

SEIZING A WATERSHED MOMENT

**Making EQIP Work for Water Quality in
10 Mississippi River Border States**



**Environmental Quality Incentives Program
State Report 1 of 10**



APPENDIX – STATE REPORTS

ARKANSAS ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

OVERVIEW

Arkansas received an average of \$21 million in EQIP funds per year for technical and financial assistance from 2003 to 2007, ranking it 4th out of the 10 states that border the Mississippi River for EQIP funds. Seventy percent of Arkansas EQIP funds are disbursed to the state's 75 NRCS field offices while 30 percent are retained at the state-level to help achieve the state's 8 funding categories; 5 of which are labeled with the term "water quality."

Applications to participate in EQIP are evaluated using a single ranking sheet called the "Application Ranking Summary" that includes a: (1) national priority section, (2) state issues section, and (3) cost-efficiency score. Applications to participate in EQIP are collected and ranked at the county Natural Resources Conservation Service (NRCS) offices and then sent to the Arkansas NRCS state office for selection. Arkansas EQIP awards contracts to the highest scoring applications in each county first until the funds in each county run out. Then, if there are any funding categories that still have remaining funds, Arkansas EQIP collects the remaining applications and awards contracts to the highest scoring applications.

The State Technical Committee's EQIP Work Group provides input to the State Conservationist regarding Arkansas's EQIP funding categories and generates questions for the state issues section. "Locally-led groups and partners" identify local resource concerns and provide input to the state office on practices needed in their county and appropriate cost-share rates to generate higher participation rates.

ARKANSAS EQIP WEBSITE

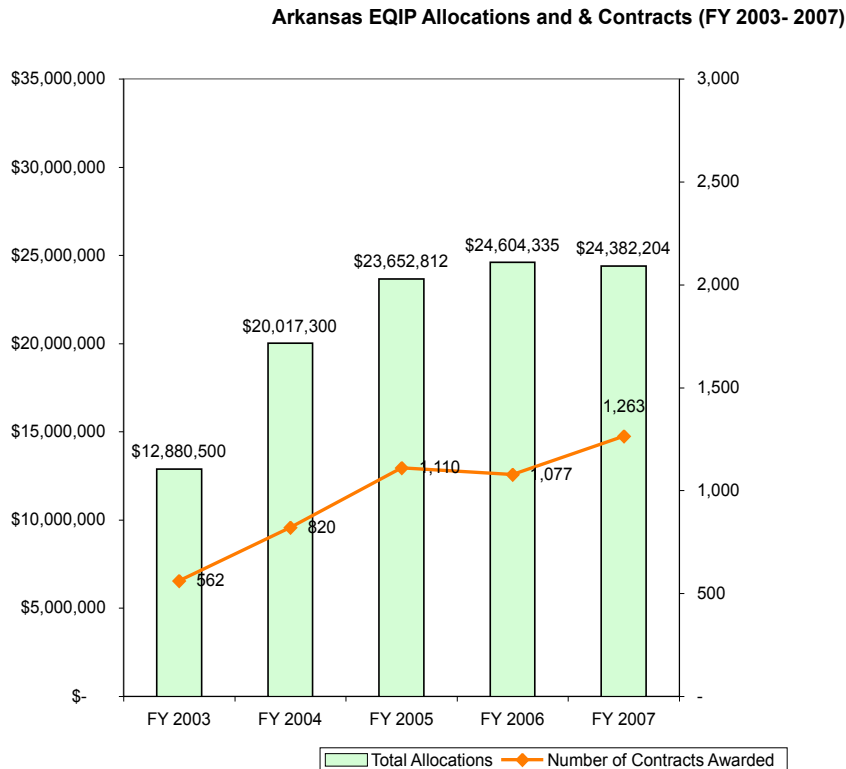
<http://www.ar.nrcs.usda.gov/programs/eqip/eqip.html>

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FUNDING AND REACH OF EQIP

EQIP funding is allocated to states using a national formula. The chart below shows the amount of financial and technical assistance Arkansas has received from FY 2003 to 2007 and the number of contracts awarded each fiscal year. A total of 4,832 contracts have been entered into with producers between 2003 and 2007 providing \$105.5 million and addressing nearly 749,802 acres in the state.



Source: EWG compiled annual data from EQIP's "Allocation" and "Contract" tables found on the USDA NRCS website: <http://www.nrcs.usda.gov/programs/EQIP/>.

KEY FACTORS ANALYSIS

We analyzed the following factors for indications of the extent to which EQIP in Arkansas is focused on reducing sediment and nutrient loads to streams, lakes, and rivers: (1) the presence or absence of qualitative or quantitative goals for pollutant reductions, (2) methods used to allocate state-level funds to counties or other sub-state levels or to specific projects or priorities, and (3) the application ranking criteria used to select participants in EQIP. We relied primarily on the information and data presented on the NRCS website to complete this analysis and followed up on our investigation with interviews of the state EQIP program manager.

Goals

Aside from one unsuccessful watershed-based project, EWG did not find evidence to suggest that Arkansas EQIP has a) established explicit quantitative or qualitative goals for EQIP to clean up agricultural sources of pollution, b) identified which lakes, streams, or tributaries are priorities for improvement, c) set a timetable to achieve those goals, or d) established a means to track progress toward the goals. Arkansas's application ranking systems do create an implicit set of priorities for treating water quality, but measurable goals and timelines do not exist.

EWG recommends that Arkansas EQIP set clear and specific goals for how much and what types of agricultural pollution need to be reduced, which lakes, streams or tributaries are priorities for improvement, and a timetable to achieve those goals. EWG also recommends that Arkansas EQIP develop systems to track, evaluate, and report on the environmental performance of EQIP.

Fund Allocation

Arkansas distributes 70 percent of its EQIP funding to its 75 county field offices. This allocation consists of

1. A \$75,000 base EQIP allocation amount
2. An additional allocation based on
 - a. A geographic information system (GIS) analysis of resource concerns and
 - b. The number of unfunded applications from the previous year in each county.

The remaining 30 percent of funds are allocated on a statewide competitive basis to ensure that adequate funding is given to each of the state's priority resource concerns. According to Kenneth Lee, Arkansas's Assistant State Conservationist for Programs, the state's priority resource concerns are commonly referred to as funding categories since they include both actual resource concerns and funding initiatives for small farmers.

EWG recommends that if funds are allocated directly to local jurisdictions, Arkansas EQIP should use allocation formulas based primarily on natural resource and environmental factors to channel more funding to localities with significant environmental problems associated with agriculture.

In its "2008 State EQIP Policy" document,¹ Arkansas provides a breakdown of EQIP spending by the percentage of funds distributed to each of its priority resource concerns. (See table below.) The Policy document states, "EQIP funds allocated to Arkansas will be targeted in the percentages shown for the following resource concerns

¹ Arkansas 2008 State EQIP Policy document. ftp://ftp-fc.sc.egov.usda.gov/AR/eqip/Arkansas_2008_State_EQIP_Policy.pdf

as nearly as possible. Any changes will be based on numbers of applications and amounts requested with a goal of maintaining approximately 60 percent of funding for livestock related applications.”

Funding Distribution to Resource Concerns in Arkansas	
Resource Concerns	Distribution of EQIP Funds
Grassland Sediment/Erosion, Water Quality	32%
Irrigation, Water Quantity, Regular EQIP Funds	26%
Animal Waste/Nutrient Management, Water Quality	25%
Forestry, Water Quality/Plant Health	10%
Waste System Closures, Water Quality	2%
Cropland Sediment/Erosion, Water Quality	2%
Alternative/Small Cropland Farms (Alternative Crop)	2%
Small Grassland Farms (Small Scale Farm Initiative)	1%

Source: Arkansas State EQIP Policy:
ftp://ftp-fc.sc.egov.usda.gov/AR/eqip/Arkansas_2008_State_EQIP_Policy.pdf.

As highlighted in yellow, 5 of the 8 funding categories are related to water quality. Thus, Arkansas intends to spend approximately 70 percent of the state’s EQIP funds on water quality-related funding categories.

According to Lee, Arkansas EQIP is very responsive to the desires of the locally led groups and partners. For example, the State Conservationist set up the “Waste Systems Closure” funding category in response to the need to close swine lagoon systems when a major swine company closed their operation. Only the swine farms involved in the lawsuit were eligible to receive funding. Arkansas EQIP may be ending this funding category soon as most of the farms have closed their lagoons.

Another example of the State Conservationists flexibility in determining funding categories is the establishment of the Alternative Crop funding category. This funding category was created because some counties have many small, vegetable farms that could not compete with the big traditional, farmers. Thus, all practices are available to these applicants but their applications only have to compete against other small, vegetable farm applications.

Arkansas EQIP developed and attempted to carry out one “special project” to install sediment reduction practices in the L’Anguille River watershed. This project approached a watershed-based water quality clean up project. Unfortunately, according to Lee, necessary complementary funding from the state’s Clean Water Act “319” program fell through and the “L’Anguille Total Maximum Daily Load (TMDL) Project” was unable to be fully implemented.

Despite this setback, EWG recommends that Arkansas EQIP's best opportunity for improving water quality is to fund well-designed, watershed-based clean-up projects. This approach encourages multiple farmers within a watershed to reduce pollution to a specific lake, stream, or tributary to the Mississippi River.

The problem-solving advantages of this approach are well understood. They include focusing resources in specific locations to solve well-defined problems using a strategy that directs funding to those farmers within the watershed who can do the most to reduce pollution. Ideally, such water quality improvement projects include developing monitoring and evaluation systems to adjust the strategy and resource allocations based on the results that are being realized. Ramping up the emphasis in EQIP on such watershed-based clean-up projects would dramatically increase the effectiveness of the program.

EWG recommends that Arkansas EQIP allocate 60 percent of its EQIP funds to watershed-based clean-up projects by 2012. Arkansas EQIP should then allocate the remaining 40 percent of funds by 2012 to funding pools that target high priority natural resource and environmental problems. These state-level funding pools create important opportunities to focus EQIP on the most pressing designated problems. The funding pools allow EQIP managers to select the best applications from all the applications proposing to address the same natural resource or environmental problem.

Application Ranking Criteria

Applications to participate in EQIP are evaluated using a single ranking sheet called the "Application Ranking Summary" that includes only three of the four customary components: (1) a national priority section, (2) a state issues section, and (3) a cost-efficiency score. There are no questions in the Ranking Summary's local issues section but the "locally-led groups and partners" help the state NRCS develop Arkansas's resource concerns.

The ranking sheet is not posted online but Lee provided a copy (see Appendix). Arkansas uses a points-based ranking system for EQIP and applications that receive a greater total point score get a higher priority for participation in EQIP.

When a farmer meets with a county District Conservationist to apply to EQIP, the District Conservationist determines what practices the farmer is interested in and selects one of 8 funding categories in the ProTracts ranking tool. This enables the State Conservationist to track funding requests by each funding category. Applications to participate in EQIP are collected and ranked at the county NRCS offices and then sent to the Arkansas NRCS state office for selection.

Arkansas EQIP awards contracts to the highest scoring applications in each county until the funds in each county run out. Then, if there are any funding categories that still have remaining funds, Arkansas EQIP collects the remaining applications, re-ranks

them, and awards contracts to the highest scoring applications. The State Conservationist has the discretion to move funds between funding categories if there are more applications than funds in certain categories. According to Lee, Arkansas EQIP is often able to fund all applications to each category but the Irrigation funding category consistently has more applications than there is money available.

Arkansas uses three multipliers to weight its ranking criteria. The multiplier for the state section of the ranking sheet is 1.4 and the multiplier for the national section is 1.1. Lee did not know what the multiplier was for the cost-efficiency score as it was embedded in the NRCS ProTracts ranking software. Lee said that Arkansas, like other states, does not provide a certain percentage of the total application ranking score to each national, state, or cost-efficiency section of its ranking criteria document. He did say that most of Arkansas's emphasis is on the state section because most of the points are given to the state section. See Box 1 for background information on the cost-efficiency score.

Box 1. The Cost-Efficiency Score

A cost-efficiency score is generated for each application to determine how effective the cost-shared practices will be at addressing the priority resource concerns (soil, water, air, plant, animal, and human). The cost-efficiency score is calculated by multiplying the practice(s)'

$$\frac{\text{Conservation Practice Physical Effects (CPPE) value(s)} \\ \times \text{Service life of the practice(s)}}{\text{Average cost of installing and maintaining the practice(s)}}$$

NRCS maintains a national database of each practice's CPPE value. CPPE values range from -5 to + 5 reflecting the practice's ability to worsen or improve each resource concern. The CPPE value can be modified by the state or local jurisdiction to reflect the soil, weather, topographic, and other state or local conditions that may impact the effectiveness of the practice.

All 10 Mississippi River border states are using the NRCS Pro-Tracts Cost-Efficiency software to calculate a Cost-Efficiency score for each application. However, because the Cost-Efficiency score is embedded in the software, this step in the ranking process is not transparent since the state EQIP managers were unable to fulfill our request of reviewing the CPPE values given to practices funded by EQIP.

We attempted to determine how much emphasis Arkansas EQIP places in its Ranking Summary on the reduction of nutrient and sediment pollution and on geographic priority areas. Our investigation was hampered by a lack of specificity in the ranking criteria, which we describe in Box 2. In addition, we were unable to receive a version of the Ranking Summary with points in order for us to conduct a rough analysis of raw, unweighted points.

Box 2. The Lack of Specificity in Ranking Criteria

The ranking criteria in all 10 Mississippi River border states lacked sufficient specificity for us to determine with real certainty the emphasis each state was giving in its ranking sheets to the reduction of sediment and nutrient pollution and to areas of geographic importance. For example, many ranking factors do not specify the particular source of natural resource or environmental problems, such as sediment or nutrient loss from cropland. Instead the ranking factors refer to more generic sources of problems, such as nonpoint source pollution.

In those cases where more specific types of pollutants like sediments or nutrients were cited, they were usually included in a longer list of pollutants, such as pathogens, pesticides, or excess salinity, making determination of the priorities implicit in the ranking criteria difficult. A similar lack of specificity hampered our ability to determine the emphasis placed on location of an application within a priority watershed or other geographic unit.

Despite these difficulties, it is clear that the factors used in ranking criteria and the priority assigned those factors through point allocations and multipliers are critical determinants of effectiveness of EQIP in reducing sediment and nutrient pollution.

Arkansas's Ranking Summary does include factors that appear to give some priority to geographic location and/or sediment and nutrient pollution reduction though it is unclear how much priority is emphasized. Arkansas asks National Priorities Question 1 which includes a reference to impaired watersheds:

"Will the treatment you intend to implement using EQIP result in considerable reductions of non-point source pollution, such as nutrients, sediment, pesticides, excess salinity in impaired watersheds, groundwater contamination or point source contamination from confined animal feeding operations?"

This question does give some priority to an application located in an impaired watershed as part of a larger priority for addressing nonpoint and point source pollution.

Arkansas's Ranking Summary asks one geographically focused question in its State Issues section:

" Will this application area be within the identified ground water decline area and address reduced use of ground water for irrigation?"

Regarding emphasis on reducing nutrient and sediment pollution, a review of Arkansas's Ranking Summary does not provide clear answers about how much priority Arkansas EQIP places on these two specific water quality impairments. For example, the National Priority Question 1 does mention the words "nutrients" and "sediment" but the question lacks sufficient specificity for us to distinguish whether an application was being selected for treatment of nutrients and sediments versus treatment of excess salinity or pesticides.

Arkansas's Summary includes the National Priorities Question 4 related to sediment pollution:

"Will the treatment you intend to implement using EQIP result in a considerable reduction in soil erosion and sedimentation from unacceptable levels on agricultural land?"

There are two questions in the State Issues section regarding "sediment and pollutants" and "sheet and rill erosion."

"Will all sediment and pollutants from the application area be filtered or otherwise reduced (Other than by animal waste application area set back distance or sheet and rill erosion control measures) before entering adjacent ditches, streams, wetlands, or waterbodies on at least a) 1/3 of the acres, b) 2/3 of the acres, or c) all of the acres in this application?"

"Is there active sheet and rill erosion above the soil loss tolerance on the application area that will be reduced a) by 1 – 2 tons average, but remains above T, b) by 2 – 3 tons average, but remains above T, or c) to the soil loss tolerance or less?"

Without access to the points assigned to the factors listed above, it is impossible to conclude how much emphasis in raw un-weighted points Arkansas is providing for the reduction of sediment and nutrient pollution or to location within impaired watersheds or other geographic units.

EWG recommends that Arkansas EQIP revise their ranking systems to increase the priority given to applications located in high priority watersheds that will reduce sediment and nutrient pollution. Sediment and nutrient pollution are the two most important pollutants of streams, lakes, and reservoirs in the 10 states bordering the Mississippi River, the main stem of the Mississippi River, and the Dead Zone in the Gulf of Mexico.

Conclusion

We find that EQIP has not been deployed as effectively as it could be in Arkansas or any of the 9 states that border the Mississippi River. The methods used to decide how to spend EQIP dollars within the state and which farmers will get those dollars are more likely to result in diffuse and fragmented efforts to reduce pollution from farms rather than the focused and coordinated effort needed to solve both local and regional water pollution problems.

Watershed-based water quality clean-up projects are the best use of federal taxpayer resources and offer the greatest hope for cleaning up the unintended environmental damage of agriculture. These projects entail setting goals to clean up specific bodies of water that are deemed the highest priorities, determining how many of the most cost effective practices are needed, and persuading key farmers to participate in the project.

To quickly ramp up the effectiveness of EQIP, Arkansas NRCS should:

1. Set clear and specific goals for how much pollution needs to be reduced, which lakes, streams or tributaries are priorities for improvement, and a timetable to achieve those goals.
2. Use 60 percent of EQIP dollars by 2012 to fund watershed-based water quality clean-up projects that encourage multiple farmers within selected watersheds to reduce pollution to specific lakes, streams, or tributaries to the Mississippi River.
3. Use 40 percent of EQIP funds by 2012 in state-level funding pools to target the highest priority natural resource and environmental problems in each state.
4. Select farmers to participate in EQIP who can do the most to contribute to watershed-based clean-up projects or solve high priority problems.

APPENDIX—Arkansas EQIP Ranking Criteria

Natural Resources Conservation Service

Application Ranking Summary

Cropland Water Quality

Program:	Ranking Date:	Application Number:
Ranking Tool: Cropland Water Quality		Applicant:
Final Ranking Score:		Address:
Planner:	Telephone:	
Farm Location:		

National Priorities Addressed

Issue Questions	Responses
1. Will the treatment you intend to implement using EQIP result in considerable reductions of non-point source pollution, such as nutrients, sediment, pesticides, excess salinity in impaired watersheds, groundwater contamination or point source contamination from confined animal feeding operations?	Yes <input type="radio"/> or No <input type="radio"/>
2. Will the treatment you intend to implement using EQIP result in a considerable amount of ground or surface water conservation?	Yes <input type="radio"/> or No <input type="radio"/>
3. Will the treatment you intend to implement using EQIP result in a considerable reduction of emissions, such as particulate matter, nitrogen oxides (NOx), volatile organic compounds, and ozone precursors and depleters that contribute to air quality impairment violations of National Ambient Air Quality Standards?	Yes <input type="radio"/> or No <input type="radio"/>
4. Will the treatment you intend to implement using EQIP result in a considerable reduction in soil erosion and sedimentation from unacceptable levels on agricultural land?	Yes <input type="radio"/> or No <input type="radio"/>
5. Will the treatment you intend to implement using EQIP result in a considerable increase in the promotion of at-risk species habitat conservation?	Yes <input type="radio"/> or No <input type="radio"/>

State Issues Addressed

Issue Questions	Responses
Sediment & Pollutants Filtered or Reduced - Select only one question.	
1. Will all sediment and pollutants from the application area be filtered or otherwise reduced (Other than by animal waste application area set back distance or sheet and rill erosion control measures) before entering adjacent ditches, streams, wetlands, or waterbodies on at least 1/3 of the acres in this application?	Yes <input type="radio"/> or No <input type="radio"/>
2. Will all sediment and pollutants from the application area be filtered or otherwise reduced (Other than by animal waste application area set back distance or erosion control measures) before entering adjacent ditches, streams, wetlands, or waterbodies on at least 2/3 of the acres in this application?	Yes <input type="radio"/> or No <input type="radio"/>
3. Will all sediment and pollutants from the application area be filtered or otherwise reduced (Other than by animal waste application area set back distance or erosion control measures) before entering adjacent ditches, streams, wetlands, or waterbodies on all of the acres in this application?	Yes <input type="radio"/> or No <input type="radio"/>
Sheet & Rill Erosion- Select only one question.	
4. Is there active sheet and rill erosion above the soil loss tolerance on the application area that will be reduced by 1 - 2 tons average, but remains above T, on application area?	Yes <input type="radio"/> or No <input type="radio"/>
5. Is there active sheet and rill erosion above the soil loss tolerance on the application area that will be reduced by 2 - 3 tons average, but remains above T on application area?	Yes <input type="radio"/> or No <input type="radio"/>
6. Is there active sheet and rill erosion above the soil loss tolerance on the application area that will be reduced to the soil loss tolerance or less?	Yes <input type="radio"/> or No <input type="radio"/>
Improving Livestock Operations- Select only one question.	
7. The livestock operation producing the waste or dead animals to be treated with practices in the contract is an existing operation.	Yes <input type="radio"/> or No <input type="radio"/>
8. The livestock operation producing the waste or dead animals to be treated with practices in the contract is an expanding operation (Low Expansion).	Yes <input type="radio"/> or No <input type="radio"/>
9. The livestock operation producing the waste or dead animals to be treated with practices in the contract is expanding operation (Medium Expansion).	Yes <input type="radio"/> or No <input type="radio"/>

10. The livestock operation producing the waste or dead animals to be treated with practices in the contract is expanding operation (High Expansion).	Yes <input type="radio"/> or No <input type="radio"/>
Field Runoff Recovery System- Select only one question.	
11. Will tailwater recovery provide for 10 to 33% of field runoff on the area in this application?	Yes <input type="radio"/> or No <input type="radio"/>
12. Will tailwater recovery provide for 33.1% to 66% of field runoff on the area in this application?	Yes <input type="radio"/> or No <input type="radio"/>
13. Will tailwater recovery provide for more than 66% of field runoff on the area in this application?	Yes <input type="radio"/> or No <input type="radio"/>
Woodland Protection- Select only one question.	
14. At least 1/3 of woodland in tract(s) associated with this application will be protected from wildfire, invasive species where present (See list) and uncontrolled grazing, where present	Yes <input type="radio"/> or No <input type="radio"/>
15. At least 2/3 of woodland in tract(s) associated with this application will be protected from wildfire, invasive species where present (See list) and uncontrolled grazing, where present	Yes <input type="radio"/> or No <input type="radio"/>
16. All of woodland in tract(s) associated with this application will be protected from wildfire, invasive species where present (See list) and uncontrolled grazing, where present	Yes <input type="radio"/> or No <input type="radio"/>
This must be in accordance to policy or other documentation (List).	
17. Will the treatment you intend to implement using EQIP result in the protection, restoration, development or enhancement of federally listed threatened and endangered species (See List for Species and Practices)?	Yes <input type="radio"/> or No <input type="radio"/>
18. A valid CP9 (that includes a native grass buffer), CP21(native warm season grasses only), CP22 (Zone 3-native warm season grasses only), CP29, CP30 or CP33 application is pending on the same tract of land represented by this application.	Yes <input type="radio"/> or No <input type="radio"/>
19. Will this application area be within the identified ground water decline area and address reduced use of ground water for irrigation?	Yes <input type="radio"/> or No <input type="radio"/>

Local Issues Addressed

Issue Questions	Responses
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Land Use:

Resource Concerns	Practices
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Ranking Score

Efficiency: Local Issues: State Issues: National Issues: Final Ranking Score:
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This ranking report is for your information. It does not in any way guarantee funding. When funding becomes available, you will be notified if your application is selected for funding. Some changes to the application may be required before a final contract is awarded.

Notes:

NRCS Representative: Signature Date:	Application Signature Not Required for Contract Development unless required by State policy: Signature Date:
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