Engaged public
 - Increasing awareness about wetlands



Visual Guide to National Wetland Inventory (NWI) Palustrine Wetland Classes in West Virginia Aerial and ground photos of PFO, PSS, PEM, PAB, PUB types

PFO: Palustrine Forested Wetland has at least 30% cover of trees that are 6 meters (20 feet) tall or taller.
Example: silver maple swamp. Note the long straight shadows of the tree trunks in the aerial photos.



Questions?

