Mississippi River/Gulf of Mexico Watershed Nutrient (Hypoxia) Task Force

Hypoxia Task Force Background

- Formed by EPA in 1997; legislatively authorized in 1998 HABRHCA Law
- At the Task Force's request, an interagency committee convened by the White House Office of Science and Technology Policy completed an Integrated Assessment, which served as scientific basis for a 2001 Action Plan with goal: reduce size of the Hypoxic Zone to <5000 sq km by 2015
  - Focused on reducing *nitrogen* loads to the gulf via the Mississippi River
- Science Reassessment 2004-2007:
  - Considered *phosphorus* a co-driver of the hypoxic zone
  - Convened four science symposia, outcomes submitted to EPA Science Advisory Board panel for consideration
  - Science Advisory Board recommended a dual N and P strategy; estimated a 45% reduction needed in both N and P to reach goal; urged "directionally correct" progress toward goal rather than continued debate over goal revision
- 2008 Action Plan included commitment by states to develop and implement Nutrient Reduction Strategies with continued federal support
- In 2015 the Task Force reaffirmed its goal with a new 2035 target date; adopted interim, 20% N and P load reduction targets for 2025; committed to enhanced tracking of progress
- 2014 HABHRCA required EPA to submit to Congress biennial reports on behalf of the HTF, describing progress towards the goal; 2015 and 2017 Reports to Congress complete

Mississippi River Gulf of Mexico Watershed Nutrient Task Force

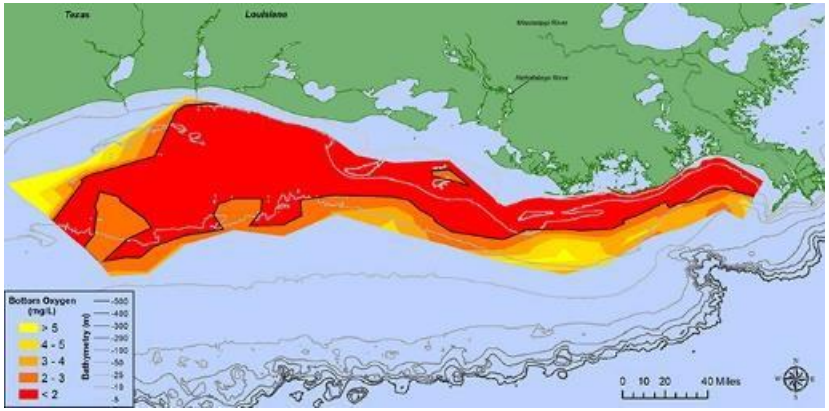
Science Based Goal

Coastal Goal

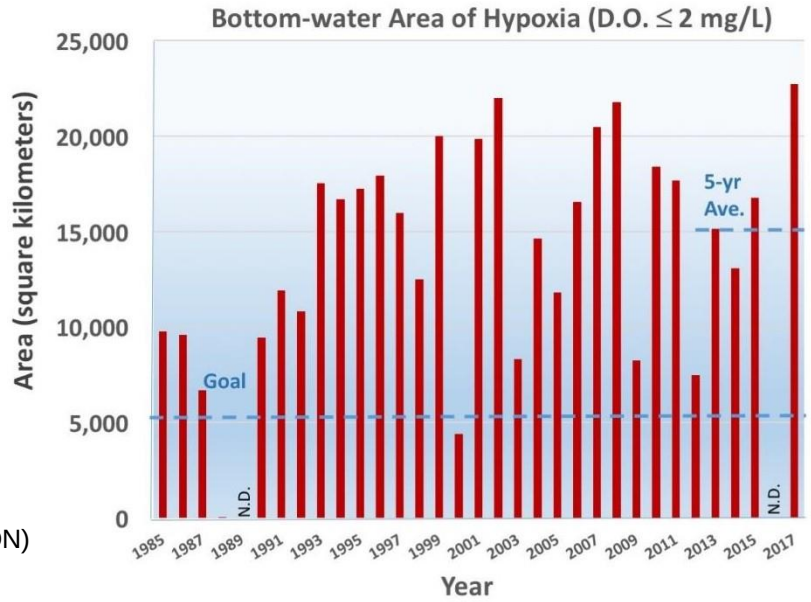
By 2035, reduce 5-year running average size of the Gulf hypoxic zone to 5,000 km^2

Interim Target

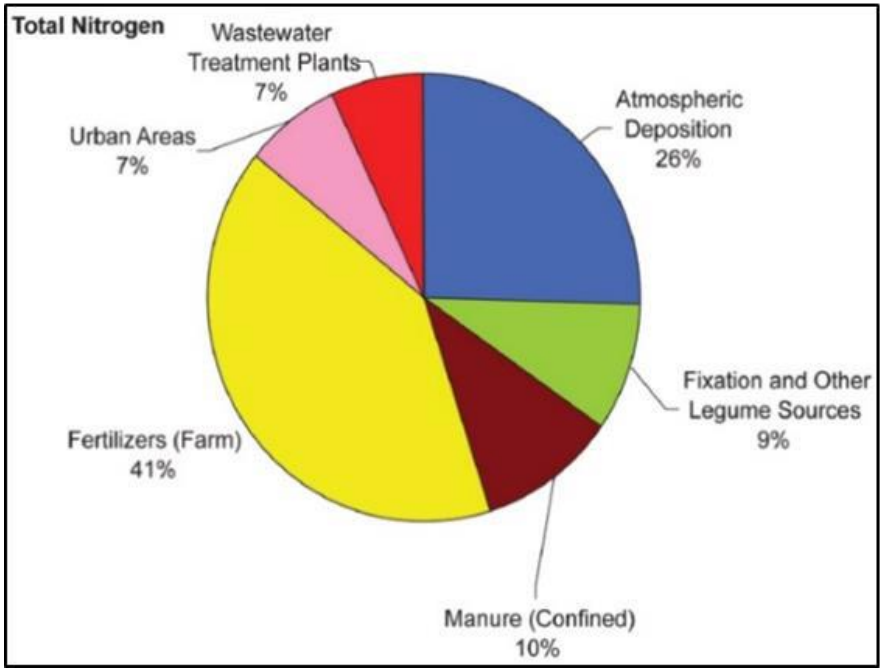
20% reduction of nitrogen and phosphorus loading by 2025

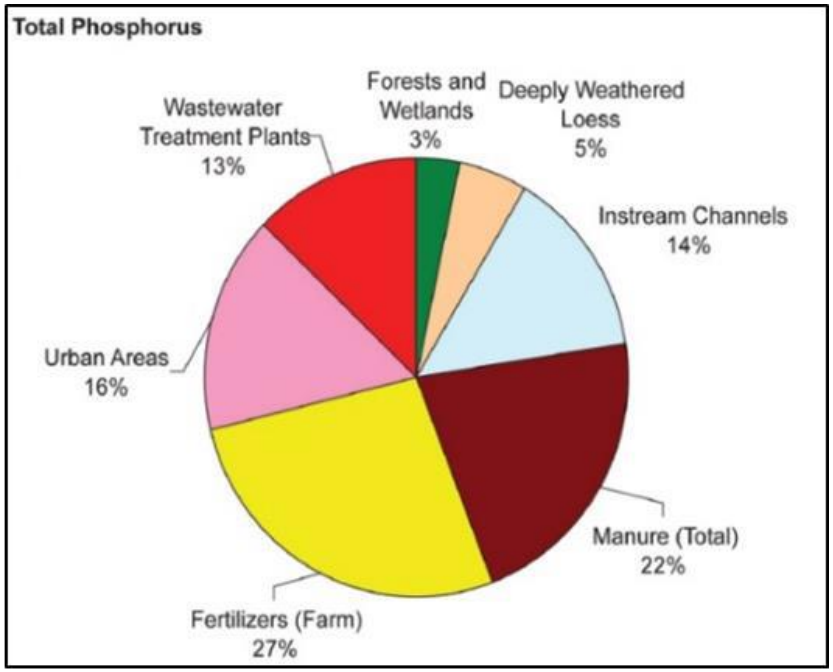


From Nancy Rabalais (LSU/LUMCON)



Nitrogen and Phosphorus Loading Sources in the Mississippi and Atchafalaya River Basin (MARB)





USGS SPARROW model estimates of sources of TN and TP transported from Mississippi River Basin to the Gulf of Mexico (Robertson and Saad 2013)

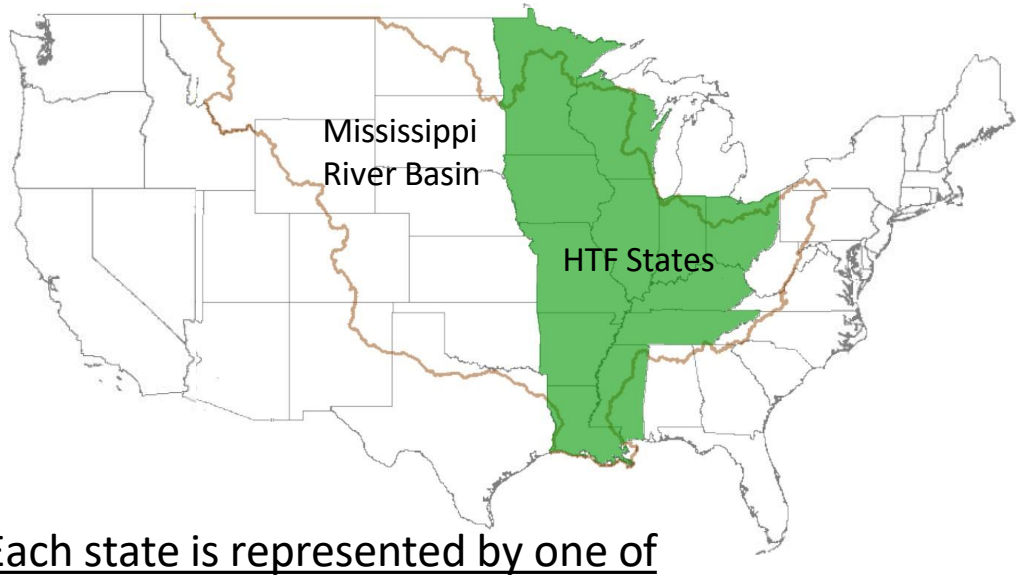
Hypoxia Task Force Members

Five Federal Agencies plus Tribes:

- US Army Corps of Engineers
- US Environmental Protection Agency
- US Department of Agriculture
- US Geological Survey
- National Oceanic and Atmospheric Administration
- National Tribal Water Council

12 State Agencies:

- Arkansas
- Missouri
- Iowa
- Tennessee
- Minnesota
- Indiana
- Ohio
- Louisiana
- Illinois
- Mississippi
- Kentucky
- Wisconsin



Each state is represented by one of

Agriculture agency, Environmental Quality agency, or Natural Resources agency

HTF Priority Activities

Nutrient Reduction Strategies

- All 12 states have developed strategies
- Focus on implementation in state priority watersheds

Tracking progress towards the goal

- Point Source Measures Report
- Nonpoint source (NPS) Measures
- Federal Accomplishments and revised Federal Strategy, 2016

Continue to build and leverage partnerships, including with Land Grant Universities

- SERA-46 Priorities for Collaboration

Communicating Progress

- 2017 Report to Congress

Federal Agency Efforts to Support States

- Improving both MARB and Gulf monitoring data and modeling approaches to help demonstrate progress, including looking at trends from long term sites
- Targeted delivery of federal funding for conservation systems and watershed planning to support state nutrient reduction strategies (USDA Programs, EPA 319)
- EPA provides $60 million in grants (through Bipartisan Infrastructure Law funding) over 5 years to HTF states and other partners to support implementation of the 2008 Action Plan and state nutrient reduction strategies.

Tracking Progress Towards Our Goal

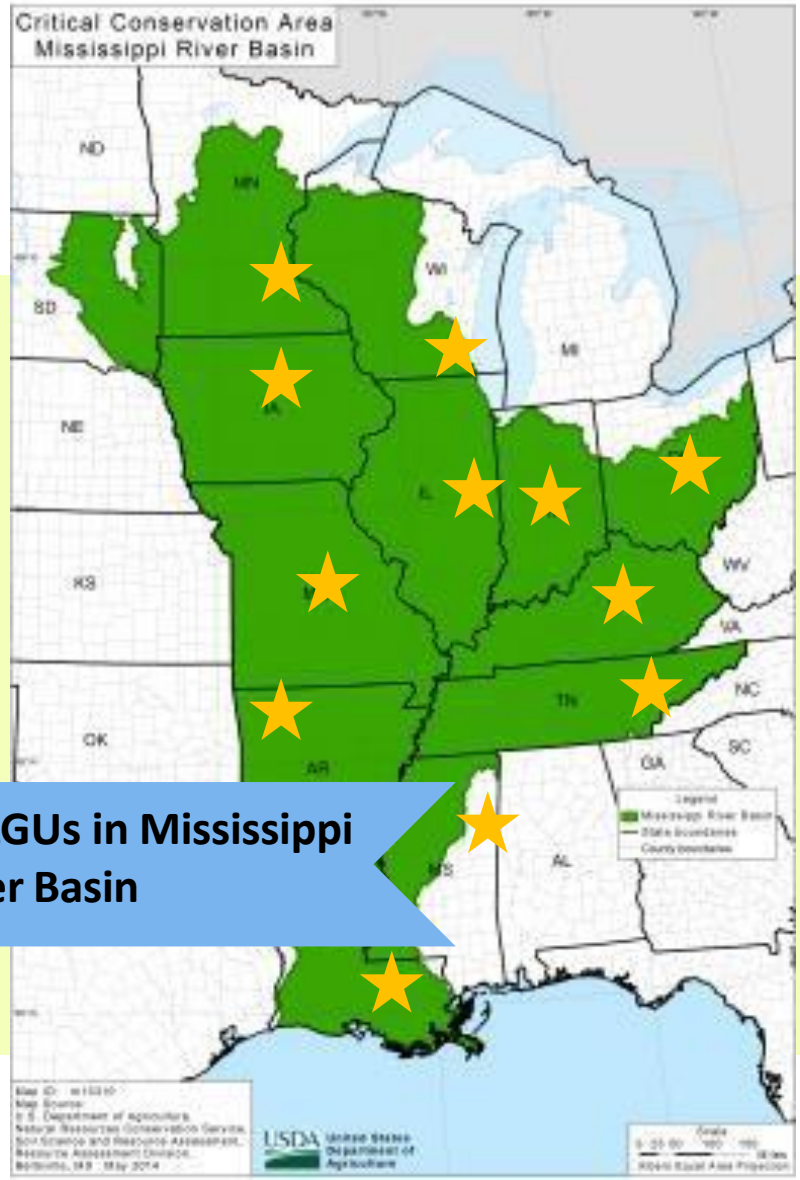
Forging State and Basinwide Connections & Partnerships to Implement Nutrient Reduction Strategies

- In 2014, established MOU with Land Grant Universities in each HTF State; these LGUs formed a committee for collaboration , “SERA-46” (see next slide)
- Farmers and Agricultural Organizations: HTF members seek to encourage farmer-led actions that improve water quality and enhance ecological benefits and services
- Businesses, e.g., the Midwest Row Crop Collaborative, a coalition of ag/food industry and conservation NGOs seeking to accelerate sustainable ag practices while meeting production goals
- Cities and Communities, including municipal wastewater agencies and the communities they serve
- Other NGO Conservation Organizations seeking to restore and enhance natural resources in the MARB, e.g., The Nature Conservancy

Leadership from the States

- All states developed their own Strategies
  - Engaged stakeholders
  - Targeted watersheds
  - Similarities between states, but still unique to each.
- HTF provides opportunity for states:
  - Lead efforts tailored to the state
  - Work across borders
  - Learn from each other
    - Successes, lessons learned
  - Greater coordination with federal partners
  - Improved collaboration with land grant universities
  - Common measures and tracking progress while preserving state individuality

SERA-46
Land-grant University
Extension & Research



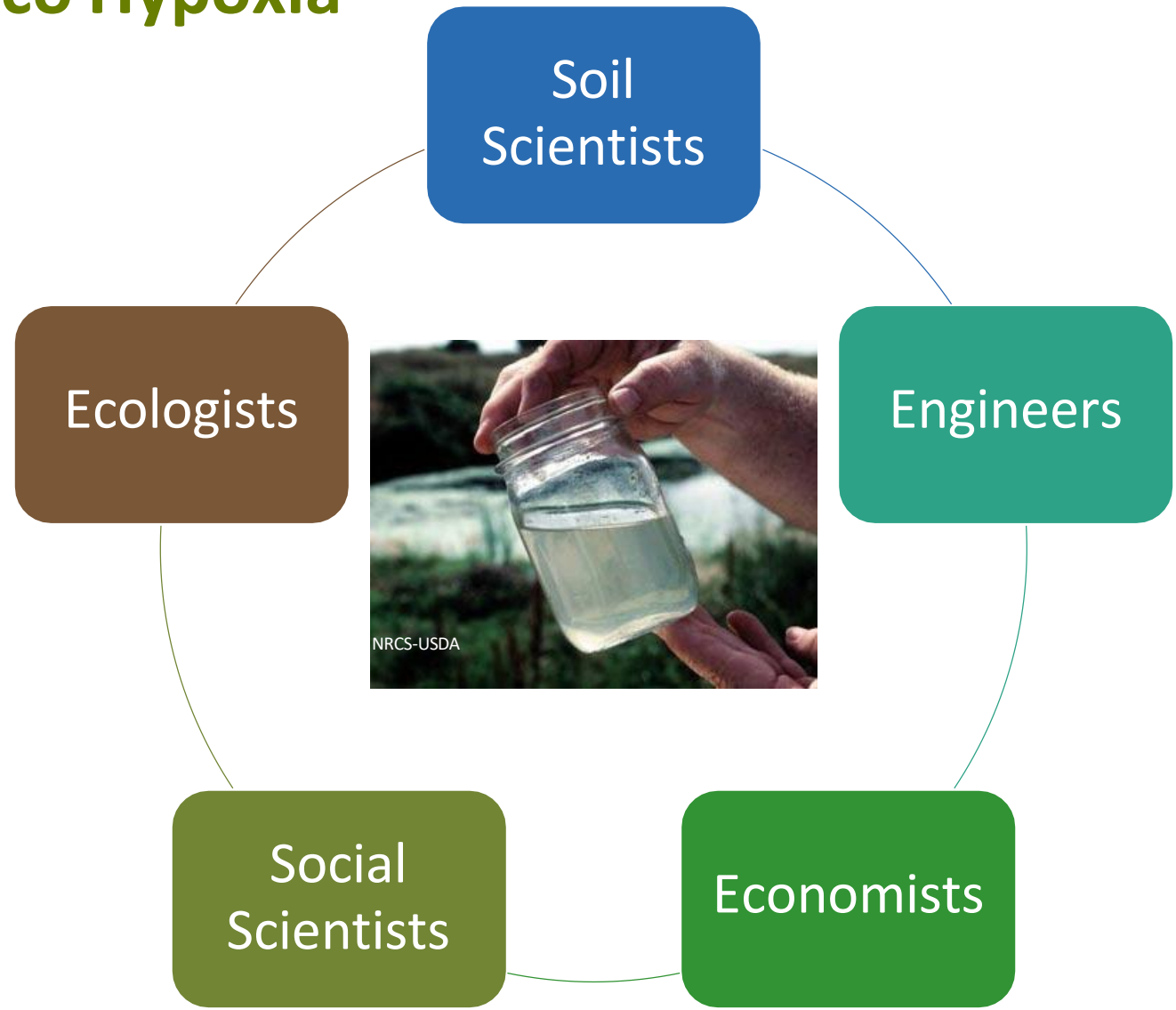
12 LGUs in Mississippi River Basin

USDA-NIFA coordinates multistate efforts via regional committees

Strong linkage/coordination with Hypoxia Task Force

LGU Expertise in Addressing Gulf of Mexico Hypoxia

SERA-46
Land-grant University Extension & Research



Benefits of LGUs Collaborating with HTF

SERA-46
Land-grant University
Extension & Research

- Multi-institutional teams focus on regional issues and solutions
- Multi- and trans-disciplinary approaches to problem solving
- Integration of research and extension

Priorities for Collaborative Work

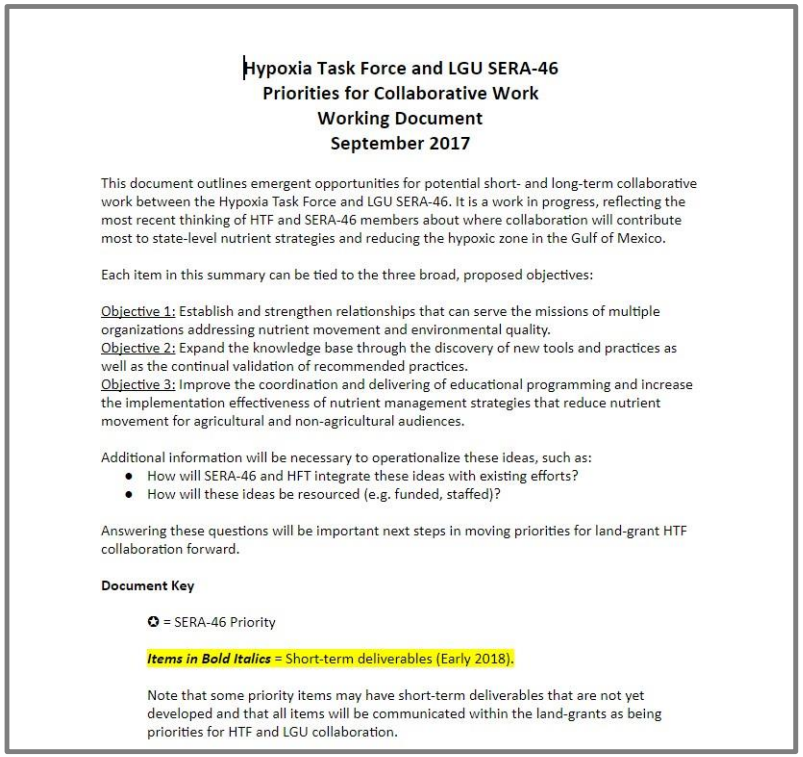
SERA-46
Land-grant University
Extension & Research

Developed May 2015

Revised September 2017

Three Focus Areas

1. ***Strengthening Networks***
2. ***Conservation Systems Research and Outreach***
3. ***Monitoring and Tracking of Progress***



Hypoxia Task Force and LGU SERA-46
Priorities for Collaborative Work
Working Document
September 2017

This document outlines emergent opportunities for potential short- and long-term collaborative work between the Hypoxia Task Force and LGU SERA-46. It is a work in progress, reflecting the most recent thinking of HTF and SERA-46 members about where collaboration will contribute most to state-level nutrient strategies and reducing the hypoxic zone in the Gulf of Mexico.

Each item in this summary can be tied to the three broad, proposed objectives:

Objective 1: Establish and strengthen relationships that can serve the missions of multiple organizations addressing nutrient movement and environmental quality.
Objective 2: Expand the knowledge base through the discovery of new tools and practices as well as the continual validation of recommended practices.
Objective 3: Improve the coordination and delivering of educational programming and increase the implementation effectiveness of nutrient management strategies that reduce nutrient movement for agricultural and non-agricultural audiences.

Additional information will be necessary to operationalize these ideas, such as:
- How will SERA-46 and HFT integrate these ideas with existing efforts?
- How will these ideas be resourced (e.g. funded, staffed)?

Answering these questions will be important next steps in moving priorities for land-grant HTF collaboration forward.

Document Key

✪ = SERA-46 Priority

Items in Bold Italics = Short-term deliverables (Early 2018).

Note that some priority items may have short-term deliverables that are not yet developed and that all items will be communicated within the land-grants as being priorities for HTF and LGU collaboration.

What's Working, What's Not

- Voluntary approach brings people to the table but consequences of non –participation are few, especially since primary source of nutrient pollution is not regulated
- Membership of HTF limited to 12 states and 5 federal agencies so everyone working in the basin are not equal stakeholders; especially notable is inability for NGOs to fully participate
- There is no dedicated source of continued funding, recent BIL funding infusion has been well received but then what?
- There is unequal interest by states depending on their local water quality issues – i.e. watershed is too big for coordinated action
- Feds, states and NGOs all report progress differently, so there is not one reliable story of actual progress tied to dollars spent and actions taken