

# Susquehanna River Basin Commission: Operations and Opportunities



POWR/PEC Central Region Watershed Group Workshops

August 6 & 11, 2020

Andrew Dehoff, Executive Director

# Susquehanna River Basin

## The Basin

- 27,510-square-mile watershed
- Diverse landscape
- 4.2 million population
- 49,000+ miles of waterways
- Comprises 43 percent of the Chesapeake Bay watershed



## The Susquehanna River

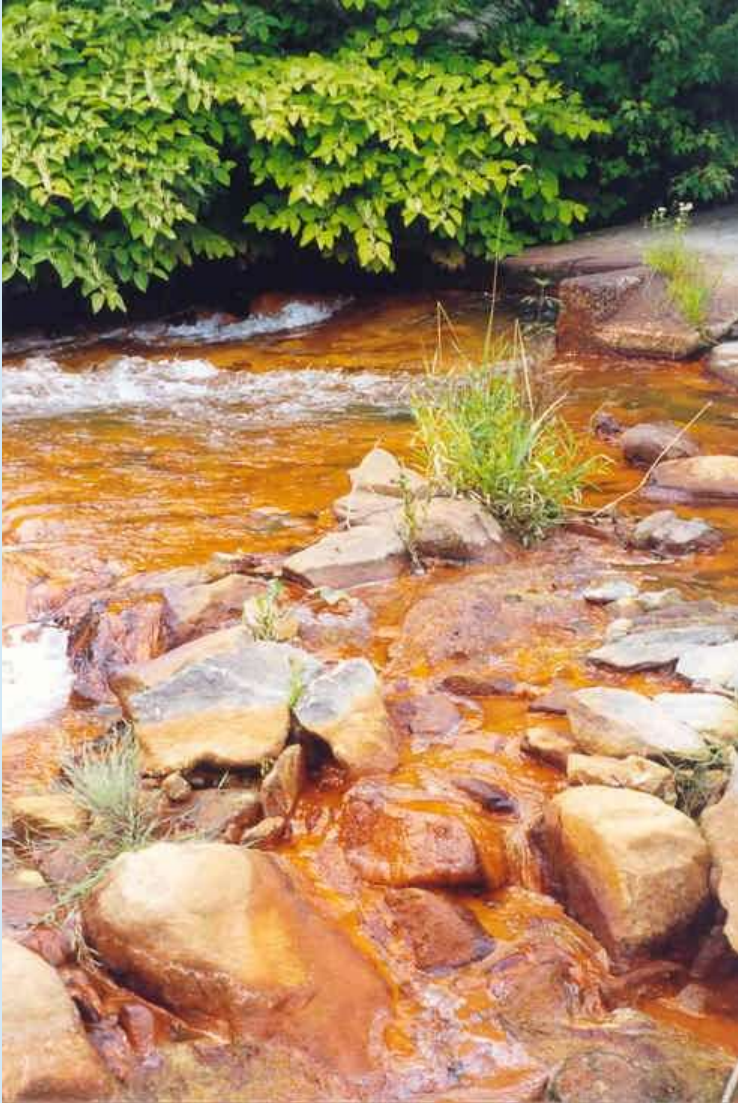
- 444 miles, largest tributary to the Chesapeake Bay
- Supplies 18 million gallons a minute (26 bgd) to the Bay
- Supports Public Water Supply, Industry and Ecosystem



# Timber

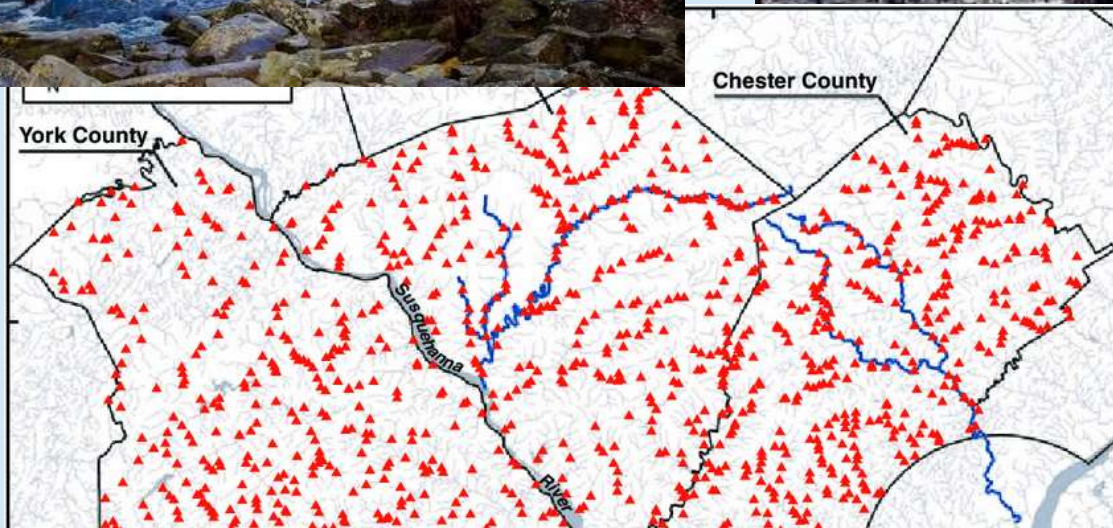


# Coal Legacy





# Mill Dams



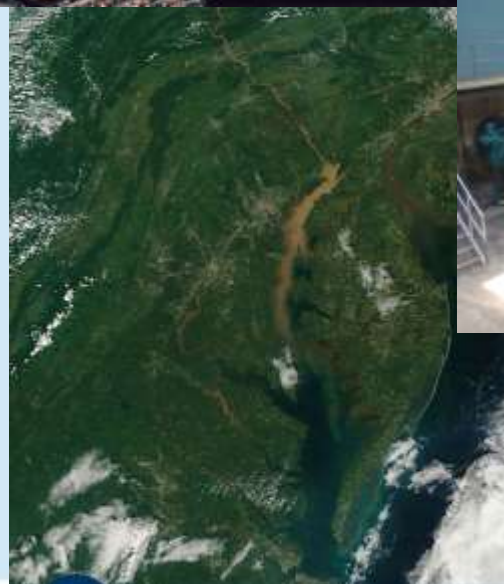


# Legacy Sediments



# Driving Issues

- Water use for power generation
- Public water supply diversions
- Chesapeake Bay





# Susquehanna River Basin Commission

- SRB Compact, 1971
- Mission: provide for the planning, conservation, utilization, development, management and control of the water resources of the basin
- Fill gaps; avert conflicts; foster cooperation
- Sixty-five staff (45 technical)





# SRBC Commissioners

New York State: DEC Commissioner  
Basil Seggos



Commonwealth of Pennsylvania:  
DEP Secretary Patrick McDonnell



State of Maryland: MDE Secretary  
Ben Grumbles



United States: Brigadier General  
Thomas Tickner, North Atlantic  
Division, U.S. Army Corps of  
Engineers



# Setting Goals and Priorities

What governs?

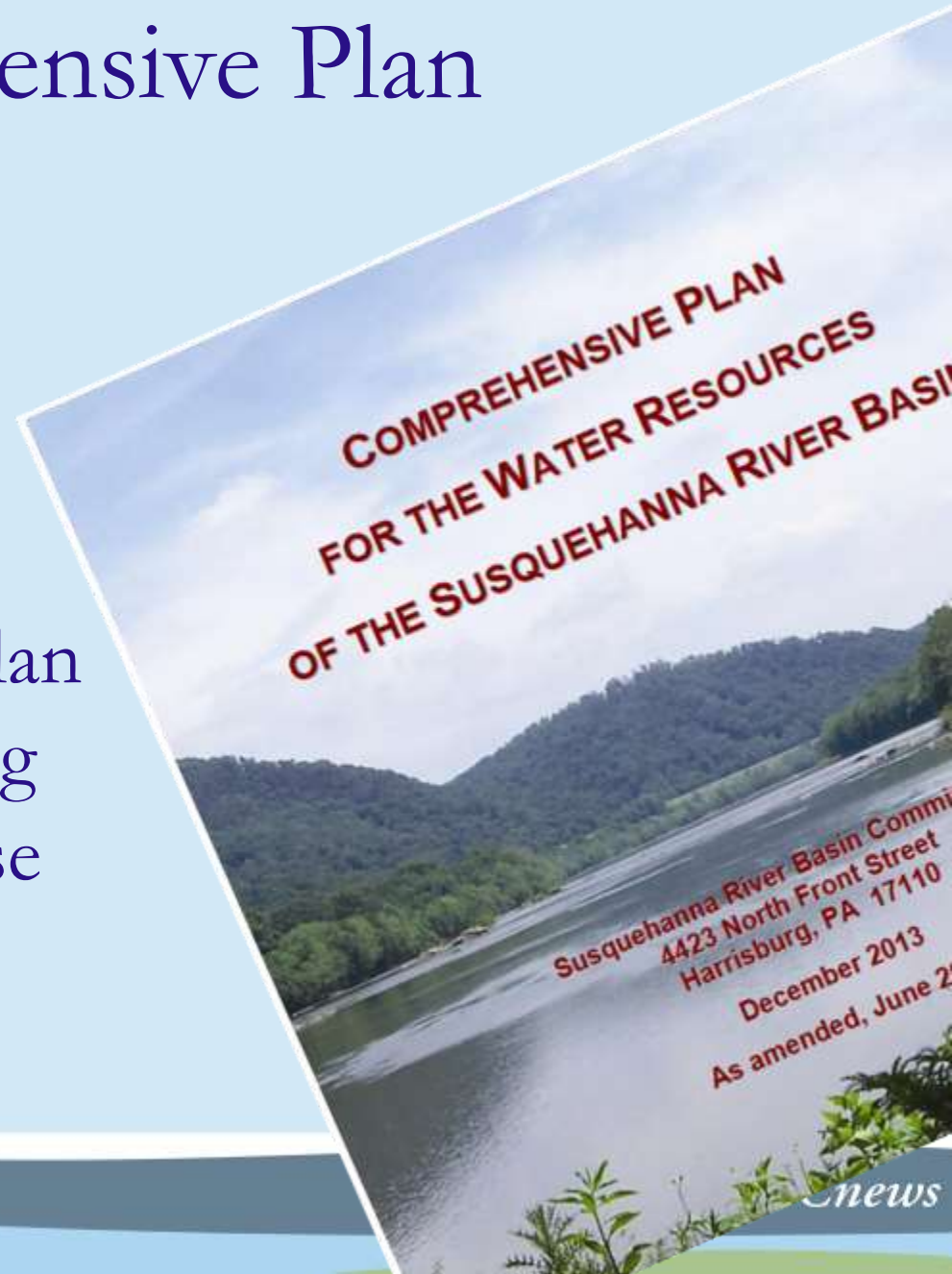




# Comprehensive Plan

Section 14.1—

Comprehensive Plan. The commission shall develop and adopt, and may from time to time review and revise, a comprehensive plan for the immediate and long range development and use of the water resources of the basin.



# Comp. Plan Implementation

## Section 14.2—Water Resources Program.

The commission shall annually adopt a water resources program, based upon the comprehensive plan, consisting of the projects and facilities which the commission proposes to be undertaken.

**SRBC**  
SUSQUEHANNA RIVER  
BASIN COMMISSION  
NY • PA • MD • VA

**Water Resources Program**  
(Fiscal Years 2019 - 2021)

The Water Resources Program presents the priority water resources needs of the basin over the next three fiscal years and the key projects proposed to address those needs, per the Susquehanna River Basin Compact requirements and based upon the Comprehensive Plan.

Comprehensive Plan - Priority Management Areas		Comprehensive Plan - Priority Management Areas		Comprehensive Plan - Priority Management Areas	
A. Sustainable Water Development		B. Water Quality		C. Flooding	
D. Ecosystems		E. Chesapeake Bay		F. Coordination and Implementation	
<b>Enhance Assessment of Water Use and Availability</b> Eric Roof eroof@srbc.net	<b>Streamline Regulatory Processes</b> Todd Esby tesby@srbc.net	<b>Develop Additional Consumptive Use Mitigation</b> John Boley jboy@srbc.net	<b>Remediate Abandoned Mine Drainage Impacts</b> Janis Shallenberger jshallenberger@srbc.net	<b>Improve Community Flood Preparedness</b> Ben Pratt bpratt@srbc.net	<b>Restore Watersheds</b> Chris...
<ul style="list-style-type: none"><li>A comprehensive accounting of water use and availability in the Basin for better sustainable water resources planning.</li><li>Improve State Water Use Data Sharing Protocols (Jul. 2019)</li><li>Complete Grandfathered Projects Registration (Jul. 2020)</li><li>Update Basinwide Water Use and Availability Analysis (Jan. 2021)</li></ul>	<ul style="list-style-type: none"><li>Efficient and focused regulatory oversight ensures effective and appropriate water resources management.</li><li>Update Grandwater Regulations and Policies (Jan. 2019)</li><li>Expand Assistance To Drinking Water Suppliers (Jan. 2021)</li><li>Develop General Permits (Jan. 2021)</li></ul>	<ul style="list-style-type: none"><li>Adopt Consumptive Use Mitigation Policy (Jan. 2019)</li><li>Complete Silverman Quarry Mitigation Plan (Mar. 2019)</li><li>Complete F.J. Leary Reservoir Feasibility Study (Mar. 2020)</li><li>Initiate Alternative Consumptive Use Mitigation Pilot (Dec. 2020)</li></ul>	<ul style="list-style-type: none"><li>Abandoned mine drainage (AMD) is a major cause of basin stream impairment and targeted restoration projects produce tangible results.</li><li>Complete Basins Creek AMD Treatment Study (Dec. 2018)</li><li>Complete Woodley Draft Abandoned Mine Lands Reclamation Project (Dec. 2018)</li><li>Develop Construction Plans for Select Priority AMD Treatment Projects (Jan. 2021)</li><li>Complete Upper Tiers AMD Remediation (Jul. 2018)</li><li>Complete construction of Cresskill AMD treatment plant (PADEP SAMS)</li><li>Complete mine mapping for Hockanigum Tunnel (EPCANM)</li></ul>	<ul style="list-style-type: none"><li>The persistent challenge of flooding in basin communities requires appropriate mitigation planning to minimize ongoing risks to life and property.</li><li>Develop Swatara Creek Flood Insurance Mapping (Jan. 2019)</li><li>Update Wyoming Valley Flood Insurance Mapping (Dec. 2019)</li><li>Develop Chemung River Flood Insurance Mapping (Dec. 2019)</li></ul>	<ul style="list-style-type: none"><li>Complete Muncy Flood Resiliency Study (Jul. 2019)</li><li>Complete Upper Susquehanna Flood Study (Jul. 2019)</li><li>Complete Flood Protection Structures (PADEP SAMS)</li><li>Initiate Mid-Atlantic Flood Study (PADEP SAMS)</li><li>Flood in (PADEP SAMS)</li><li>River (PADEP SAMS)</li></ul>



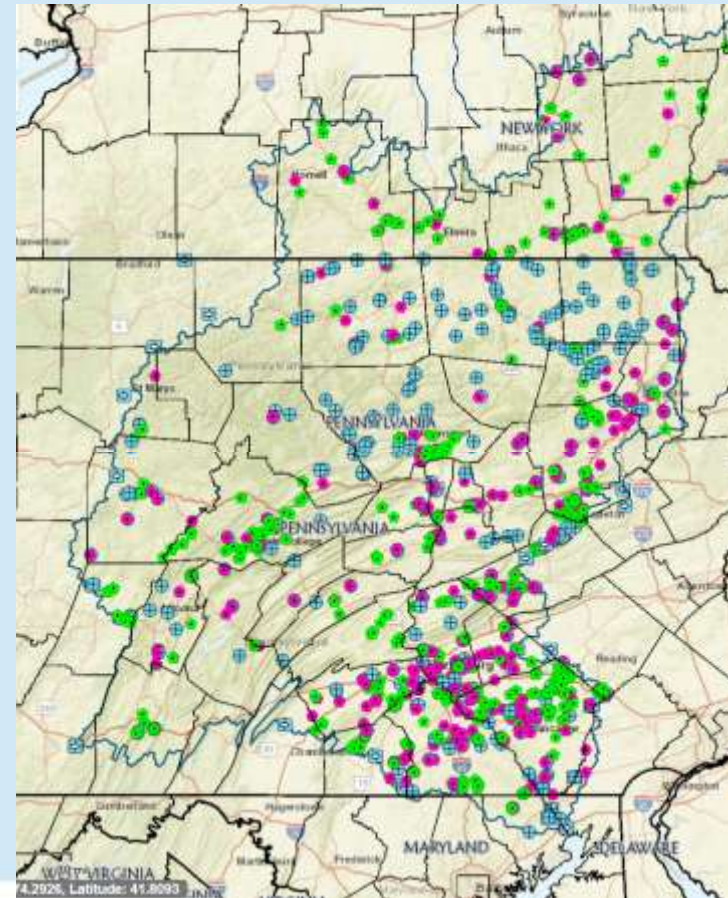
# Priority Water Resource Needs

1. Enhance Assessment of Water Use and Availability
2. Streamline Regulatory Processes
3. Develop Additional Consumptive Use Mitigation
4. Remediate Abandoned Mine Drainage Impacts
5. Improve Community Flood Preparedness
6. Restore Impaired Waterways and the Chesapeake Bay

# Priority Water Resource Needs

## 1. Enhance Assessment of Water Use and Availability

- Water use reporting and registration
- Data sharing
- Cumulative Water Use and Availability Study





**Chemung Subbasin**

**Upper Susquehanna Subbasin**

**West Branch Susquehanna Subbasin**

**Middle Susquehanna Subbasin**

**Lower Susquehanna Subbasin**

**Juniata Subbasin**

SEE APPENDIX OF HUC-10 INFORMATION

NOTE: THE FIRST FIVE DIGITS OF THE HUC-10 CODE (SUBBASIN) HAVE BEEN REMOVED FOR LABELING PURPOSES

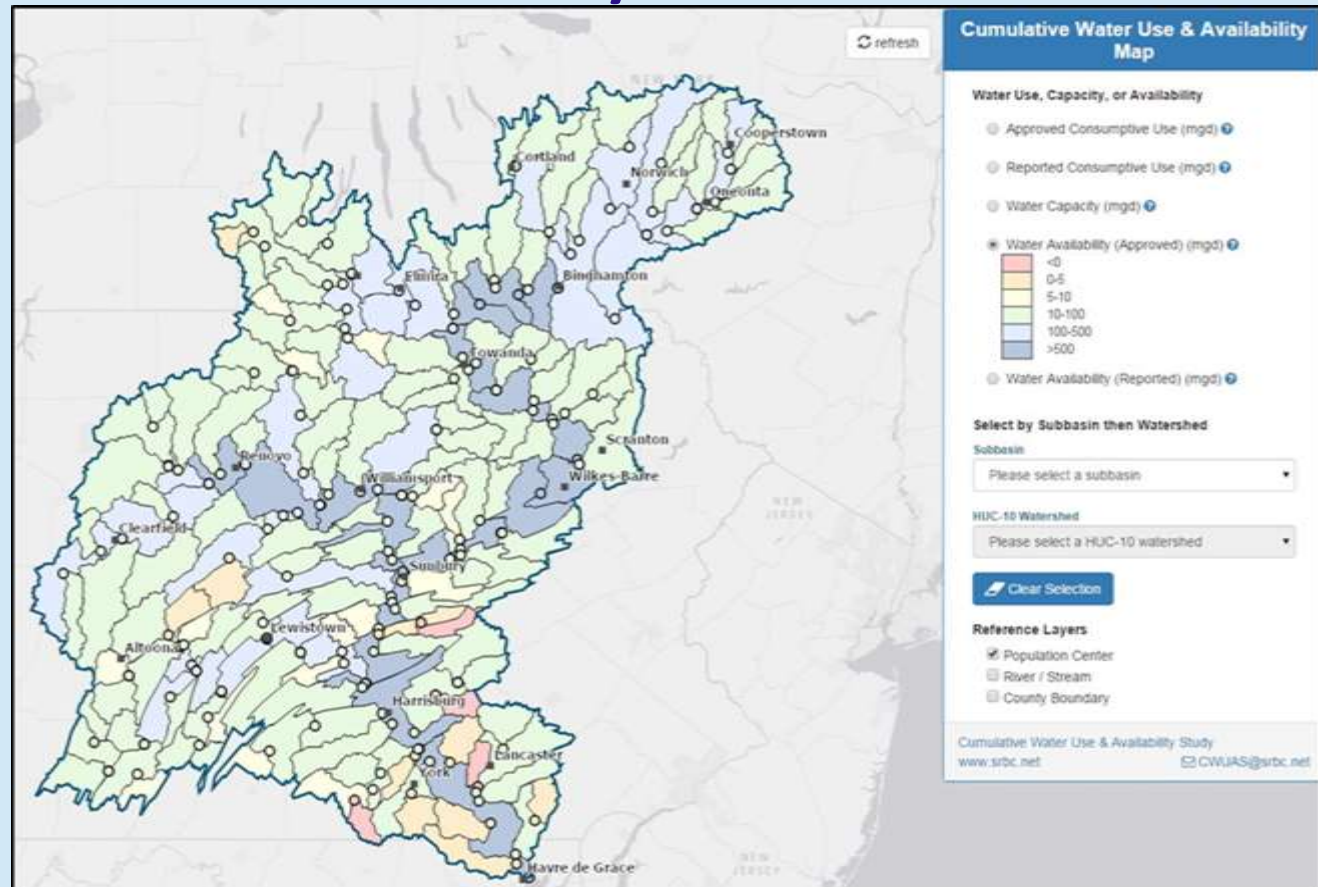
0 5 10 20 Miles

SOURCE: 10-Digit WBD, NRCS 2008; Subbasin, United States Geological Survey(USGS), 2001  
 Disclaimer: Use of Map for Any Purpose on "As Is" Basis. No Warranties Provided. SRBC (365aa) 10-22-2015



# Cumulative Water Use and Availability Study

Online  
Map  
Tool





# Priority Water Resource Needs

## 2. Streamline Regulatory Processes

- Delegation of authorities
- General Permits
- Review of policies and regulations

# SRBC Regulatory Authorities

- Groundwater and Surface Water Withdrawals
  - 100,000 gpd (30-day average)
- Consumptive Use
  - 20,000 gpd (30-day average)
  - Public Water Suppliers and Agriculture are exempt
- Natural Gas
  - Withdrawals and Consumptive Use (any quantity)
- Public component
  - public comment; eyes and ears in the field
  - Water Application and Approval Viewer
  - RSS feed



# WAAV



## Water Application and Approval Viewer - WAAV

Welcome to the Water Application and Approval Viewer (WAAV). WAAV provides access to information on water withdrawal, diversion, and consumption use projects regulated by the Commission. Through this viewer, visitors can -

- Find the status of pending and approved applications;
- View and download pending application summaries;
- View and download Commission approvals;
- Find the list of approved water sources for the natural gas industry, by project sponsor; and
- Sign up via RSS Feed to receive electronic notices of pending applications.

### Pending Applications

The Commission posts pending application summaries. The summary is only a portion of the application materials received by the Commission and is posted in order to provide an overview of the proposed project. To request access to complete applications, See [Policy No. 2009-02 Access to Records Policy](#).

#### Please note:

- Application summaries posted on WAAV contain information submitted by applicants and the accuracy of that information may not have been validated by Commission staff.
- Once an application is acted upon by the Commission, the application is no longer available through WAAV.

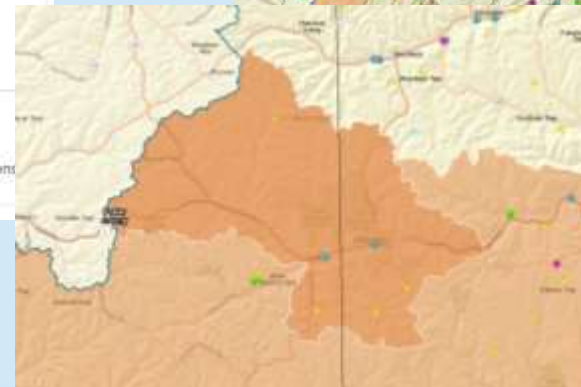
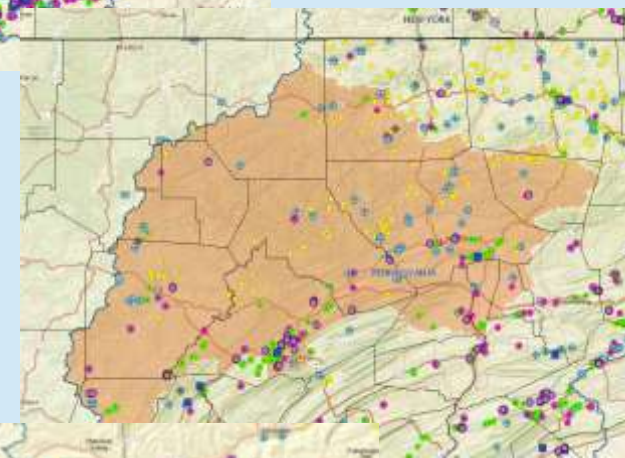
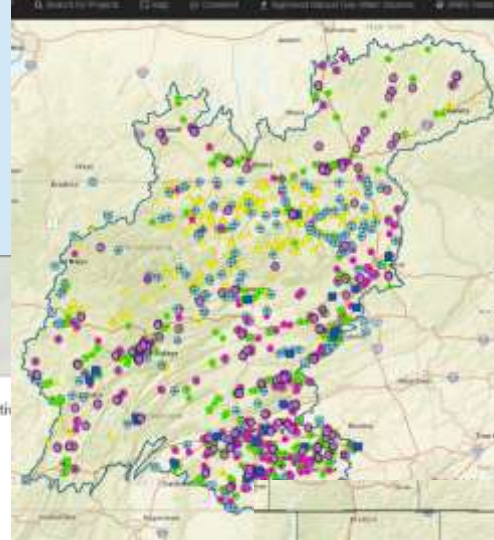
### Approved Applications

Project approvals (dockets, approvals by rule, etc.) are generally available on WAAV approximately three weeks following Commission approval.

Please contact [records@srbc.net](mailto:records@srbc.net) if you have any questions or are not locating the information you are seeking.

### Search for Projects

Under this tab, visitors may search for projects and view a project's status, quantities, source types, and other information for regulated projects and pending applications. Visitors may also download approvals and brief summaries of pending applications, and may also comment on pending applications.



# Priority Water Resource Needs

## 3. Develop Additional Consumptive Use Mitigation

- Non-traditional storage
- New policies
  - Alternative methods





# Alternative Mitigation Methods

- Demand Modification Alternatives
  - Projects involving greater water conservation, water reuse & recycling, & increased groundwater recharge.
- Environmental & Water Quality Alternatives
  - Wetland restoration, dam removal, AMD remediation, stormwater BMPs, floodplain reconnection, and riparian buffer projects.
  - Commission initiated



# Priority Water Resource Needs

## 4. Remediate Abandoned Mine Drainage Impacts

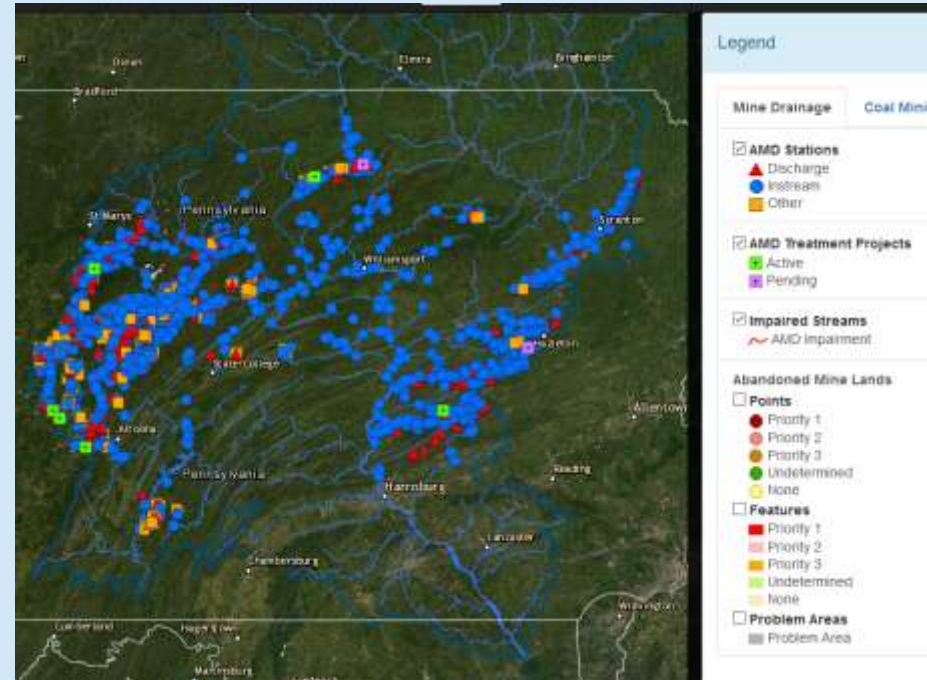
- Develop Restoration Plans
- Implement treatment and track success
- Fill implementation gaps
- Develop project pipeline





# Data and Partnerships

- Mine Drainage Portal
- Partnerships
  - restoration strategies
  - grant pursuit
  - monitoring
  - design
  - conservation districts, universities, citizens groups



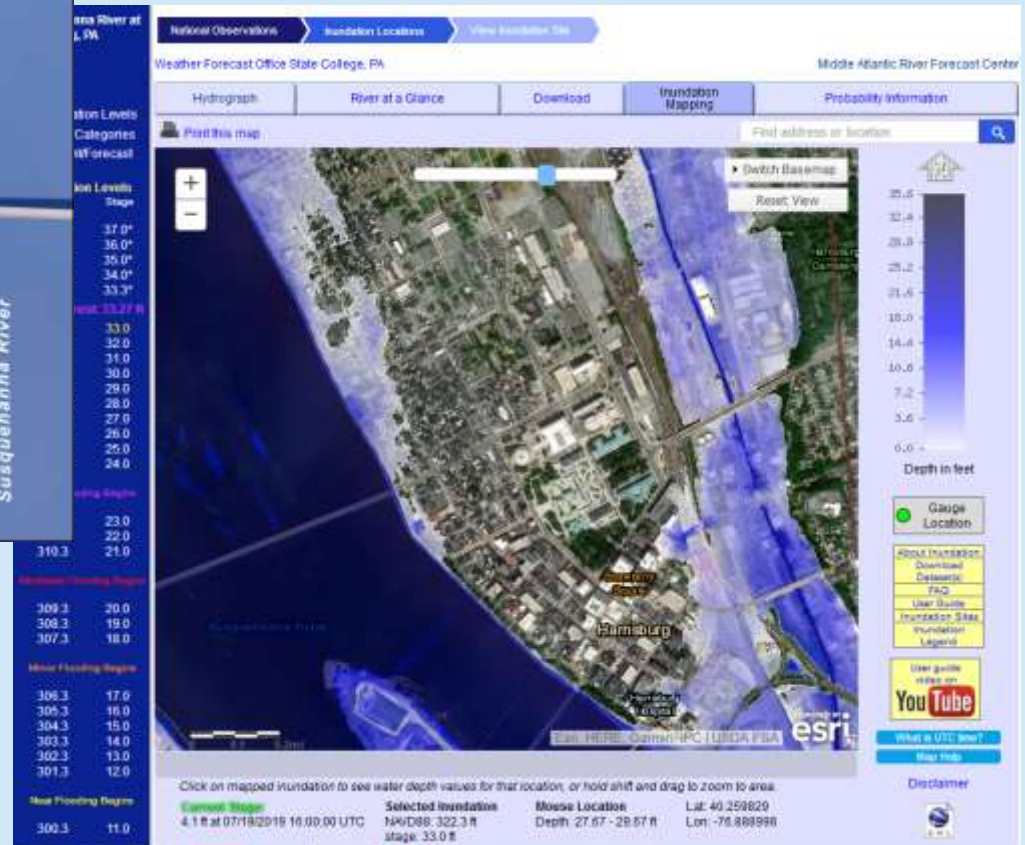
# Priority Water Resource Needs

## 5. Improve Community Flood Preparedness

- Advocate for robust monitoring and forecasts
- Prepare flood inundation maps
- Conduct post-flood assessments



# Flood Map Library and Links





# Floodplain and Planning Assistance

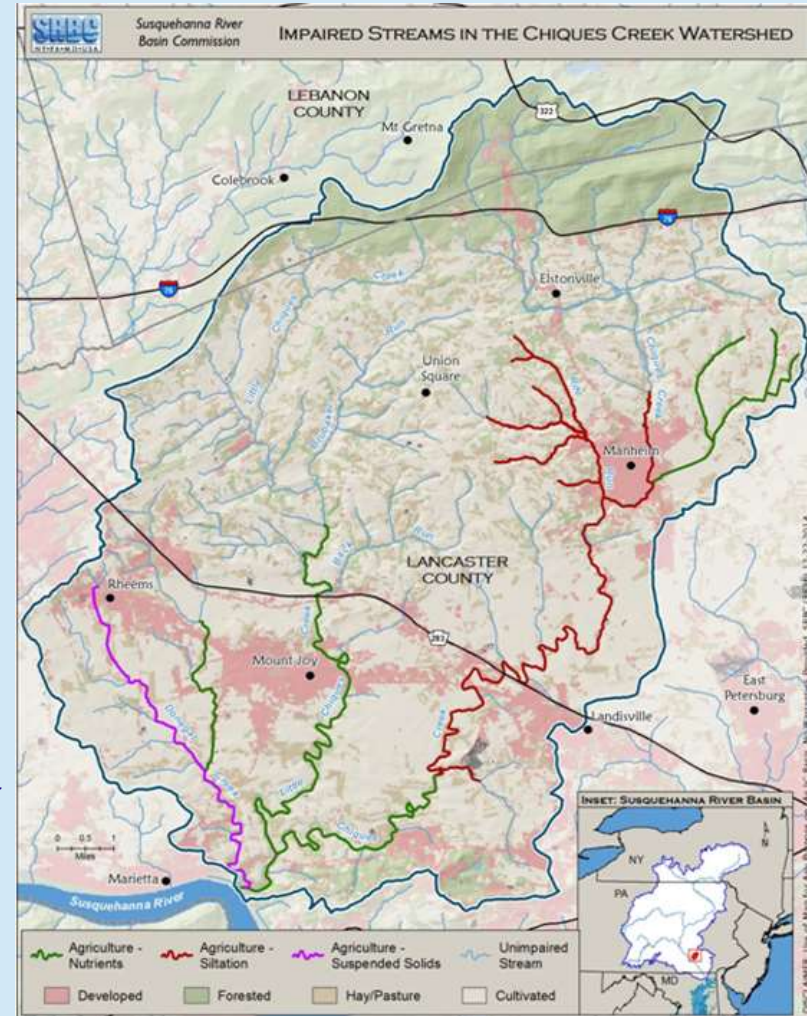
- U.S. Army Corps of Engineers
  - Floodplain Management Services
  - Planning Assistance to States



# Priority Water Resource Needs

## 6. Restore Impaired Waterways and the Chesapeake Bay

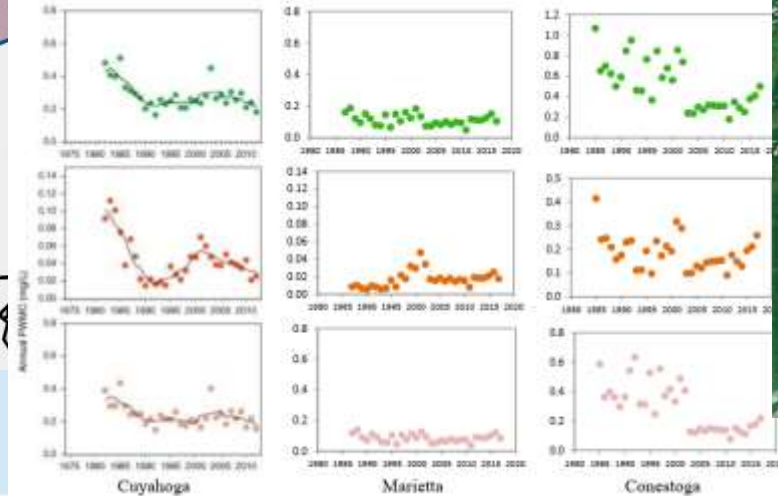
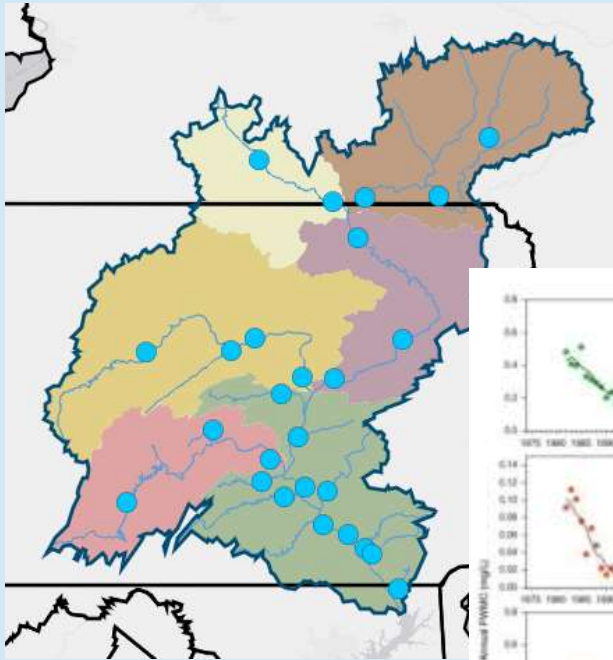
*Chiques Creek Restoration Initiative:  
Alternate TMDL Development*





# Chesapeake Bay Activities

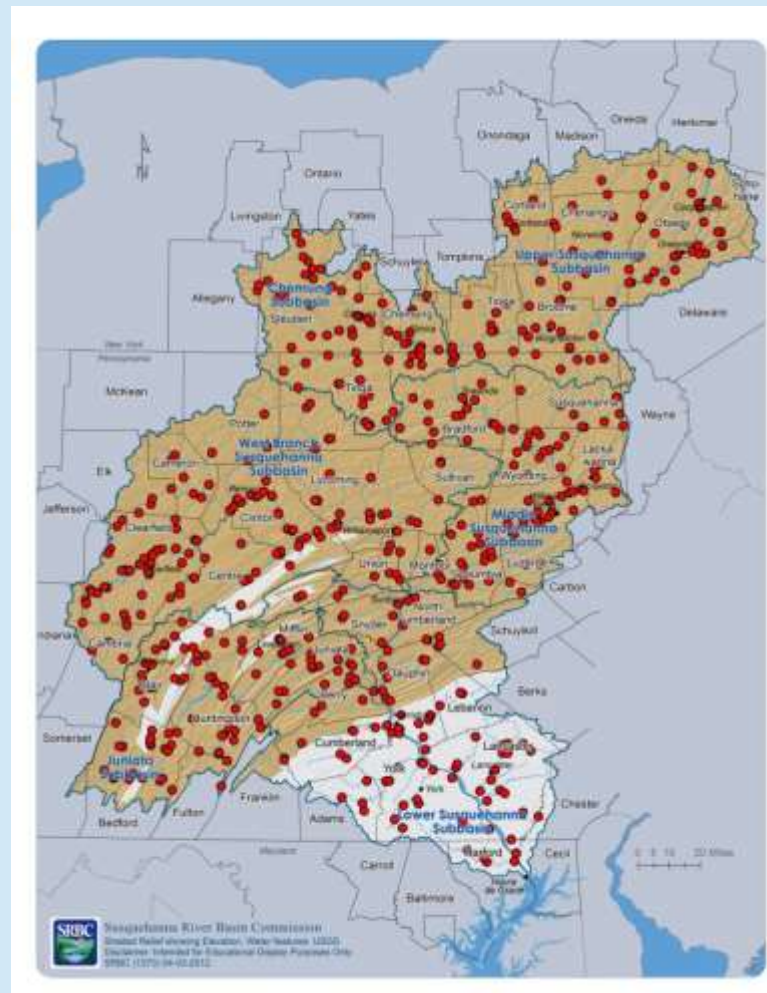
- Nutrient and sediment monitoring beginning in the 1980s





# SRBC Water Quality Monitoring

- Data collection began mid-1980s
- Chemistry, biology, habitat, flow
- Approximately 2,000 station visits annually
  - Over 35,000 lab analytes
  - Over 70,000 fish collected
- Over 25 million WQ observations by real-time stations
- Active in all jurisdictions/subbasins
- Active in all major WQ issue areas
  - mine drainage, agriculture, urban runoff and CSOs, etc.



# Water Quality Data Portals

## Welcome to the Water Quality Portal

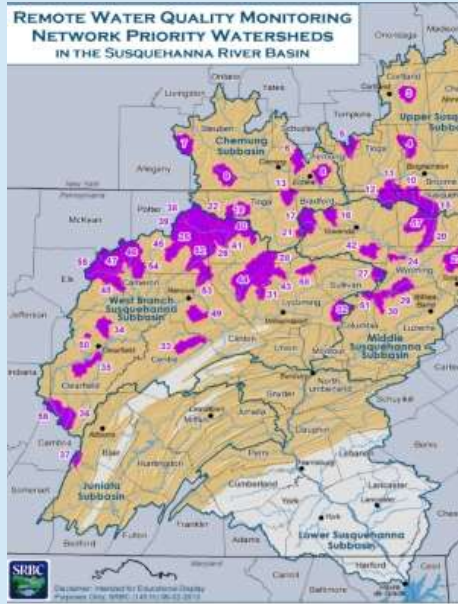
This portal provides public access to data collected as part of the Commission's programs to assess and track water quality conditions in the basin. Within the data portal, you will find chemical, biological, and habitat data for rivers and streams in our basin. These data were acquired through single, point-in-time, "grab" samples collected by Commission staff. For continuous water quality data at select locations, please visit the [Remote Water Quality Monitoring Website](#).

Before previewing the data contained in the portal, you may want to become familiar with some of the terminology contained within the datasets by reviewing the following links to information on [data collection methods](#), [lab information](#), [macroinvertebrate identification](#) and [project descriptions](#). In addition, the project web pages listed on the right provide more information for the data in the portal, with the name of the project found in the export file for any results from the portal.

Please select the type of data that you would like to query:

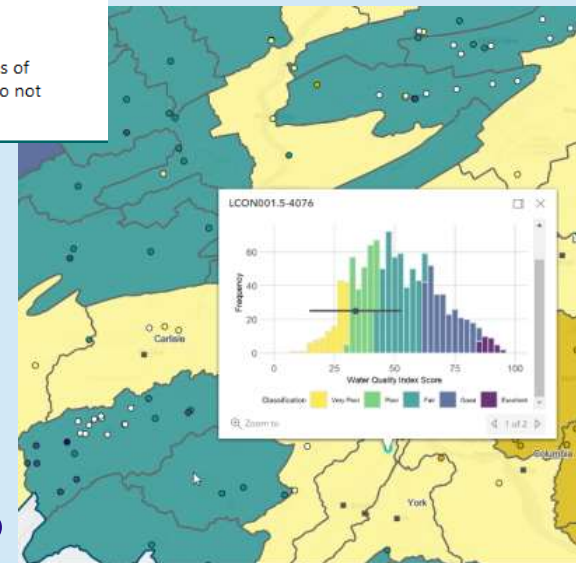
- **Fish** (Dates range from 2008 to 2017)
- **Habitat** (Dates range from 1998 to 2017)
- **Macroinvertebrate** (Dates range from 1990 to 2017)
- **Water Chemistry** (Dates range from 1982 to 2017)

It is important to note that the Commission collects data annually throughout different portions of the basin, so if there is interest in a stream where no data have been collected to date, please do not hesitate to [contact us](#) to offer suggestions.



## Remote Water Quality Monitoring Network

## Water Quality Index Map



# Summary of Opportunities

- data sharing
- water quality monitoring
- technical assistance and grant support
- public comment
  - water use applications
  - Comprehensive Plan update



# Thank You



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