

SRBC Water Quality Advisory Committee Meeting



*USGS PA Water Science Center Office,
New Cumberland, PA
May 22, 2013*

Update to Comprehensive Plan

- Release to public –
Summer
- Comment/Response –
Fall
- Final update approved -
December



COMPREHENSIVE PLAN FOR THE WATER RESOURCES OF THE SUSQUEHANNA RIVER BASIN

Susquehanna River Basin Commission
1721 North Front Street
Harrisburg, PA 17102
December 2013

SUSQUEHANNA RIVER BASIN COMMISSION

State of the

SUSQUEHANNA

2013 REPORT



Water Use & Development



Floods & Droughts



Stormwater



Mine Drainage



Sediment & Nutrients



Human Health & Drinking Water Protection



Habitat & Aquatic Resources

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[2013 Full Report](#)

 [High Res. \(10.0 mb\)](#)

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About the State of the Susquehanna

The 2013 State of the Susquehanna report is produced by the Susquehanna River Basin Commission to provide the public a snapshot look at data and trends associated with seven overarching water resource indicators. The seven indicators, which are the same as those covered in SRBC's 2010 State of the Susquehanna report, are:

1. Water Use and Development
2. Floods and Droughts
3. Stormwater
4. Mine Drainage
5. Sediment and Nutrients
6. Human Health and Drinking Water Protection
7. Habitat and Aquatic Resources

Drinking Water Connection

This 2013 report features "**The Drinking Water Connection**" to draw attention to the importance of protecting water supplies for the more than 6 million people – both in and out of the Susquehanna basin – who rely on the basin for their water.

In addition to relating how each of the seven indicators affect drinking water conditions, there is an informative chart listing the major public water supplies in the Susquehanna basin.

SUSQUEHANNA RIVER BASIN COMMISSION

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Information Sheet

Cumulative Water Use and Availability Study



[Why is SRBC assessing cumulative water use and availability throughout the Susquehanna basin?](#)

[What are the major steps to this study and when will it be completed?](#)

[How will this study and assessment tool aid SRBC in its regulatory decision-making and planning, and enhance public awareness and understanding of the basin's water resources?](#)

[What is the schedule for this study?](#)

[Commentary: Executive Director Paul Swartz, Susquehanna River Basin Commission](#)

Why is SRBC assessing cumulative water use and availability throughout the Susquehanna basin?

The Susquehanna River Basin Commission's (SRBC's) Comprehensive Plan – first adopted in 1973 and most recently updated in 2008 – calls for the agency to manage water resources at the watershed level to assure long-term balance between healthy ecosystems and economic viability. Given that water supply for human uses can affect aquatic ecosystems if not returned to streams undiminished in quantity, it is important for SRBC to quantify the potential impacts of these consumptive water uses on the basin's water resources and aquatic life – not only individually but also cumulatively. This involves determining how much water is available for local, sustainable development while protecting ecosystems and other instream flow needs in the Susquehanna basin.

2013 SUSQUEHANNA WATER SCIENCE FORUM

Susquehanna River Basin Commission

October 7 - 8, 2013

Radisson Hotel Harrisburg, Camp Hill, PA

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Overview

[Forum Overview](#)



Who Should Attend: Water Resource Managers and Researchers

The 2013 Susquehanna Water Science Forum will address the need to encourage, publicize and disseminate research to ensure that the best available scientific information is used to establish priorities and support sustainable water resource management in the Susquehanna River Basin.

The Forum will bring together researchers and water resource managers to share current water resource research, prioritize research needs and better coordinate research activities in the Susquehanna River Basin. Public and private interests will focus on applied research in aquatic ecosystem management, providing a catalyst for continued coordination and development.

*From Science to
Sustainable Water
Resources
Management*



Forum Topics

Identifying Greatest
Stressors to Aquatic
Ecosystem Integrity

Evaluating Effects of

Susquehanna River Basin Commission
protecting your watershed for today and tomorrow

SAVE THE DATE — OCTOBER 7 - 8, 2013

2013 SUSQUEHANNA
WATER SCIENCE
FORUM

**From Science to Sustainable
Water Resources Management**

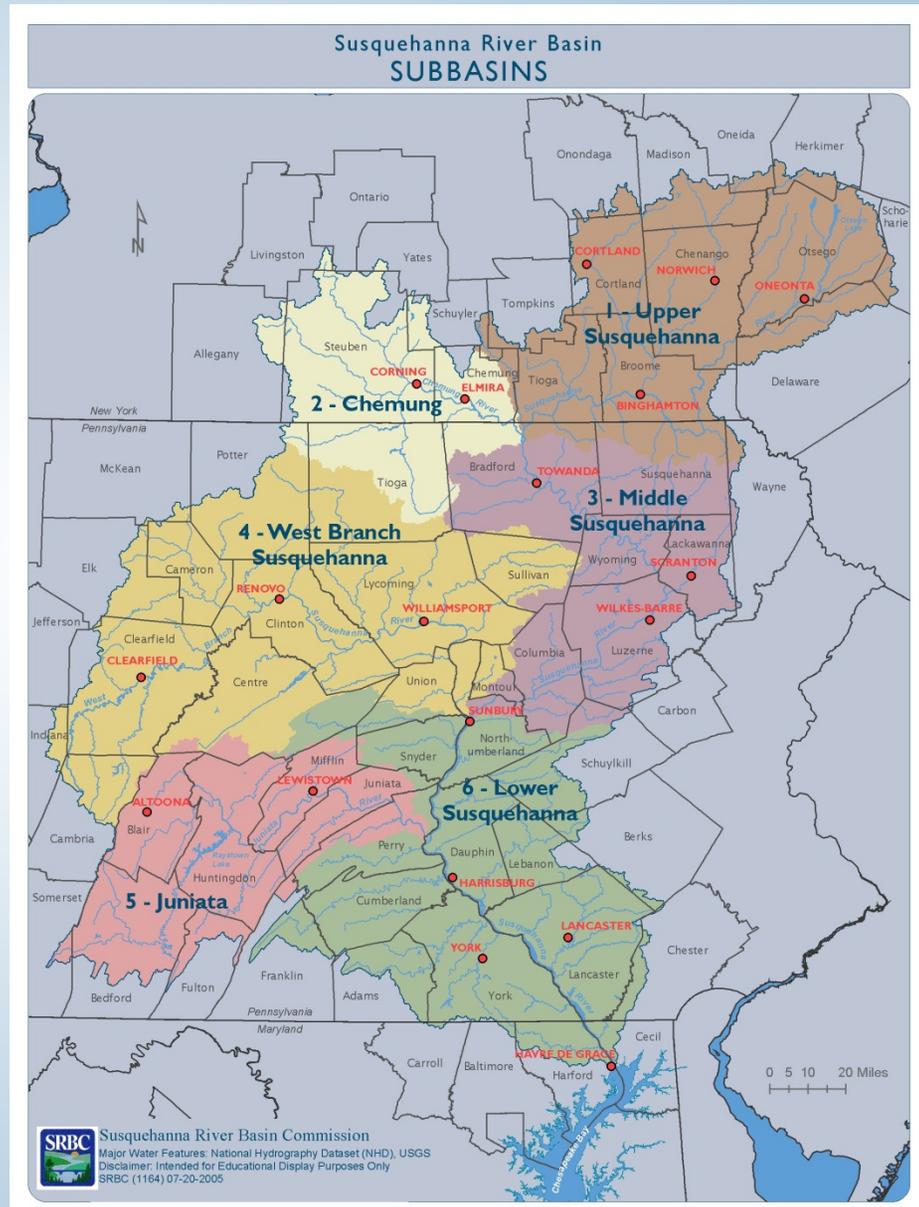
Forum Topics:

- Identifying Greatest Stressors to Aquatic Ecosystem Integrity
- Evaluating Effects of Stressors
- Balancing Competing Uses for Long-term Sustainability
- Using Science to Achieve Balanced Policy and Regulation

Monitoring and Protection Program Highlights

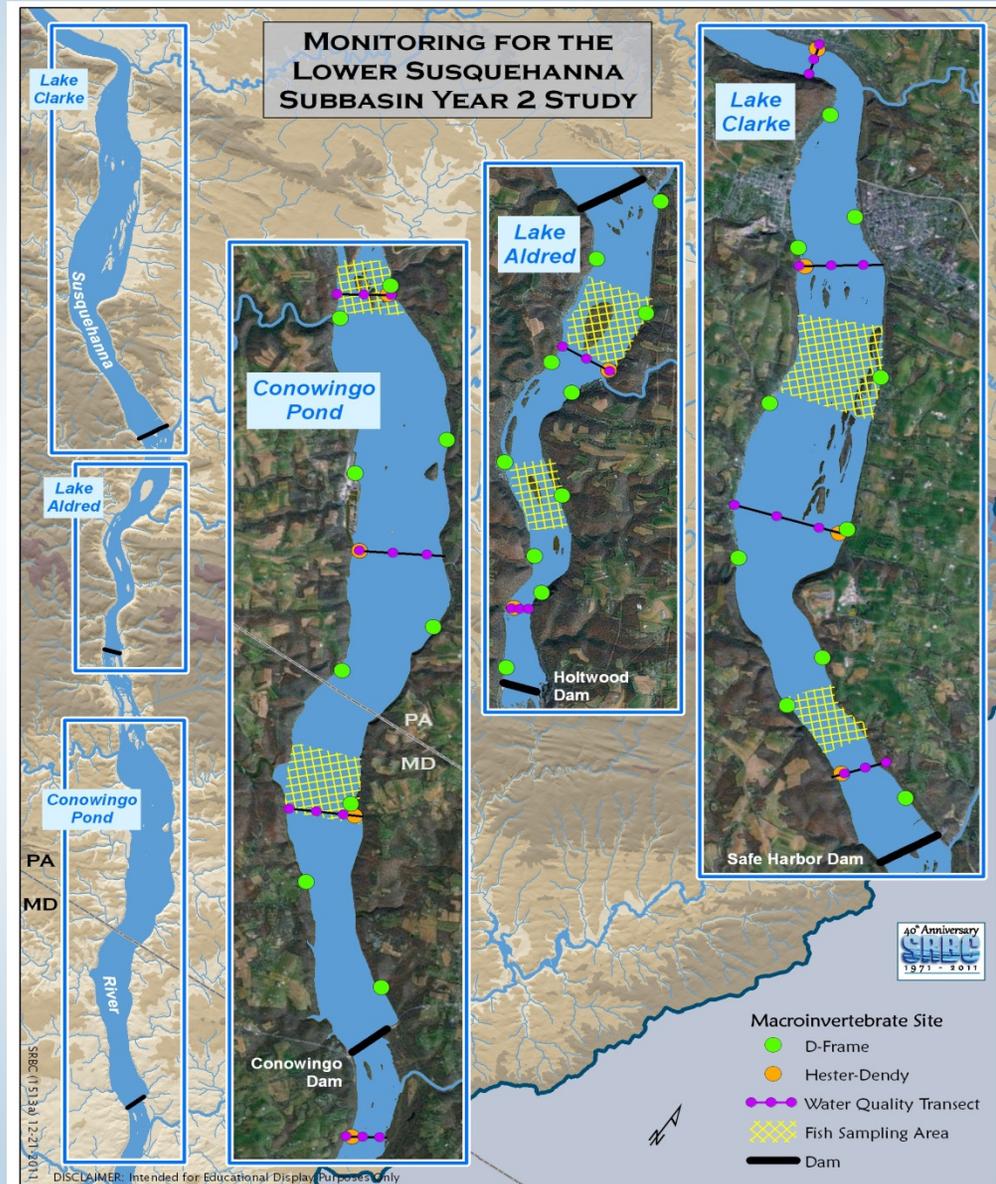
Data Collection Highlights - 2012

- Fifteen (15) different monitoring projects
- Active in all subbasins / jurisdictions
- Expanded Bay monitoring
- Conclusion of first research-related data collection effort (ARS Research)
- Completed data collection efforts for several TMDLs related to nutrient, sediment, and atmospheric deposition
- The fish are back in Bear Run!



Lower Reservoir Study

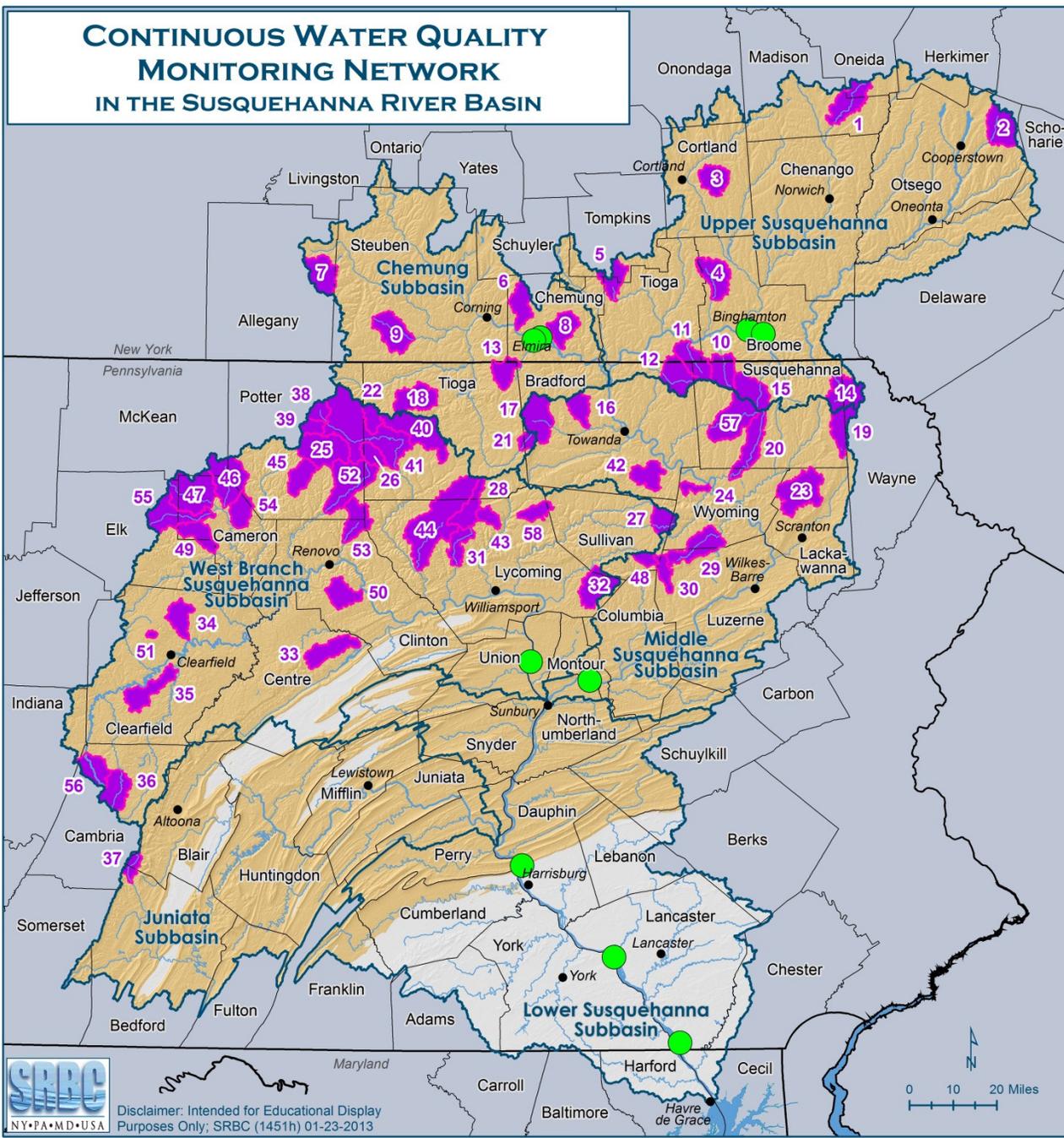
- Focus on lower 45 miles of the Susquehanna River
- Study Intent
 - General baseline
 - Some focus on water supply concerns
 - Recommendations for future monitoring
- Water chemistry, macroinvertebrates, and fish
- General habitat and depth profile data



CONTINUOUS WATER QUALITY MONITORING NETWORK IN THE SUSQUEHANNA RIVER BASIN

-  Drinking Water Early Warning System Station
 -  Area Containing Natural Gas Shales
 -  Area with No Recoverable Natural Gas Formations
- WATERSHEDS WITH MONITORING STATIONS IN THE NATURAL GAS REGION**
-  Station Installed

- | | |
|------------------------------------|--|
| 1. Sangerfield River | 31. Larrys Creek |
| 2. Cherry Valley Creek | 32. Little Muncy Creek |
| 3. Trout Brook | 33. Marsh Creek |
| 4. Nanticoke Creek | 34. Trout Run |
| 5. Catatunk Creek | 35. Little Clearfield Creek |
| 6. Sing Sing Creek | 36. Chest Creek |
| 7. Canacadea Creek | 37. Bobs Creek |
| 8. Baldwin Creek | 38. Upper Pine Creek |
| 9. Tuscarora Creek | 39. Ninemile Run |
| 10. Choconut Creek | 40. Marsh Creek |
| 11. Apalachin Creek | 41. Pine Creek |
| 12. Wappasening Creek | 42. Sugar Run |
| 13. Hammond Creek | 43. Grays Run |
| 14. Starrucca Creek | 44. Little Pine Creek |
| 15. Snake Creek | 45. East Fork First Fork Sinnemahoning Creek |
| 16. Tomjack Creek | 46. Portage Creek |
| 17. Sugar Creek | 47. Driftwood Branch |
| 18. Crooked Creek | 48. East Branch Fishing Creek |
| 19. Lackawanna River | 49. Hicks Run |
| 20. Meshoppen Creek | 50. Baker Run |
| 21. Tioga River | 51. Moose Creek |
| 22. Long Run | 52. Kettle Creek |
| 23. South Branch Tunkhannock Creek | 53. Young Womans Creek |
| 24. Little Mehoopany Creek | 54. Hunts Run |
| 25. West Branch Pine Creek | 55. West Creek |
| 26. Elk Run | 56. West Branch Susquehanna River |
| 27. Loyalsock Creek | 57. East Branch Wyalusing Creek |
| 28. Blockhouse Creek | 58. Pleasant Stream |
| 29. Bowman Creek | |
| 30. Kitchen Creek | |



Disclaimer: Intended for Educational Display Purposes Only; SRBC (1451h) 01-23-2013

Member Jurisdiction Coordination

New York

- Coordinating subbasin survey activities in the Chemung and Upper Susquehanna
 - Methods comparison study – PEERS participation
- Real-time data access for the main river stems

Pennsylvania

- Susquehanna sampling
 - Chemical/pesticide sampling
 - Fish data collection (taxonomy support)
 - WQ datasonde support

Member Jurisdiction Coordination

Maryland

- Exchange of information related to shale gas region monitoring
- Outreach to be conducted for Lower Susquehanna Drinking Water Partnership and Early Warning System upgrades

Federal

- USEPA National Rivers and Streams Assessment work for FY14-15
- USEPA Climate Study monitoring support
- USGS Technical Advisory Committee support for Appalachian Basin Shale Gas Study

New Initiatives

Water Quality Portal

- Web access of chemical, biological, and habitat data
- Map and menu driven options for data downloads
- June 2013 completion

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Protecting Your Watershed for Today and Tomorrow

About Map Viewer

Water Quality Portal - Query Tool Mockup

Are you interested in...

Fish
 Habitat
 Macroinvertebrate
 Water Chemistry

Would you like to filter the data by subbasin?

No
 Yes

Would you like to filter the data by watershed?

No
 Yes

Application Question: What if the watersheds are already contained by the previously selected subbasin?

Filter the watershed by selecting the containing subbasin:

Chemung

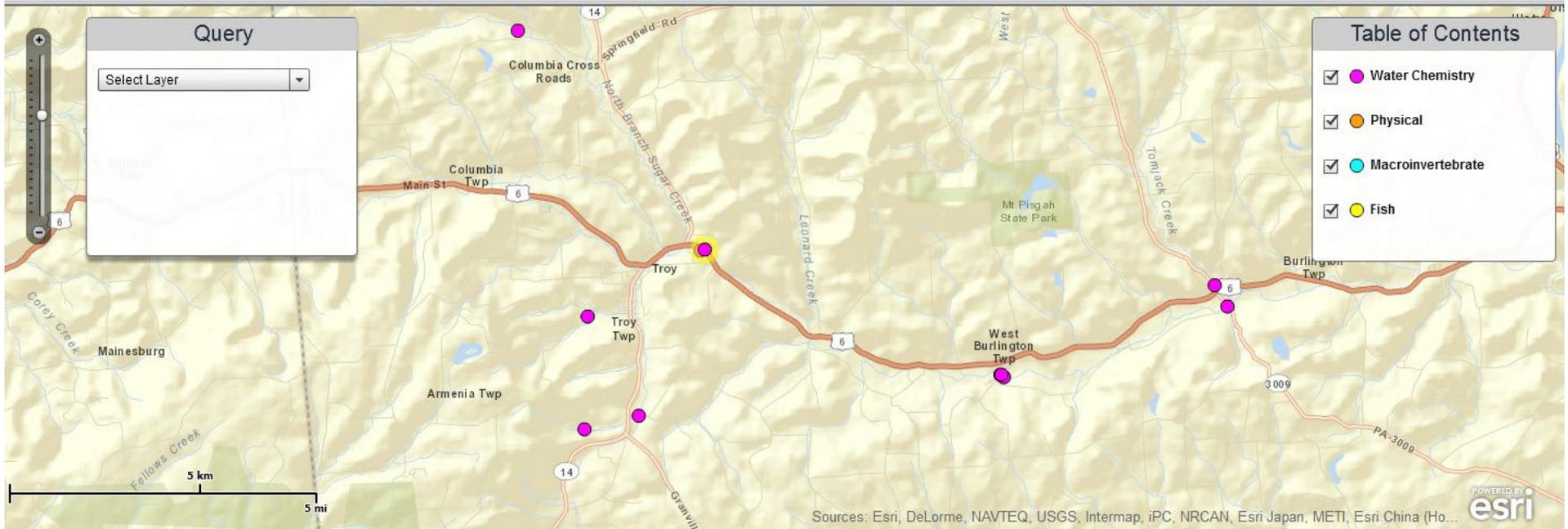
New Initiatives

Water Quality Portal – Map Interface

Water Quality Portal - Mockup

Show Attributes Query Tool

Basemap: World Streets



Water Chemistry	Macroinvertebrate	Habitat	Fish	Records: 1618				Table Options
Alias_ID	Waterbody_Name	Site_Description	Project	Station_Status	Designated_Use	Range	Count	
SUGR	Sugar Creek	South of Troy on Route 6; township road	RWQMN	Draft	TSF	10/26/2011 - 7/25/2012	32	
TOMJ	Tomjack Creek	Upstream of Route 6 and Berwick Turnpike Rd intersection	RWQMN	Draft	TSF	10/26/2011 - 7/18/2012	20	
Fall Brook 1	Fall Brook	Talisman Energy USA Inc. (Formerly Fortuna Energy Inc.) Troy Town...	ARS	Final-Confidential	TSF	10/8/2009 - 10/8/2009	1	
S Br Sugar Ck 1	South Branch Sugar Creek	Talisman Energy USA Inc. (Formerly Fortuna Energy Inc.) Troy Town...	ARS	Final-Confidential	TSF	10/8/2009 - 10/8/2009	1	
Sugar Ck 1	Sugar Creek	Fortuna Energy West Burlington Township	ARS	Final-Confidential	TSF	8/12/2008 - 8/12/2008	1	
UNT N Br Sugar Ck 1	Unnamed Tributary to Nor...	Talisman Energy USA Inc. (Formerly Fortuna Energy Inc.) Columbia ...	ARS	Final-Confidential	TSF	9/17/2009 - 9/17/2009	1	

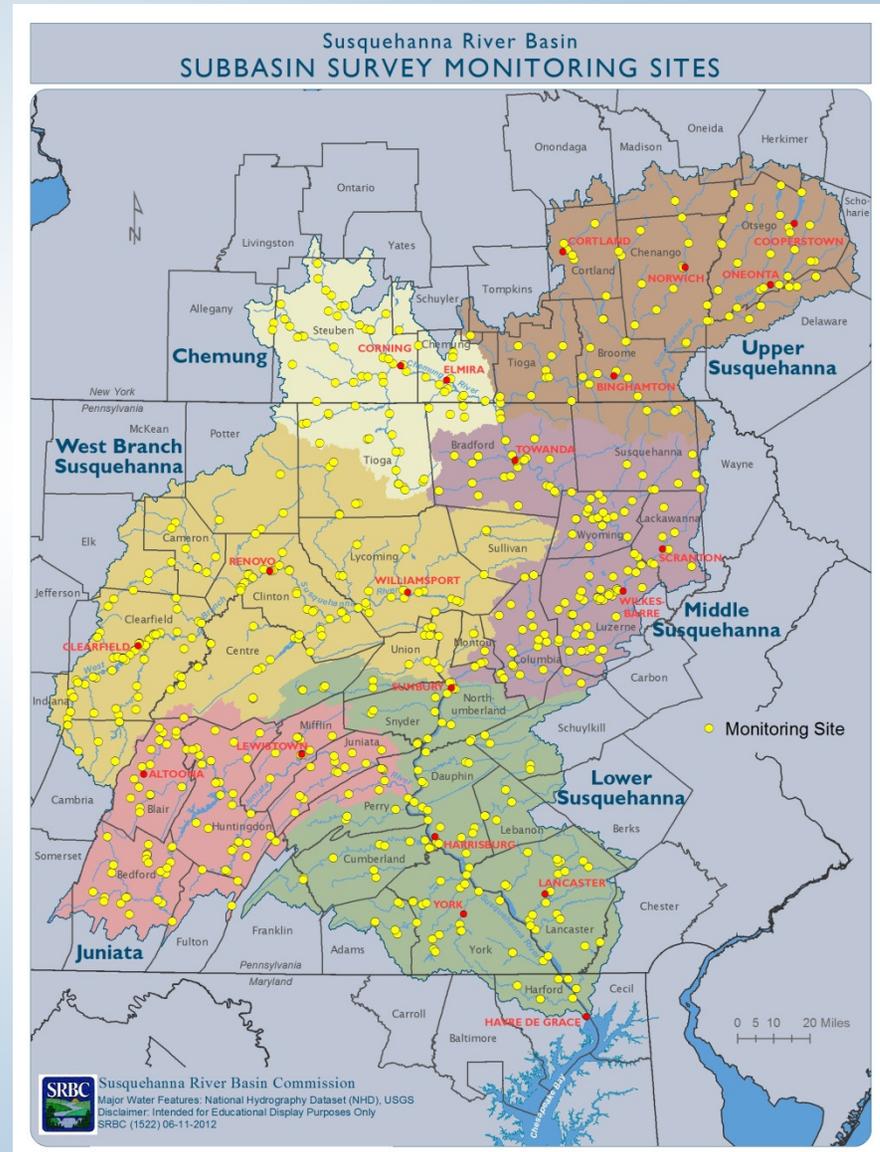
New Initiatives

USEPA 106 Monitoring Program Changes

- New monitoring design to incorporate:
 - Long-term record
 - Probabilistic design
 - Programmatic/regulatory interest

New technology/studies

- Acoustic doppler survey equipment
- Precipitation/Streamflow stations
- Basinwide fish community health assessment
- Sediment/turbidity assessment



Interstate Streams Program

Interstate Streams Program

- Data collection since 1986
- Monitoring design:
 - About 50 stations
 - Quarterly chemistry
 - Annual biological and habitat
- Possible options for program adjustment:
 - Bolster large river and tributary monitoring
 - Bolster sediment/nutrient monitoring in small watersheds
 - Expand low flow WQ network

