The History and The Vision

south river SCIENCE TEAM

April 2019

South River Science Team Established 2001













ACADEMIA

ADVISORY PANELISTS



VDEQ VDGIF

VDH

STATE

EPA (Region III) USFWS

FEDERAL

Waynesboro Grottoes

LOCAL

ENVIRONMENTAL GROUPS

Friends of Shenandoah Virginia Conservation Council Virginia Save Our Streams **Trout Unlimited** Shenandoah River Keeper Chesapeake Bay Foundation

William & Mary James Madison Virginia Tech Delaware Waterloo Colorado State Western Washington Texas Tech

William Clements David Hirschman Ralph Turner Mike Newman Gary Bigham Rob Mason John Rudd

Engineers Geologists **Risk Assessors** AECOM

Inaugural Science Team Charter February 14, 2001



Mission: Serve as a focal point for technical and scientific issues in support of steering committee

Objectives: Review <u>data</u>, <u>trends</u>, <u>gaps</u>; <u>fate</u> <u>and transport</u> issues, remediation, communications, ID and prioritize additional study areas; <u>exposure issues</u>; refine and <u>develop</u> <u>conceptual models</u>, develop plan to fill data gaps; explore watershed management options; fishery management options; monitor developments at other Hg sites; <u>information transfer</u> - expert lectures.

Charter Revisions



October 6, 2009

<u>Mission</u> - serve as a focal point for collecting and interpreting information to help mitigate legacy mercury contamination in the South River watershed.

<u>Objectives</u> - collect, analyze and interpret diverse environmental datasets; conduct outreach at the local and state levels; communicate findings to scientific and lay audiences; explore and prioritize remedial, restoration, and risk reduction options.

October 22, 2015

<u>Mission</u> - serve as a focal point for collecting and interpreting information to help mitigate legacy mercury contamination in the South River watershed.

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Accomplishments

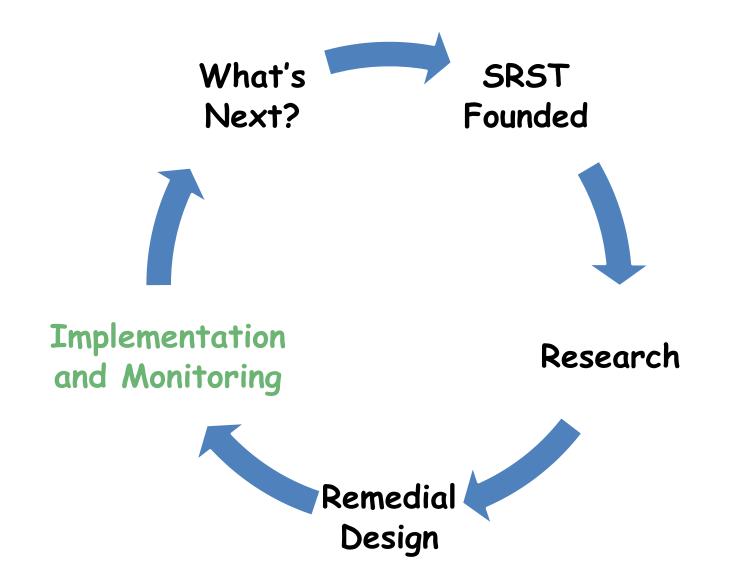


- Established a culture of <u>collaboration</u>, mutual <u>respect</u> & <u>transparency</u>
- Significant contributions to Hg science through:
 - Over 50 publications in peer-reviewed journals
 - Over 75 Master's and Doctoral degrees completed
 - Presentation of SRST research at National and International Conferences
- Increased awareness of fish tissue consumption advisory
- Vast biotic and abiotic data base and understanding

<u>All of the above laid framework for an expedited</u> <u>decision making process!</u>

South River Science Team Evolution

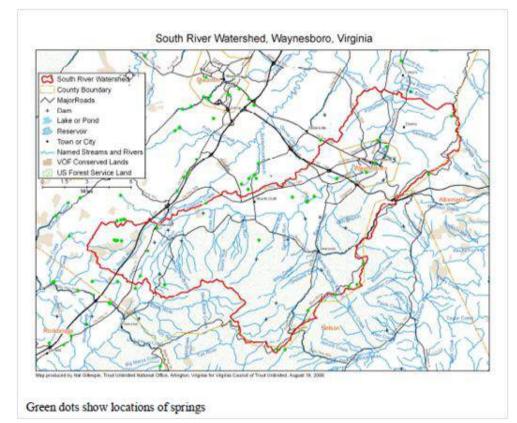




Transition to Watershed Focus??



- Much of the "Research" is finished
- Mercury is only part of the South River Story
- Other Stressors
 - Sediment
 - Nutrient Loading
 - Bacteria
 - Flooding
 - Livestock







Other Groups have explored establishing a "South River Watershed Organization"

- 2011 Upper South River Solutions
 - Waynesboro Downtown Development Inc.
 - UVA Institute for Environmental Negotiations
 - Trout Unlimited
 - Virginia Department of Conservation and Recreation
- Conducted interviews and held multiple meetings

South River Solutions Draft Mission Statement



"To foster better stewardship and understanding of the Upper South River watershed resources; address natural and economic resource issues; and ensure sustainable watershed health, functions, and uses.

- **Water Quality**: A watershed that contributes water of such quality that people can use it for consumption, recreation, work, as well as the support of terrestrial and aquatic life.
- **Natural Resources**: A balanced ecosystem that supports its component parts throughout the Upper South River Watershed including a varied habitat that thrives within the watershed.
- **Use of Resources**: Wise stewardship of the resources to maximize their renewal and strive to eliminate permanent loss.
- **Land Use**: Recognize that owners of property within the watershed have land use rights, as well as duty to protect the health of the ecosystem through the use of their land.
- **Recreation**: A watershed that provides compatible types of outdoor recreation consistent with experiences that foster an appreciation of the watersheds' natural resources.
- **Economics**: A watershed that provides water quality and quantity sufficient to support a balanced economically viable and healthy community in which its citizens are proud to live, work, farm, and recreate.
- **Education**: An engaged populace that understands and appreciates the watershed ecosystem and works to promote sustainable watershed health."

South River Solutions S.M.A.R.T. Goals – Path Forward



- Eighteen Goals established ranging from habitat preservation and water quality issues to tourism and industry jobs
- Process lost momentum and South River Watershed Group was not pursued
 - Goals and next steps too broad
 - Funding and commitment issues
 - Need to be more focused
 - Identify core goals and build incrementally over time

Transition SRST into Watershed Organization?



- Leverage experience and relationships of SRST to jumpstart a Watershed focused group
- Mercury would still be important issue, but other topics and stakeholders would be engaged.
- DuPont (Corteva) remain present and continue support to develop organization
- Need for other Groups to provide <u>ACTIVE</u> participation