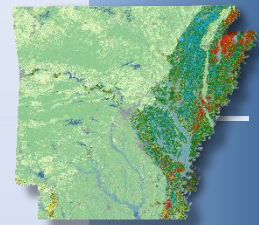


Mississippi River Basin Healthy Watershed Initiative

A Progress Report for Arkansas



Presented by: Mike Sullivan, State Conservationist



FY 2010

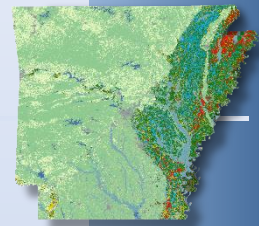
- 12 States
- 41 Focus Areas

FY 2011

Added two focus areas:
SD/MS

7 AR Focus Areas

- 3 shared with MO
- 2 shared with LA

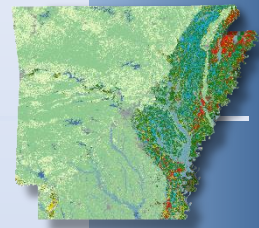


Back to the Future

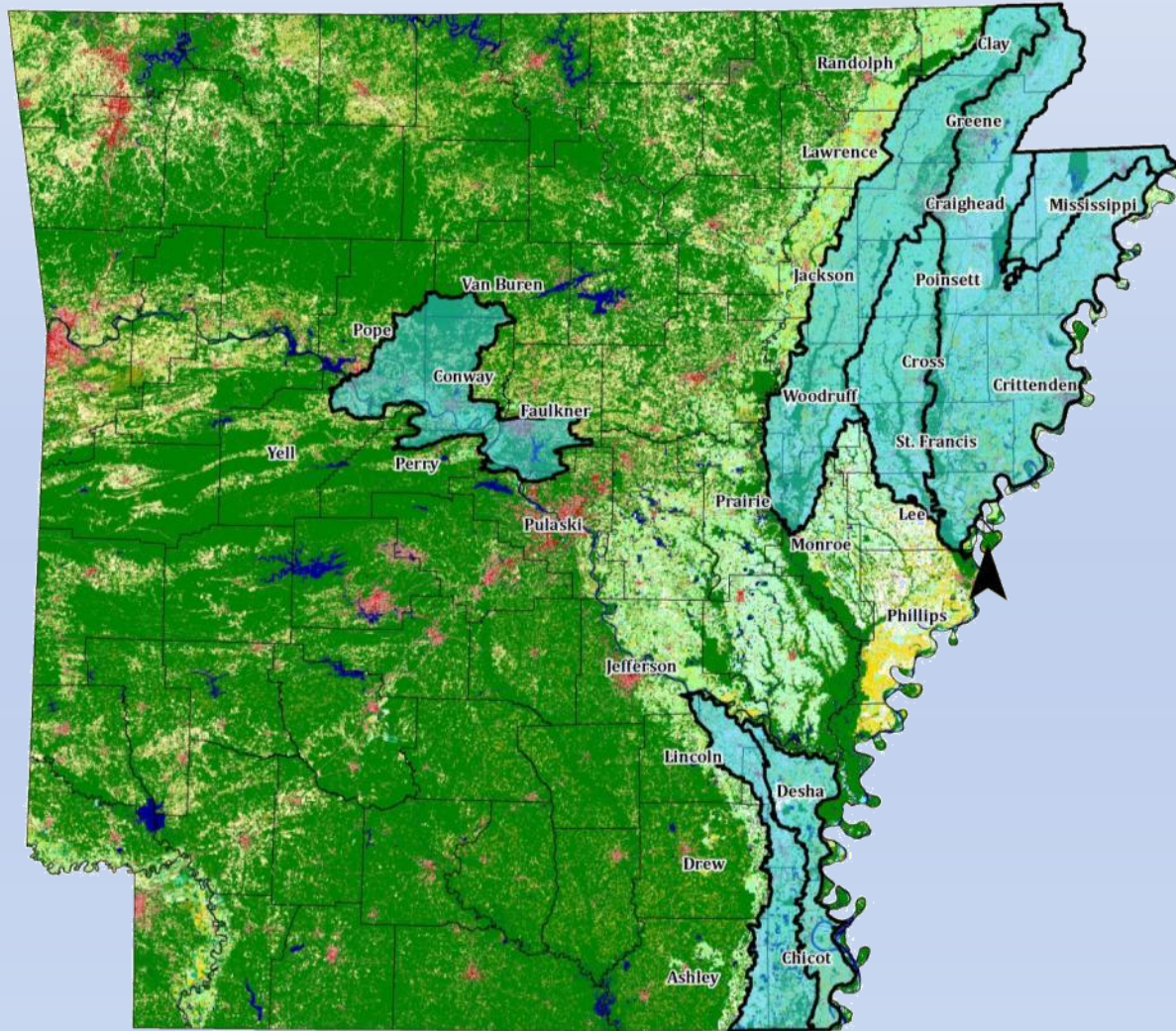


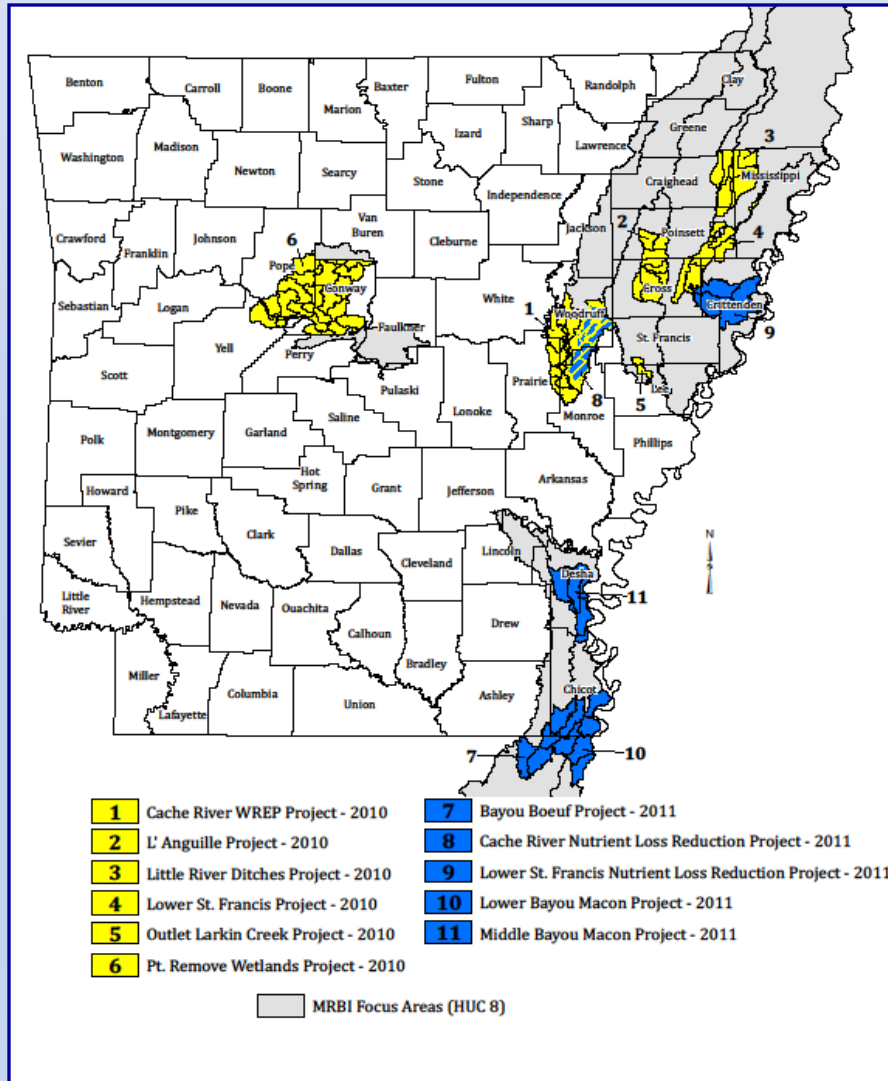
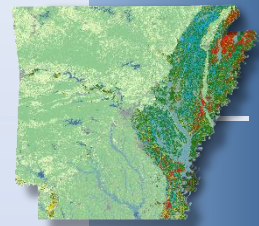
Legacy Principles

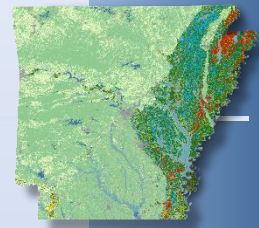
- Assess the resources, problems, and opportunities.
- Draw on various sciences and disciplines and integrate into a plan for the whole property.
- Work closely with land users so that the plans for conservation reflect their objectives.
- Through implementing conservation on individual properties, contribute to the overall quality in the watershed.



Arkansas MRBI Focus Watersheds

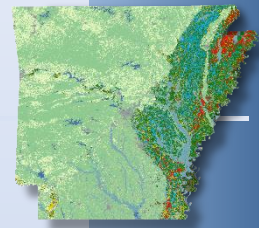






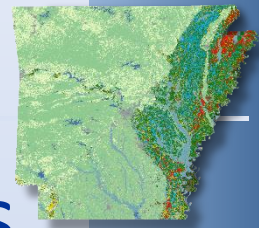
Primary Cooperative Conservation Partners

Project Sponsors	Monitoring Partners
Local Conservation Districts	University of Arkansas
Arkansas Association of Conservation Districts	University of Arkansas Extension Service
Arkansas Association of RC&D Councils	Arkansas State University
The Nature Conservancy	Agricultural Research Service
Point Remove Irrigation District	



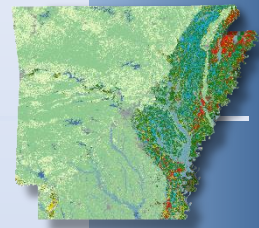
Collaborating Conservation Partners for Projects

Conservation Districts – 16
Conservation District Associations - 1
Non-Government Organizations - 5
RC&D Councils – 3
Associations of RC&D Councils - 1
Arkansas State Agencies - 5
Federal Agencies - 3
Educational Partners - 4
Cities - 1
Irrigation and/or Drainage Districts - 4



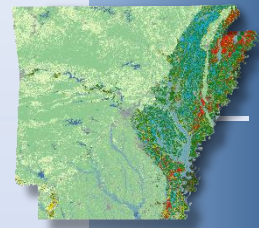
MRBI vs General Conservation Programs

MRBI	General Programs
Projects proposed and sponsored by conservation partners	Funding provided through NRCS without matching contributions from partners
Partners choose ranking questions	State Technical Committee chooses ranking questions
Partners choose conservation practices	Most available practices can be selected by farmers
Funding is provided within a specific project area	Funding is statewide
Water quality monitoring and evaluation is included in conservation practices	Water quality monitoring and evaluation is not available



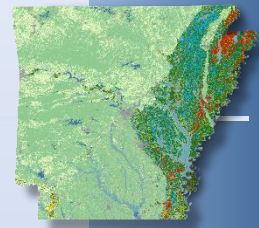
NRCS Conservation Program Funds Dedicated to MRBI

Project	Total Project Funds
L'Anguille	\$1,054,000
Larkin Outlet Creek	1,320,000
Point Remove	4,761,000
Lower St. Francis (1)	2,908,836
Lower St. Francis (2)	4,302,275
Little River Ditches	3,156,614
Cache River (CCPI)	1,054,000
Cache River (WREP)	15,750,000
Middle Bayou Macon	5,450,000
Lower Bayou Macon	3,253,000
Bayou Boeuf	1,666,317
Total	\$44,676,042

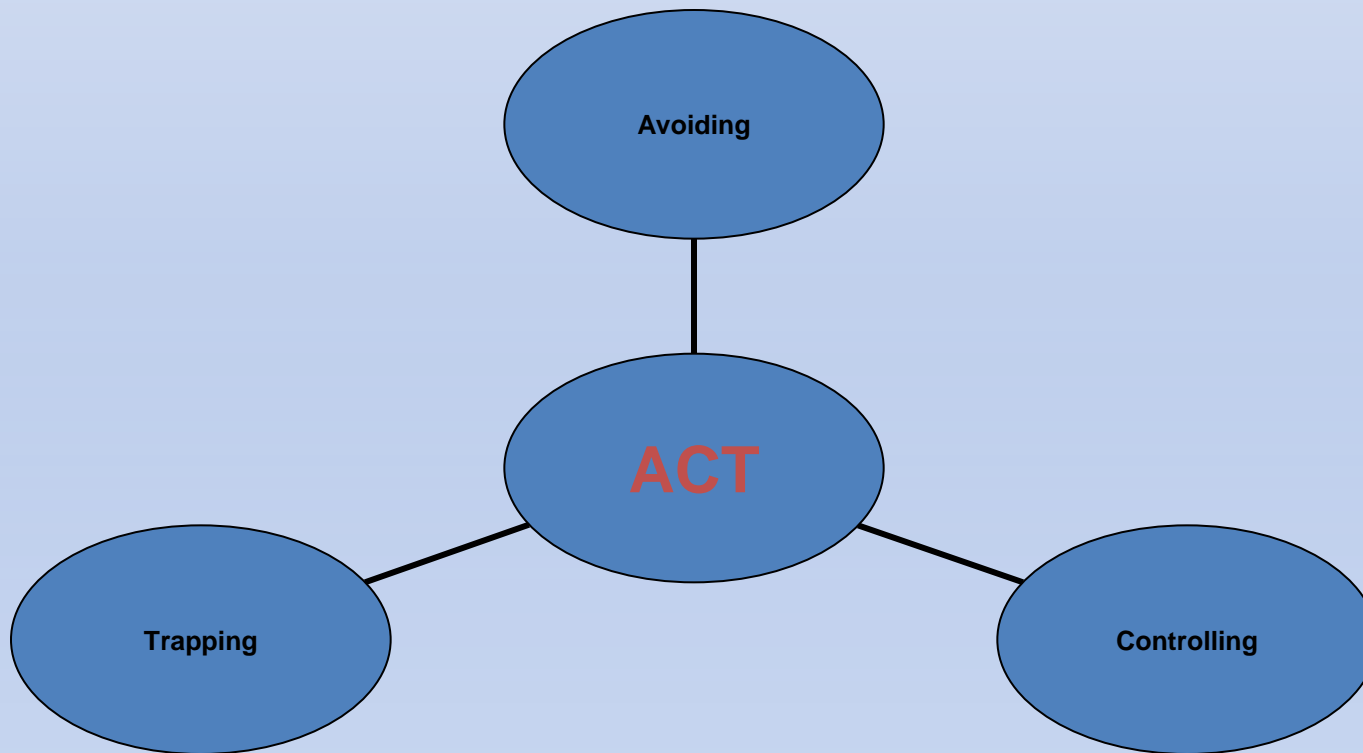


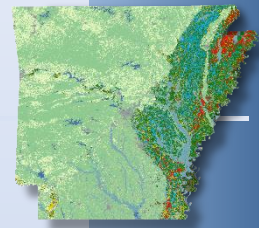
Watershed Approach

Project	Total Project Acres	Predicted Acres To Be Treated
L'Anguille	148,783	115,000
Larkin Outlet Creek	14,800	7,400
Point Remove	462,949	48,000
Lower St. Francis (1)	482,414	106,800
Lower St. Francis (2)	169,611	53,400
Little River Ditches	214,153	160,500
Cache River (CCPI)	156,419	55,000
Cache River (WREP)	80,113	10,000
Middle Bayou Macon	130,881	27,700
Lower Bayou Macon	28,090	14,000
Bayou Boeuf	193,805	116,000
Total	2,082,018	713,800



Avoiding, Controlling, Trapping (ACT)





Core Conservation Practices

AVOIDING

- 328 - Conservation Crop Rotation
- 340 - Cover Crop
- 528 - Prescribed Grazing
- 590 - Nutrient Management
- 633 - Waste Utilization

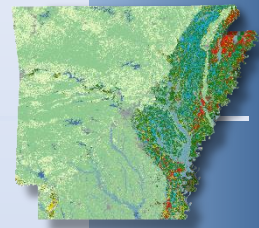
CONTROLLING

- 329 - Residue & Tillage Management - No Till/Strip Till
- 345 - Residue & Tillage Management - Mulch Till
- 346 - Residue & Tillage Management - Ridge Till
- 412 - Grassed Waterway
- 512 - Forage and Biomass Planting
- 554 - Drainage Water Management
- 643 - Restoration & Management of Declining Habitats
- 645 - Upland Wildlife Habitat Management

TRAPPING

- 390 - Riparian Herbaceous Cover
- 391 - Riparian Forest Buffer
- 393 - Filter Strip
- 656 - Constructed Wetland
- 657 - Wetland Restoration
- 658 - Wetland Creation
- 659 - Wetland Enhancement





Supporting Conservation Practices

AVOIDING

- 313 - Waste Storage Facility
- 317 - Composting Facility
- 327 - Conservation Cover
- 381 - Silvopasture Establishment
- 382 - Fence
- 472 - Access Control
- 511 - Forage Harvest Management
- 558 - Roof Runoff Structure
- 561 - Heavy Use Area Protection
- 612 - Tree & Shrub Planting
- 632 - Solid/Liquid Waste Separation Facility
- 634 - Waste Transfer

TRAPPING

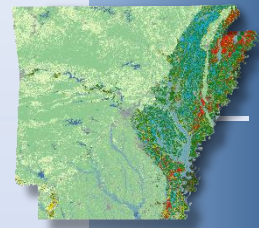
- 342 - Critical Area Planting
- 350 - Sediment Basin
- 356 - Dike
- 436 - Irrigation Storage Reservoir
- 490 - Forest Site Preparation

CONTROLLING

- 324 - Deep Tillage
- 342 - Critical Area Planting
- 362 - Diversion
- 386 - Field Border
- 410 - Grade Stabilization Structure
- 430 - Irrigation Water Conveyance
- 447 - Tailwater Recovery
- 449 - Irrigation Water Management
- 468 - Lined Waterway or Outlet
- 484 - Mulching
- 533 - Pumping Plant
- 587 - Structure for Water Control
- 607 - Surface Drainage
- 620 - Underground Outlet
- 638 - Water & Sediment Control Basin

- 533 - Pumping Plant
- 587 - Structure for Water Control
- 629 - Waste Treatment
- 638 - Water & Sediment Control Basin
- 646 - Shallow Water Development and Management

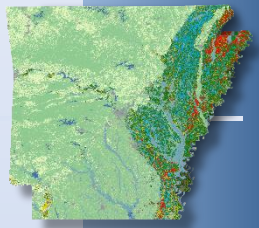




Conservation Systems Approach

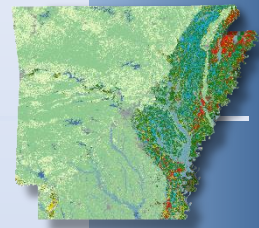
CCPI Projects	Primary Practices (2010 & 2011)
L'Anguille	Irrigation reservoirs, tailwater recovery, pumping plants
Larkin Outlet Creek	Cover crops, residue and tillage management
Point Remove	Cover crops, crop rotation, grass planting, prescribed grazing, stream crossings
Lower St. Francis	Nutrient management, irrigation practices
Little River Ditches	Nutrient management





Tailwater Recovery





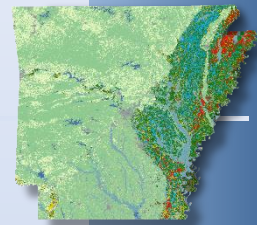
Nutrient Management

Injecting split applications of nitrogen emphasizes the four R's:

- Right Source of Nutrients,
- Right Time of Application,
- Right Rate, and
- Right Method of Application

This practice lines up with the national nutrient management strategy.

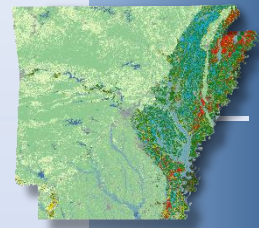




Cover Crop

- Reduce runoff from water erosion
- Increase soil organic matter content reducing nutrient inputs.
- Capture and recycle or redistribute nutrients in the soil profile.
- Promote biological nitrogen fixation and reduce energy use.
- Increase water quantity and availability for plant uptake.
- Suppress Weeds.
- Manage soil moisture.
- Minimize and reduce soil compaction.
- Enhance nutrient use efficiency

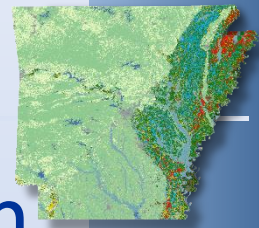




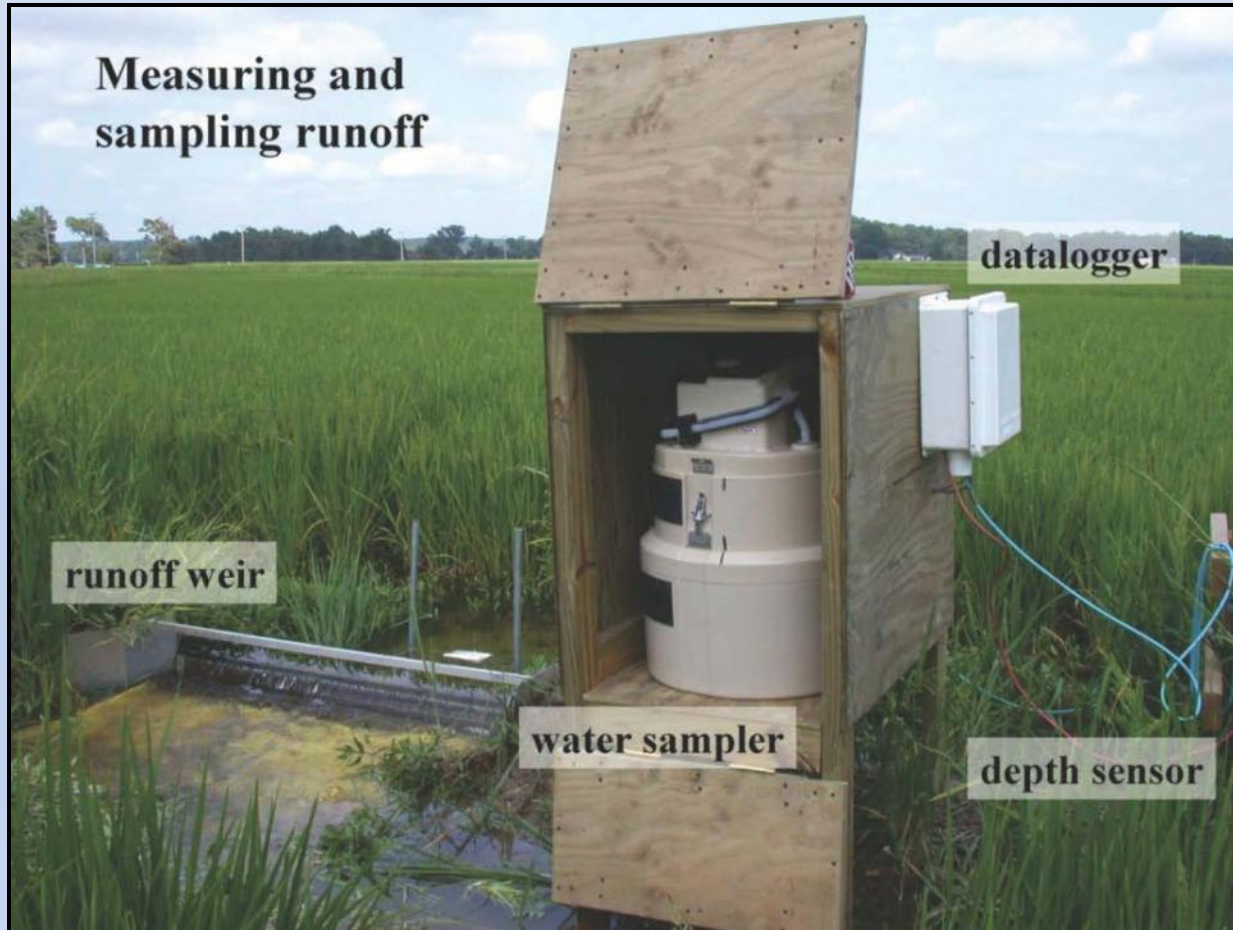
Expected Water Quality Results

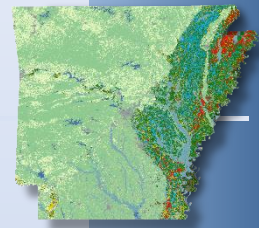


- Reduced nitrogen and phosphorus loading into waterways
- Reduced sediment from sheet & rill erosion
- Reduced sediment from irrigation-induced erosion



Water Quality Monitoring and Evaluation

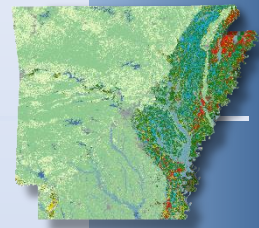




Water Quality Evaluation and Monitoring

- Voluntary monitoring to determine effects of conservation practice installation
- Partnering with University of Arkansas, Arkansas State University, and U.S. Agricultural Research Service
- Discovery Farm Protocols
- EPA Specifications
- 1 or 2 farms per project





Point Remove Wetlands Reclamation and Irrigation District MRBI Project

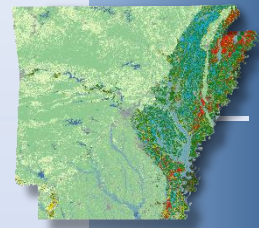
Willow Bend Farm



- Erosion problems on the Willow Bend Farm
- 1456 acres of crop/pasture enrolled in EQIP
- Agricultural waste will be applied according to conservation plan and needs on 1000 acres
- Grid soil sampling on 1325 acres – allow precise management of nutrient application
- Conservation crop rotation - 320 acres
- Cover crops - 270 acres
- Edge of field monitoring

"I needed NRCS expertise to figure out what works best on this farm."

– Ruth Spiller



L'Anguille River MRBI Project

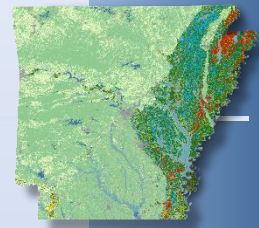
Edgar Perry Farm

- 85 acres on Crowley's Ridge - gulley erosion
- WHIP and EQIP contracts
- Critical area treatment - level gullies, plant grass on the highly-erodible land
- Sediment basin to catch debris and sediment and trap nutrients
- Planting 40 acres in native grasses and managing for upland wildlife habitat
- Planting trees on 11 acres through the Conservation Reserve Program for a riparian buffer to filter and trap sediments and nutrients



"NRCS has been great to work with."

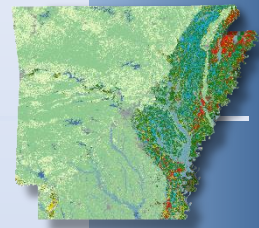
– Edgar Perry



Adaptive Management

- Adding focus areas or expanding boundaries of areas
- Adding additional conservation practices as needed
- Adjusting ranking criteria
- Annual review of projects with sponsors

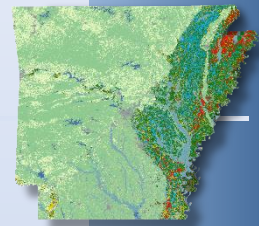




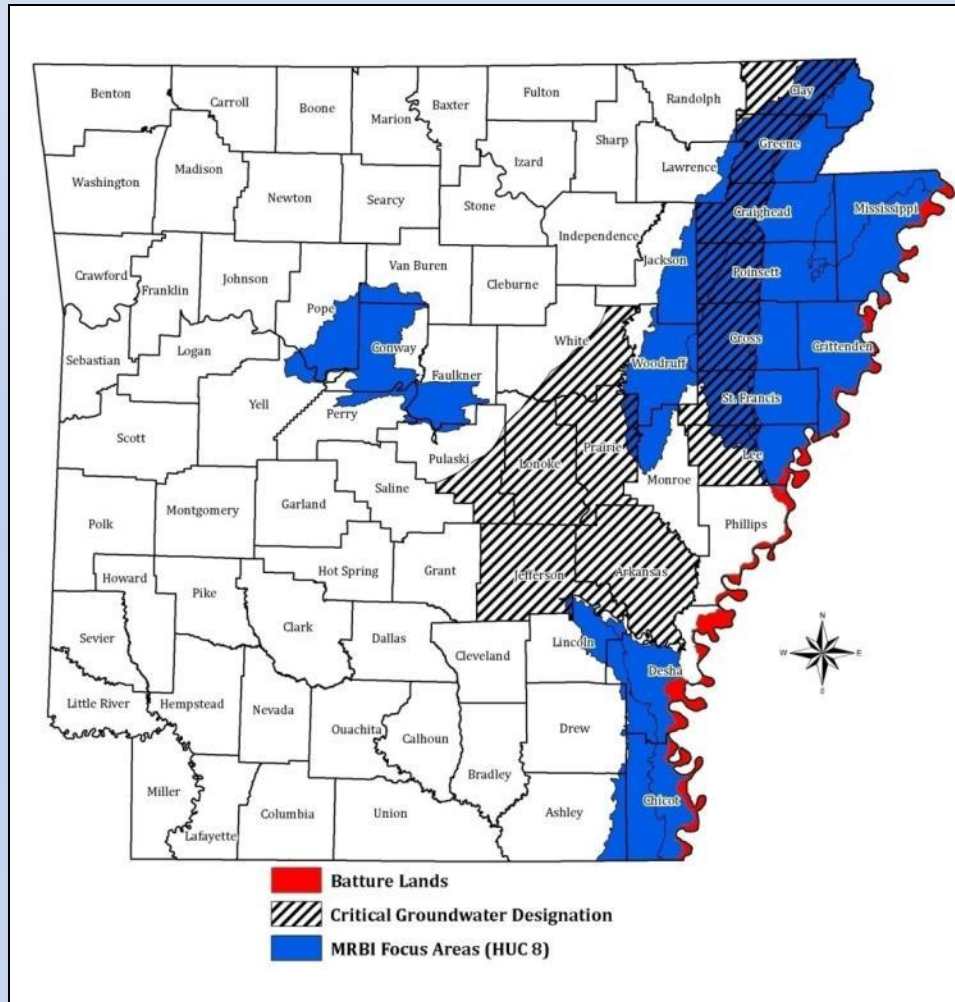
Potential Initiative Modifications in Lower Mississippi River Basin for Future Consideration

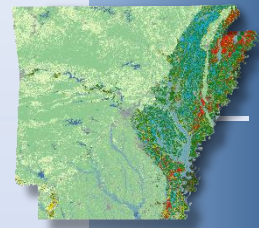
- Water management additions/
revisions to current MRBI
- Multi-state Mississippi River bature
lands forestry/wildlife initiative





Potential Areas to Consider





Questions?

Follow-up questions can be sent to:

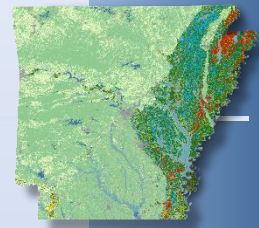
Mike Sullivan

State Conservationist

Natural Resources Conservation Service

Michael.sullivan@ar.usda.gov

or call 501-301-3100



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