Celebrating 50 YEARS 1971 · 2021

SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
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SUSQUEHANNA RIVER BASIN COMMISSION

2021 Annual Report

A Message from the Executive Director

A YEAR OF CELEBRATION AND NEW INITIATVES

Andrew Dehoff
Executive Director

January 23, 2021 marked the 50th anniversary of our creation. We spent the year celebrating a half-century's worth of accomplishments in water management, while also examining priorities for the next 50.

The Commission humbly received a bevy of proclamations and acknowledgments from United States Senators, Governors, and state and local officials from New York, Pennsylvania and Maryland. And in addition to the many congratulatory letters and social media comments we received in attaining this 50-year milestone, the Dauphin County Commissioners, home of Commission headquarters, proclaimed September 17th as "Susquehanna River Basin Commission Day."

One of our goals in 2021 was to adopt a revised Comprehensive Plan for the Water Resources of the Susquehanna River Basin. I'm thrilled to report that we met this goal. The 20-year plan articulates SRBC's vision, goals and objectives for the Basin as we move forward in a changing environment.

Although COVID dampened our face-to-face interactions, we accelerated our use of social media, website offerings, and virtual outreach tools so that schools, organizations, and the public have a better understanding of the Susquehanna and the role of SRBC. For instance, our new and ever-expanding series of Public Information Pamphlets covers an assortment of river basin topics.

The Commission is also committed to serving all communities, with emphasis on those that are disadvantaged or vulnerable, and we are stronger when all voices are represented and diversity is welcomed. As we head into 2022, we must ensure that environmental justice remains a focus for all Basin residents, in order to offer equitable access to the benefits and opportunities associated with our shared water resources.

I am delighted that we ended 2021 with so many exciting programs and accomplishments. But, just as the river continues to flow, the stream of challenges goes on. We are eager to serve the public, our stakeholders and our government officials by remaining responsive and advancing public welfare through comprehensive planning, water supply allocation, and management of the water resources of the Susquehanna River Basin.

2021 Commissioners and SRBC Staff

EXECUTIVE STAFF

Andrew D. Dehoff, P.E.
Executive Director

Andrew J. Gavin
Deputy Executive Director

Marcia E. Hutchinson
Director, Administration and Finance

Gene G. Veno
Governmental Affairs & Public Advocacy

Jason E. Oyler
General Counsel and
Secretary to the Commission

MANAGERS

John W. Balay, P.E., P.H.
Planning and Operations

Paula B. Ballaron, P.G.
Policy Implementation and Outreach

Todd D. Eaby, P.G.
Project Review

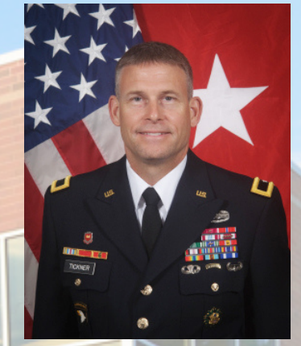
Gordon D. Lauger
Accounting

Brydon H. Lidle, III
Information Technology

Jeremy M. Hoffman
Compliance

James P. Shallenberger
Monitoring and Protection

MARYLAND (CHAIR)
Ben Grumbles
Secretary
Maryland Department of the Environment
1st Alternate: Saeid Kasraei
2nd Alternate: Suzanne Dorsey



UNITED STATES (VICE CHAIR)
BG Thomas J. Tickner
Commander
North Atlantic Division
US Army Corps of Engineers
1st Alternate: Col. John T. Litz
2nd Alternate: Amy M. Guise

NEW YORK
Basil Seggos
Commissioner
New York State Department of Environmental Conservation
1st Alternate: James M. Tierney

PENNSYLVANIA
Patrick McDonnell
Secretary
Pennsylvania Department of Environmental Protection
1st Alternate: Aneca Atkinson

SRBC's 50th Anniversary

A YEAR-LONG CELEBRATION

SRBC celebrated its golden anniversary in commemoration of the Susquehanna River Basin Commission Compact authorized on January 23, 1971.

The celebration was marked with congratulatory proclamations from partner leaders, in-person events, and social media messages.

Visit the 50th Anniversary Story Map and learn more about SRBC's first 50 years of achievements and SRBC's history.

Susquehanna River Basin Commission Day

NEW DAY FOR THE RIVER

In honor of the Commission's 50 anniversary, Dauphin County Commissioners proclaimed September 17th as Susquehanna River Basin Commission Day.

The first Susquehanna River Walk was held on September 17, 2021 inspiring the creation of Susquehanna River Basin Commission Day.

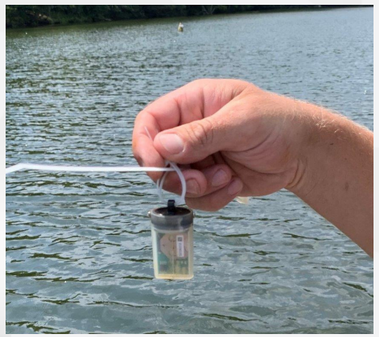
Monitoring

A YEAR OF MONITORING NOTABLES

SRBC continued to build on its flagship Monitoring and Protection program.

Scientists carefully select what type of data to collect and interpret for projects related to:

- coal mining legacy
- aquatic invasive species
- watershed restoration
- stormwater management
- migratory fish research
- harmful algal blooms
- drought impacts
- flood risk mapping
- dam removal
- natural gas development
- climate change
- drinking water protection



Stream & River Monitoring

NEW CONTINUOUS INSTREAM MONITORING WEBSITE

SRBC's **Continuous Instream Monitoring** (CIM) program turned ten years old in 2021.

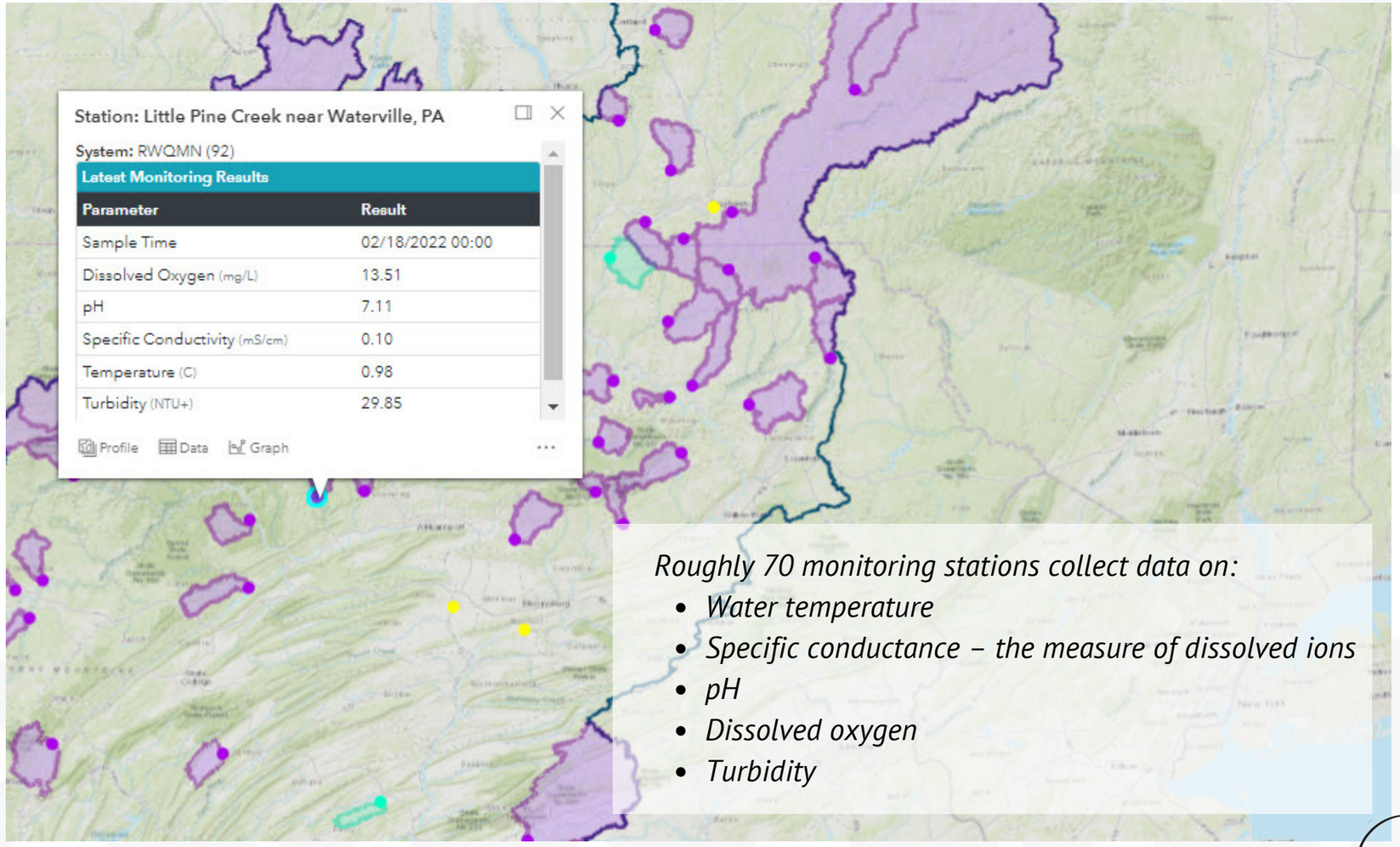
Approximately 70 real-time monitoring stations measured five water quality indicators every 15 minutes. That's more than 12 million new data points added to the program's database in just one year.

Specialized equipment detects subtle changes in water chemistry. Over time, large datasets help scientists analyze long-term water quality trends and cause-and-effect relationships that impact water resources.

CIM Story Map

NEW STORY MAP

Visit the CIM Story Map to learn more about the program's history, station locations, and how to use the CIM dashboard to view statistics about specific monitoring stations.



Roughly 70 monitoring stations collect data on:

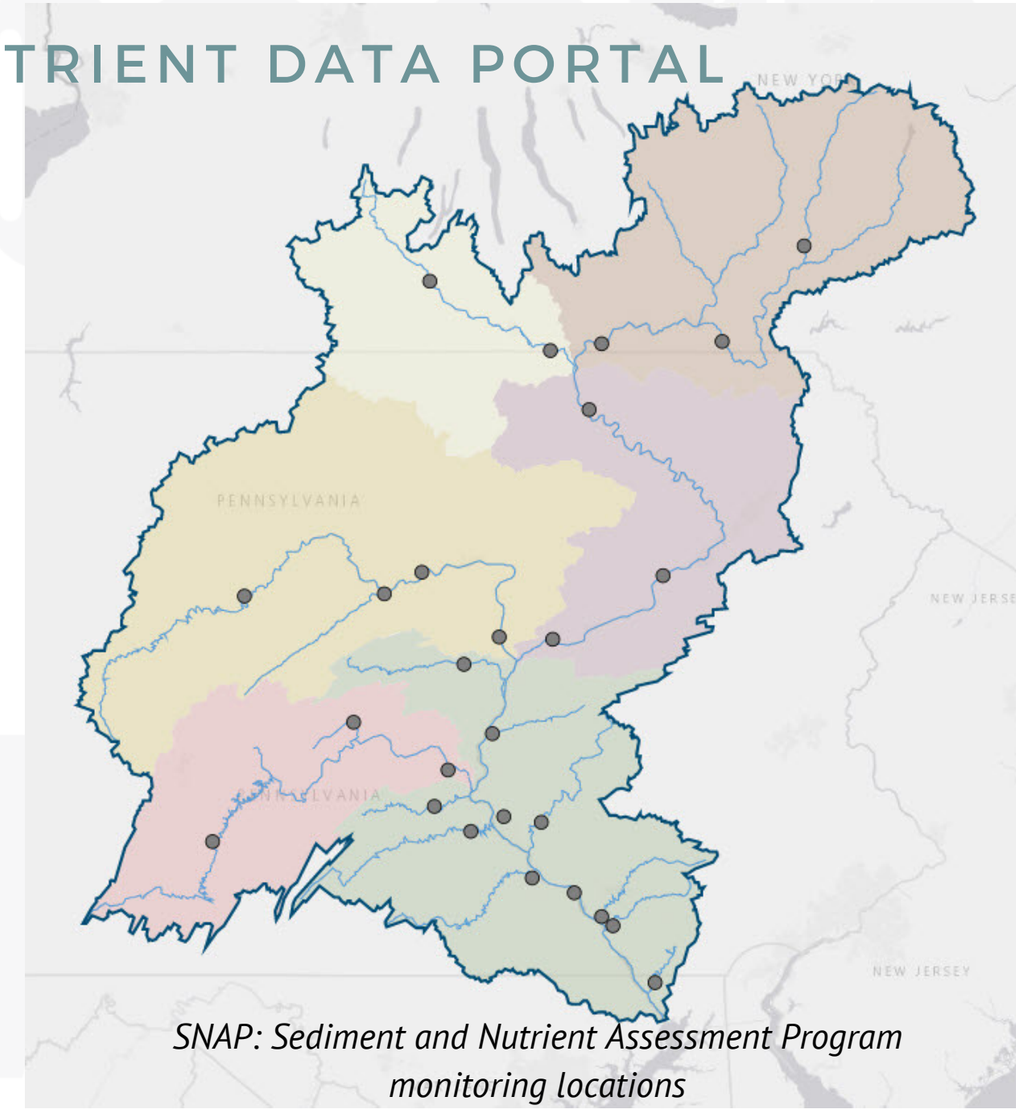
- *Water temperature*
- *Specific conductance – the measure of dissolved ions*
- *pH*
- *Dissolved oxygen*
- *Turbidity*

Chesapeake Bay Monitoring Network

DIVE DEEP INTO SEDIMENT AND NUTRIENT DATA PORTAL

Teams collected more than 525 composite water samples from 26 stations throughout parts of New York, Pennsylvania and Maryland. Levels of nitrogen, phosphorus, and suspended sediment were monitored monthly and during storm flow events.

These data are used to track pollutant loads and trends – critical information to the Chesapeake Bay program partnership. Data have been collected since 1984.



SNAP: Sediment and Nutrient Assessment Program monitoring locations

What are the Data Saying?

MAKING TECHNICAL DATA UNDERSTANDABLE

The *Stories in Water Data* story map is a great new resource that interprets and explains complex scientific data behind the Chesapeake Bay restoration effort.

The website explains approaches to pollutant data collection, how scientists tell if conditions are improving, and where to find answers to questions about water quality.

In 2011, between August 26 and September 9, first Hurricane Irene and then Tropical Storm Lee brought up to 32 inches of rain to parts of the Chesapeake Bay Watershed. This image (NASA Terra Satellite) shows the extent of sediment-laden water in the Chesapeake Bay on September 13, 2011.

Mine Land Restoration

REFORESTING OLD MINED LANDS

SRBC, the Clearfield County Conservation District, and PA Environmental Council completed a project along Bilger Run that treated mine discharge and reforested the surrounding legacy mine land with 28,000 trees. SRBC served as project manager and design facilitator.

The project is Phase I of a four-phase restoration plan for the Kratzer Run Watershed.

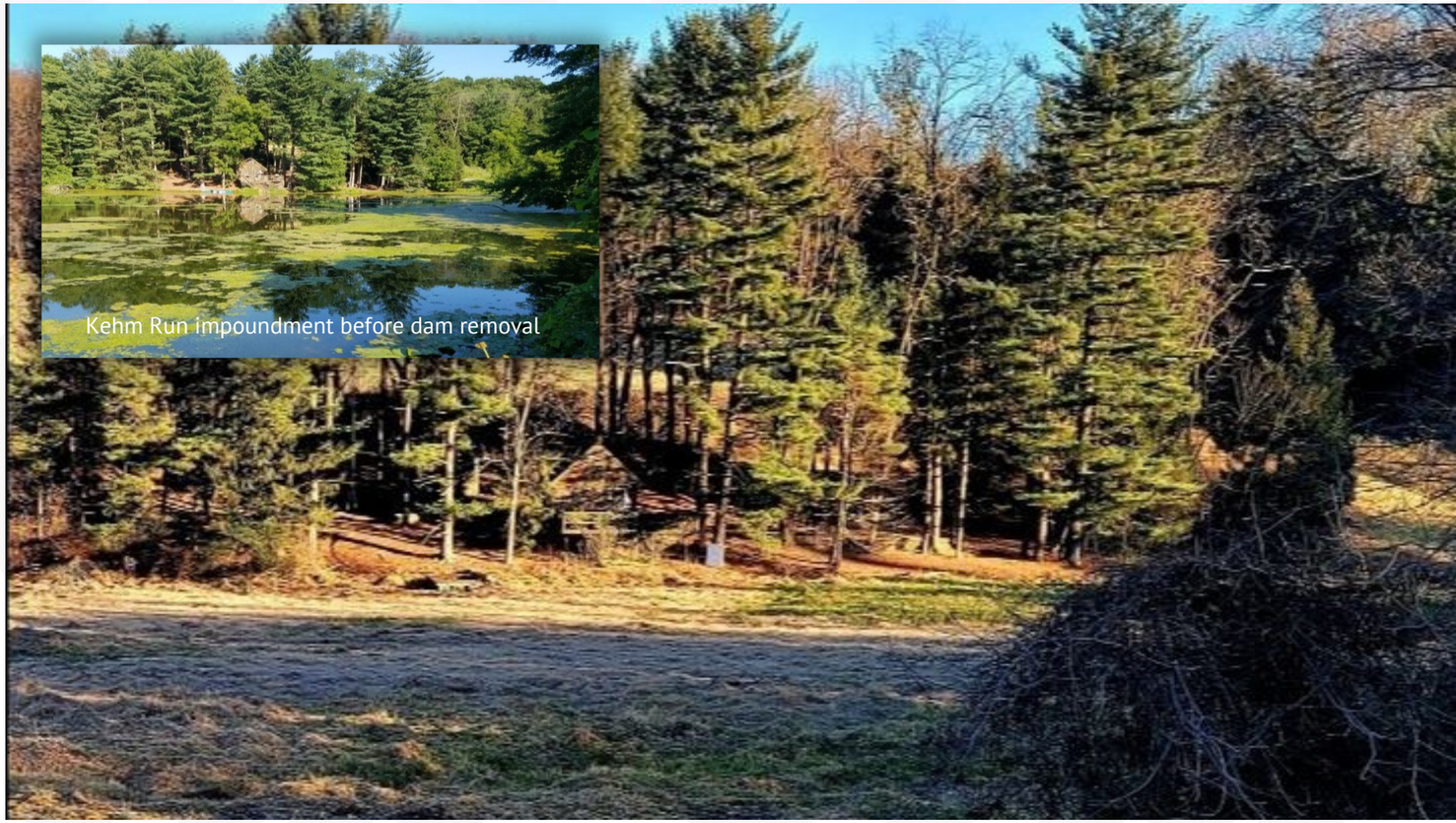
The passive treatment system is reducing acidity and aluminum loading to Bilger Run near Curwensville, PA. The Bilger 4.0 Discharge is the largest aluminum producer in the watershed with major impacts to the water quality of Bilger and Kratzer Runs.
PHOTO CREDIT: Eric Oliver

SRBC Funds Help Wrap Up Dam Removal

PARTNERSHIPS

Sometimes projects run out of money. That was the case in the removal of a 68-year-old deteriorating dam along Kehm Run in the Codorus Creek Watershed in York County, Pa.

With help from American Rivers, state funds were used to complete Phase I of this project. SRBC hydrogeologist Pierre MaCoy stepped in and helped secure SRBC water management dollars to complete the breach of the dam and reestablish the stream channel.



Kehm Run impoundment after dam removal. The next chapter for Kehm Run includes enhancing wetlands and riparian buffers, installing stormwater practices, restoring two on-site springs, and planning for long-term preservation of the site.

New Grant Program to Accelerate On-the-Ground Projects

NEW MITIGATION GRANTS

The Commission anticipates awarding $4 to $6 million in the first year of the grant program.

Consumptive Use (CU) refers to water that is used but not returned to the basin.

SRBC launched a new grant program for projects that will improve water availability and watershed resilience during droughts and periods of low flows. The Consumptive Use Mitigation Grant Program was born out of our 2020 Consumptive Use Mitigation Policy.

The grants will support projects involving:

- Water storage and release
- Modified operations or new practices that increase instream flows or improve flow resilience
- Water conservation, reuse and/or recycling
- Environmental and water quality improvement

Better Data Aid Project Review

FUNDS BOOST RELIABILITY OF GROUNDWATER MONITORING DATA

A second new grant program will improve water users' ability to report reliable water level data in groundwater production wells, which supports sustainable management of their water supply.

The Water Level Monitoring Grant Program focuses on project sponsors' needs related to monitoring equipment – their purchase, installation, and maintenance. Data collected through equipment improvements will add efficiency to SRBC's water withdrawal renewal process.

The Water Level Monitoring Grant Program awarded $117,000 for 34 projects in 2021 ranging from $1500 - $7500 per project. All projects located in Environmental Justice areas received awards for a sum total of $16,500.

Photo Credit: Alan Cressler

Flood Forecasting Decision Tool

TWO YEARS IN THE MAKING

After more than two years in development, an interactive online mapping tool was introduced to community officials and emergency managers in five counties in the Middle Susquehanna subbasin.

The decision tool is part of the Susquehanna Flood Warning & Response System (SFWRS). Based on forecasts from the National Weather Service, you can view a map that most closely resembles the predicted extent of the flood to help reduce loss and damages.

The map above shows the extent and depth of a flood resulting from stage 32.3' (record flood stage) at Danville, PA.

In the Classroom with SRBC

INSPIRING YOUNG MINDS

Staff created a new student outreach program called *In the Classroom with SRBC*. It's an opportunity to encourage K-12 students to learn about aquatic habitat, watershed issues, and the hydrologic cycle through the eyes of SRBC scientists.

Staff attended summer camps and festivals and educated youth about macroinvertebrates, stormwater runoff, and stream health monitoring.

New Groundwater Policies and Rules

The new groundwater policies will solidify the handling of an anticipated 200-250 groundwater renewal applications over the next five years and reduce costs to the regulated community.

The Commission adopted three new groundwater-related policies and supporting regulations:

- **Alternative Hydrogeologic Evaluation Policy** – new policy replaces current aquifer testing waiver process; use of existing site information reduces uncertainty and streamlines evaluation of water resource conditions
- **Updated Aquifer Testing Policy** - clarifies aquifer test requirements
- **Pre-Drill Well Site Review** - new policy encourages project sponsors to accept pre-drill review assistance from Commission staff

New Fee Incentives

PROMOTING THE USE OF LESSER QUALITY WATERS

A new fee incentive policy was adopted that encourages the use of lesser quality waters for regulated projects.

Replacing an older version from a decade ago, the new policy expands the scope of fee incentives targeting the use of waters impacted by abandoned coal mine drainage and the recycling and reuse of treated wastewater.

Penn State University has over five decades of research and experience in reclaiming its wastewater effluent for forest and crop irrigation and groundwater recharge. Spray irrigation at the Living Filter site of Penn State University. Credit: Penn State

Ongoing Efforts: Water Supply Education

PUBLIC WATER SUPPLY ASSISTANCE PROGRAM

Staff continued support and education for public water suppliers and consultants through free virtual webinar events.

The Public Water Supply Assistance Program hosted the webinar "*Focusing on What Matters: Revised Regulations and Policies to Make the Regulatory Process More Efficient*" and a three- part "*Groundwater Renewal Process*" webinar series.

Attendance for these webinars exceeded previous in-person education programs reaching as many as 250 participants per event.

Ongoing Efforts: Compliance

PROJECT SPONSOR ACCOUNTABILITY

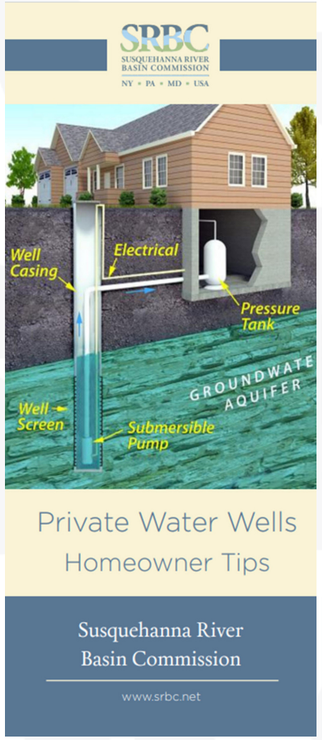
Staff successfully maintained a notably high level of compliance among our regulated projects through continuing to implement effective monitoring and inspection practices, while also implementing a new strategy focused on management priorities. In addition, staff was able to resolve several longstanding, complex compliance issues through working with project sponsors for improved water resource management outcomes.

In one compliance case, settlement funds were used to improve a golf course and address water availability issues.

Ongoing Efforts: Public Information

NEW PUBLIC INFORMATION PAMPHLETS

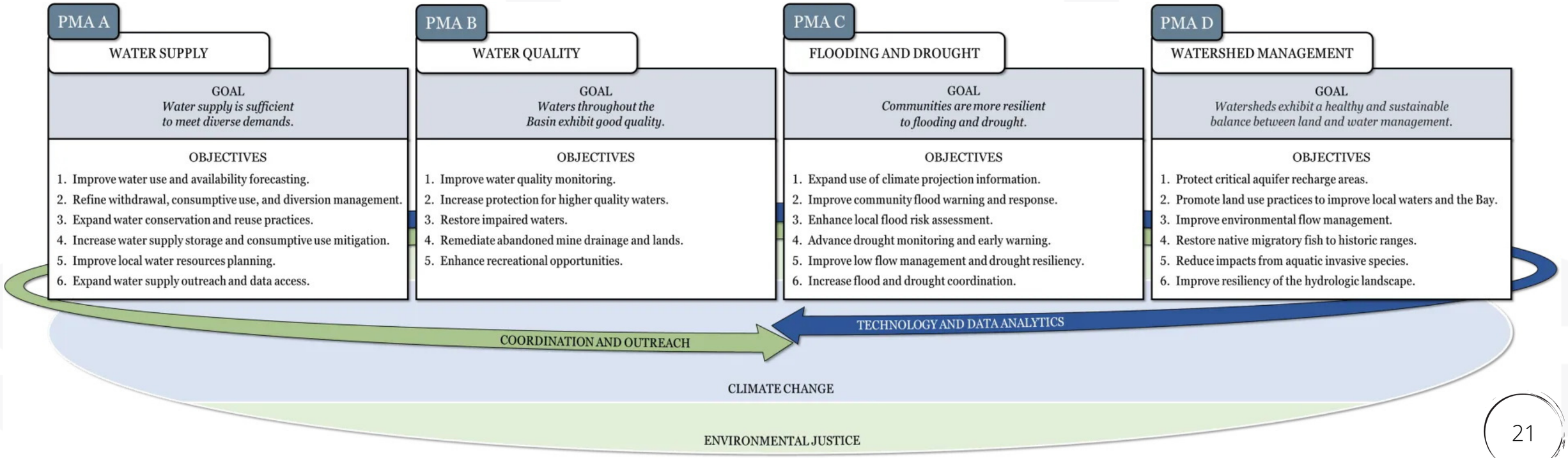
Staff launched a series of information pamphlets designed to educate and inform the public about the Susquehanna River Basin and important river basin issues.



SRBC LOOKS AHEAD 20 YEARS

NEW COMPREHENSIVE PLAN

The Commission updated its Comprehensive Plan in 2021, which marked the halfway point in the 100-year River Basin Compact. The plan builds on five decades of achievements and lays out a path to support the river basin's public, industrial, and ecological needs into the future, while also increasing our focus on climate change and environmental justice.



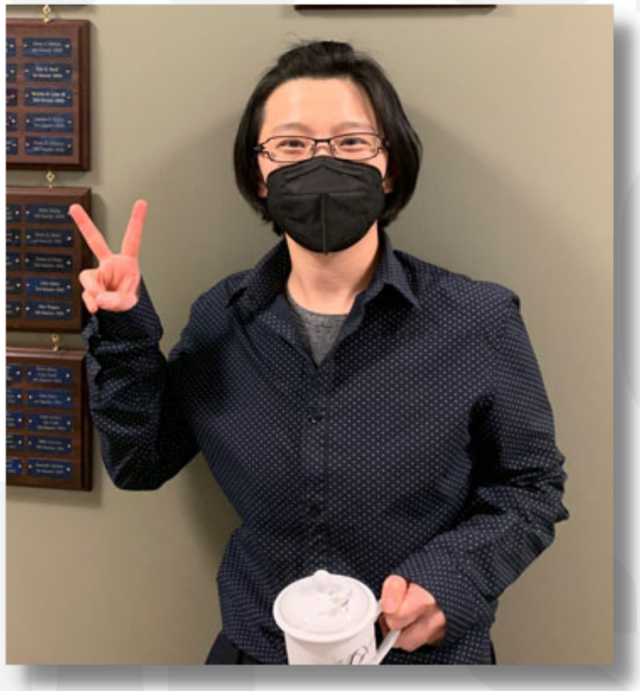
2021 Staff Awards

ANNUAL STAFF EXCELLENCE AWARD

Tom Clark was recognized for continued dedication to Commission goals in building an Abandoned Mine Drainage restoration program.

2021 Staff Awards

SPOTLIGHT AWARDS



Can Liu - Outstanding work on the US Army Corps of Engineer Flow Study

Dawn Hintz - Outstanding work on the Continuous Monitoring Network

2021 Staff Awards

SERVICE AWARDS

Brook Flynn
Donna Heiser

Matthew Elsasser
Dorinda Kennedy
Steve McFeaters
Ellyn Campbell
Marjorie Danko
Dave Haklar
Mike Appleby

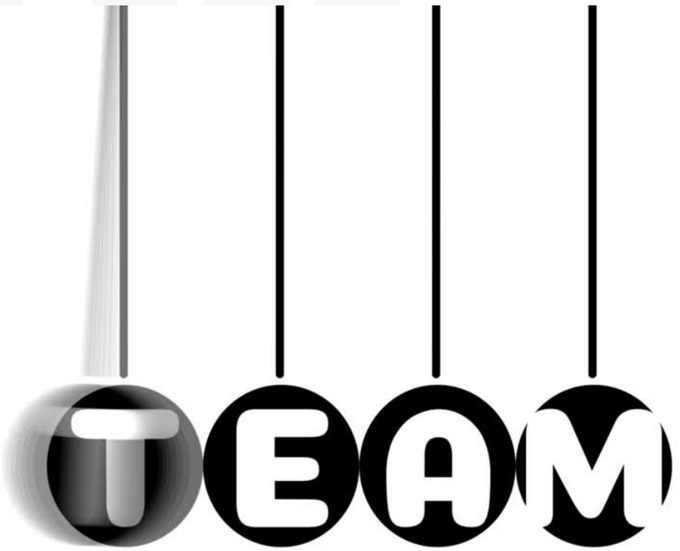
Tyler Shenk
Hilary Hollier
Ava Stoops

TEAMWORK AWARD: **Consumptive Use Mitigation Grant Team**

Hilary Hollier
Paula Ballaron

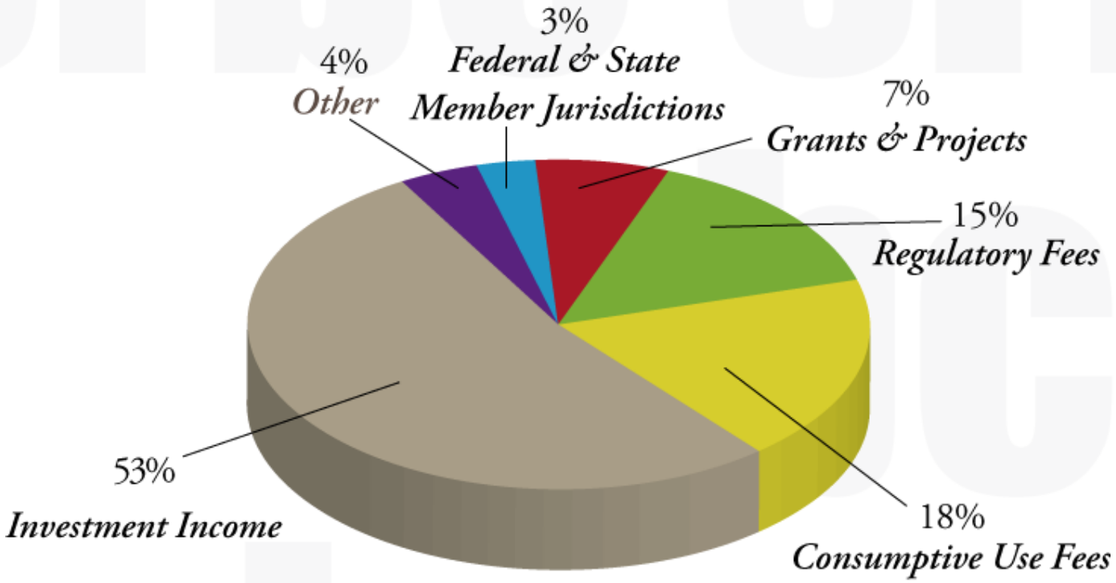
Pierre MaCoy
Julian Mazero

Chuck Frank
John Balay



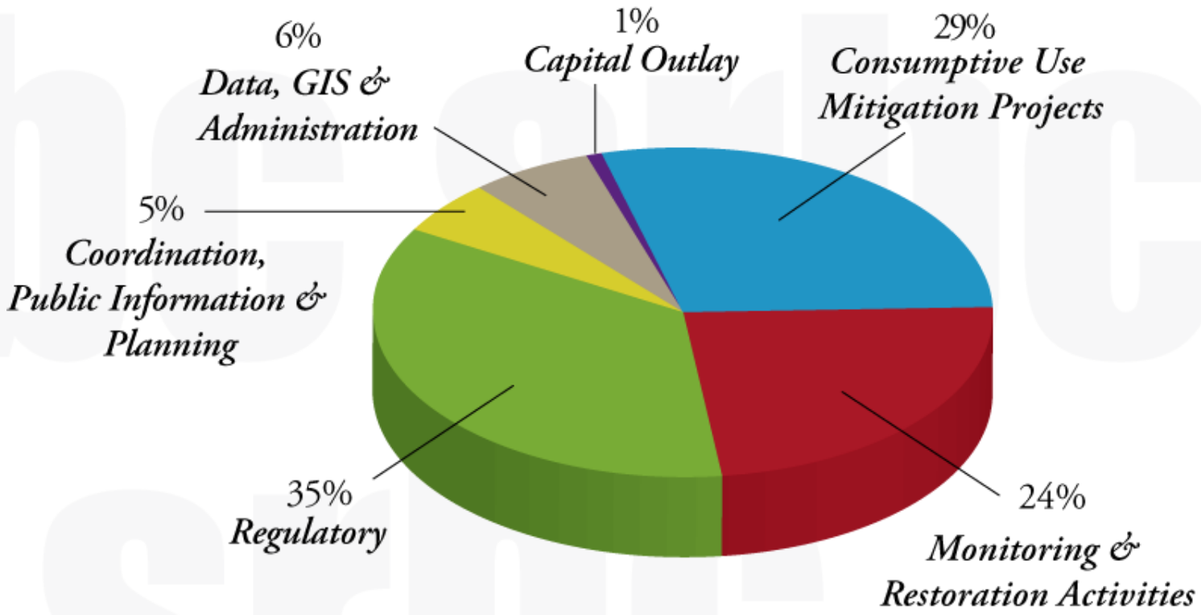
Fiscal Year 2021

FINANCIAL SUMMARY



REVENUE

Total: $25,570,507



EXPENDITURES

Total: $10,912,306

Change in Commission Fund Balances:

Fiscal Stabilization Fund	$	(2,454,105)
Sustainable Water Resources Fund	$	5,325,454
Water Management Fund	$	11,786,852
Total	$	14,658,201

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1971 - 2021

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