Arkansas Natural Resources Commission

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Asa Hutchinson
Governor

Arkansas Natural Resources Commission's Development of the Buffalo River Watershed Management Plan
Third Stakeholder Meeting
June 8, 2017: Marshall, AR
Meeting Summary

The Arkansas Natural Resources Commission (ANRC) sponsored a third stakeholder meeting as part of the development of a voluntary, non-regulatory watershed management plan (WMP) for the Buffalo River watershed. The meeting was held in Marshall on June 8, 2017. The meeting agenda is included as Attachment 1. Approximately 40 individuals attended the meeting, including farmers, landowners, and political representatives, as well as individuals from agricultural, conservation, recreational, and other interests groups, and employees from state and federal agencies.

At the direction of Governor Asa Hutchinson, the Beautiful Buffalo River Action Committee was organized to establish an Arkansas led approach to identify and address potential issues of concern in the Buffalo River watershed, including the development of a voluntary, non-regulatory WMP for the Buffalo River watershed.

The meeting was facilitated by FTN Associates, Ltd. (FTN), an engineering and environmental consulting firm headquartered in Little Rock. The Arkansas Natural Resources Commission contracted FTN to assist the agency with the development of the Buffalo River WMP. The process will be completed by June of 2018.

The meeting was initiated by summarizing the results of the March 2017 meeting in Jasper. A copy of the presentation is included as Attachment 2.

At the March meeting in Jasper, dissolved oxygen (DO) and E. coli analyses were requested as additional screening criteria for tributary subwatersheds. These analyses were conducted and presented. Subwatersheds with median DO concentrations in the lower quartile and E. coli concentrations in the upper quartile were noted and added to the cumulative scores for each subwatershed (See Attachment 2). The lowest DO medians were associated with Falling Water Creek, a tributary to Richland Creek, and Bear Creek. The highest median E. coli concentrations were associated with Mill Creek and Tomahawk Creek. The highest cumulative scores based on the screening criteria were associated with Mill Creek, Calf Creek, Brush Creek, Tomahawk Creek, and Lower Big Creek. These 5 subwatersheds are recommended for consideration of additional management practices as the watershed management plan is implemented (See Attachment 2). The screening process is not meant to be exclusionary. These subwatersheds

represent the initial places to start in implementing the watershed management plan. Additional, voluntary management practices are encouraged anywhere in the Buffalo River watershed.

The desired outcome for the Buffalo River WMP is to sustain and improve water quality in the Buffalo River and its tributaries. To achieve this desired outcome, three goals are proposed:

1. Keep pollutants out of the water (both surface and groundwater)
2. Minimize stream bank and bed disturbance, and
3. Leave no trace behind.

For nonpoint sources, the Buffalo River and its tributaries are currently attaining the designated uses and water quality criteria. To establish targets for water quality improvements in the recommended subwatersheds, changes in four water quality constituents over a 30-year period were considered – sediment, nitrate, ortho-phosphorus, and E. coli. There is limited sediment data available for the Buffalo River and its tributaries. Most of the monitoring data are for turbidity, not sediment. There are 30 years of nitrate record for the Buffalo River and its major tributaries. Ortho-phosphorus data are limited to the most recent 10 year period because of methodological issues. E. coli data have been collected only during the most recent 10 year period; however, there are 30 years of record for fecal coliform measurements. Nitrate and E. coli were selected as management indicators; to guide selection of management practices and track resulting improvements in water quality. Nitrate is soluble and can enter surface water through runoff and shallow subsurface flow or infiltrate through the soils and enter the groundwater. Nitrate is a useful management indicator because it can provide information on the effectiveness of management practices in reducing the movement of soluble constituents (including ortho-phosphorus and pesticides) through surface and groundwater. E. coli is transported as a particulate, in many instances, sorbed to sediment particles. It is a useful management indicator because it can be used to evaluate the effectiveness of management practices in reducing bacteria, and other constituents, such as total phosphorus, sorbed to sediment particles.

The initial target load reductions proposed for nitrate and fecal coliforms in the five subwatersheds were median concentrations measured during the 1985-1994 period. Median concentrations during the period 2005-2015 were compared to the 1985-1994 medians to determine target reductions. For Calf and Brush Creek, about a 30% nitrate reduction would be needed to achieve their nitrate targets. For Mill and Tomahawk Creek, about a 40% nitrate reduction would be needed, and for Lower Big Creek, about a 70% nitrate reduction would be needed to achieve their nitrate targets. For Calf and Tomahawk Creeks, median fecal coliform concentrations for the 2005-2016 period were lower than during the 1985-1994 period, so existing management practices should be continued. For Brush Creek, about a 50% reduction would be required to achieve the 1985-1994 median fecal coliform target loads. For Mill and Lower Big Creeks, about a 70-75% reduction would be needed to achieve the 1985-1994 median fecal coliform targets (See Attachment 2).

The overall emphasis for management practices to achieve the water quality targets and WMP goals is on vegetation enhancement, soil health, streambank stabilization, and individual wastewater disposal systems. Management practices considered, in addition to the management

practices suggested by stakeholders at the March Jasper meeting, include fencing (stream exclusion), prescribed/rotational grazing, alternative water sources, fertilizer/nutrient management, and soil health management.

Management practice efficiencies in reducing nitrogen and bacterial concentrations were obtained from multiple sources, including NRCS Conservation Practice Standards, the Arkansas BMP Tool II, National Pollutant Removal Performance Database, International Stormwater BMP Database and the Chesapeake Bay Program BMP Efficiencies. Attachment 2 lists the management efficiencies for not only nitrogen and coliforms, but also for sediment and total phosphorus for various BMPs. Although the emphasis is on achieving target reductions for nitrate and E. coli, the same BMPs also reduce sediment and phosphorus inputs to surface waters.

For four of the five subwatersheds (Mill, Calf, Brush, and Tomahawk Creek), the extent of BMPs, and relative cost (based on 2016 EQIP cost share) to achieve nitrate or E. coli reduction targets were presented. Expected reductions in sediment and total phosphorus were also included, even though these constituents were not explicitly targeted for reduction (See Attachment 2). These are considered to be conservative estimates of load reductions because each of the BMPs is assumed to be implemented independently. In general, BMPs are implemented as suites of management practices, not independently, with the exception of stream exclusion. The stream exclusion BMP was combined with alternative water sources because an alternative water source would likely be needed if cattle were excluded from drinking from the stream. Stream exclusion, however, provides opportunities for implementing riparian buffers, either forested or non-forested, pasture planting, and rotational grazing as a suite of management practices, which would likely increase load reductions for all constituents. The precise set of BMPs, location, and management effectiveness can be determined during watershed management plan implementation. Lower Big Creek is a larger subwatershed (~ 85,000 acres) and we were still working on management estimates it at the time of the meeting, but the approach will be the same as for the other subwatersheds.

Individual management practices, in general, were estimated to achieve the target load reductions for nitrate and coliforms in these four subwatersheds. Steamside buffers, forested or non-forested riparian buffers, were not estimated to be sufficient in attaining bacteria load reductions in Brush and Mill Creek. However, other management practices (e.g., stream exclusion, prescribed grazing) were estimated to achieve target load reductions. Implementing suites of BMPs would permit these targets to be attained. The importance of wastewater disposal systems is illustrated in Mill Creek. Point source discharges of both nitrate and E. coli have been documented in Mill Creek (Mott and Maner 1991). These nitrate load estimates, however, are over 25 years old. The extent of nitrate and coliform loadings from wastewater disposal systems is unknown in Mill Creek, but these systems are likely to be contributing to the total load from the subwatershed. The number of individual wastewater disposal systems in Mill Creek, and whether they are permitted or unpermitted systems, is unknown. Whether management practices for nonpoint sources would be able to achieve the estimated target reductions, however, depends on the relative contribution of these wastewater discharges. Obtaining this information will be one of the action items included in the WMP.

There are sources of funding to assist landowners in implementing management practices on their property. The USDA Environmental Quality Incentive Program (EQIP) cost share values were used in estimating the relative cost for various management practices. There are other cost-sharing sources as well, including EPA Section 319 funds (administered through ANRC), USDA Farm Services Agency Conservation Reserve Program and Regional Conservation Partnership Program, and the USFWS Confined Access and Livestock Fencing (CALF) program. The USFWS CALF program can, if program requirements are satisfied, pay up to 100% of the cost of fencing and alternative water supplies. Stakeholders in the watershed have participated in some of these programs in the past (See Attachment 2).

The next meeting will be scheduled for Jasper, probably in October. At the next meeting, draft WMP recommendations for implementation will be provided, including not only management practices, but also awareness, outreach and education activities that will contribute to attaining the three WMP goals and the desired outcome of sustaining and improving water quality in the Buffalo River watershed.

Attachment 1

Buffalo River Watershed Management Plan:
A Voluntary, Non-Regulatory Project
Marshall Civic Center
Marshall, AR
8 June 2017
Agenda

Time	Topic	Individual
1:00 pm	Welcome, Meeting Purposes: • Summarize the Jasper Meeting and suggested management practices • Describe the additional analyses performed and suggested subwatersheds for initial implementation of additional management practices • Describe the process for establishing target loads and management practices to achieve load reductions • Discuss next steps	K. Thornton, FTN
1:05	Summarize the 30 March Jasper Meeting • Watershed Management Plan and planning process • Management practices suggested by stakeholders	K. Thornton
1:15	Additional Analyses and Suggested Recommendations • Discuss DO and E. coli analyses • Provide suggested subwatersheds for initiation of management practices, based on additional analyses • Questions	K. Thornton
1:45	Approach for Target Loads and Management Practices • Desired Outcome and Goals • Target loads • Management practices and efficiencies • Projected load reductions and estimated costs • Questions	K. Thornton
2:50	Next Steps	K. Thornton
3:00	**Adjourn**	
3:00 – 3:30	Informal Discussions, If Desired	All

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Buffalo River Watershed Management Plan: A Voluntary, Non-Regulatory Project

3rd Stakeholder Meeting
Marshall, AR
8 June 2017

Meeting Purposes

- Summarize Jasper March meeting
- Discuss additional analyses and recommended watersheds
- Discuss target loads and management practices
- Receive your feedback
- Discuss next steps

30 March Jasper Meeting

- Watershed Management Plan
  - Water Quality Emphasis
    - Extraordinary Resource Water
  - Nonpoint Sources – non-regulatory
  - Voluntary participation

30 March Jasper Meeting

- Watershed Management Plan
  - Focus on sustaining and improving water quality
  - Does not address regulated/permitted facilities or operations (BBRAC Issue)
  - No requirement to participate
    - Are benefits of participating

30 March Jasper Meeting

- Elicited management practices to address issues identified in December Marshall meeting
- Discussed criteria used to screen subwatersheds for initiation of management practices
- Request to consider DO and E. coli

Management Practices Suggested

- Litter management
- Unpaved road BMPs
- Greenbelt buffers – pasture/stream
- Prescribed forest burns
- Feral hog capture
- Steep slope erosion BMPs
- Septic system repair/replace
- Forest mgt. practices
- Streambank restoration
- Soil/nutrient mgt
- Erosion control BMPs
- Quail habitat mgt, restoration
- Farm pond/sediment basin construction
- Trail management practices

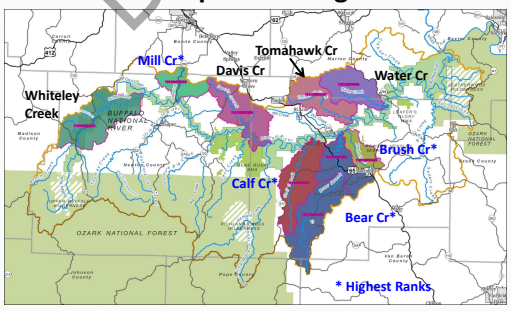
Other Recommendations

- Destination mgt. org.
- River use quotas
- Feral Hog Task Force
- Source tracking – E. coli
- Pasture mgt education
- B/C analysis of BNR
- Visitor environmental stewardship program
- Forest managment
- Promote econ. opportun.
- Develop agro/eco-tourism
- Watershed Coop
- Nutrient trading
- Mitigation bank for development
- Promote indiv. porta potties
- More visitor contact centers
- Form "Friends of the River"

Watershed Assessment

- Screening Criteria
  - Biology – Fish, Benthic organisms
  - Water quality – Turbidity, Nitrate, SRP, fecal coliforms
  - Trends – Turbidity, Nitrate, fecal coliforms
  - Loads – Nitrate, SRP, fecal coliforms
  - 8 NRCS Resource Concerns
  - Carbonate bedrock

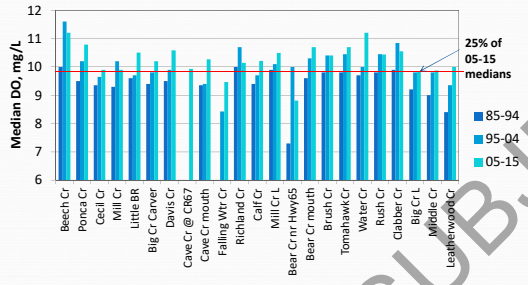
Suggested Recommendations – Jasper Meeting



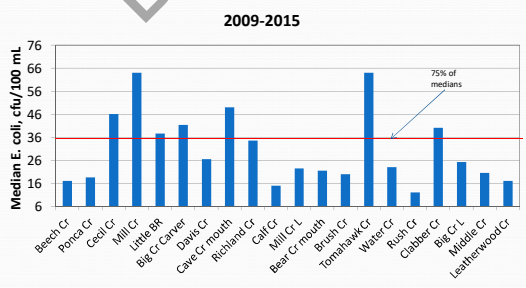
Additional Analyses

- Dissolved Oxygen
  - 3 10-year periods
- E. coli
  - Period of record – 2009-2015

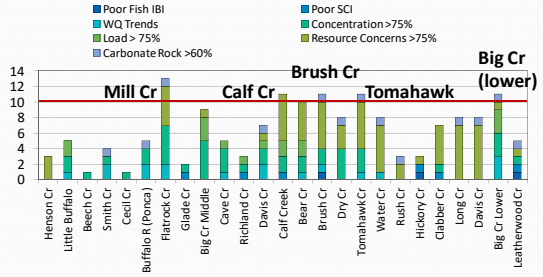
Dissolved Oxygen Analysis



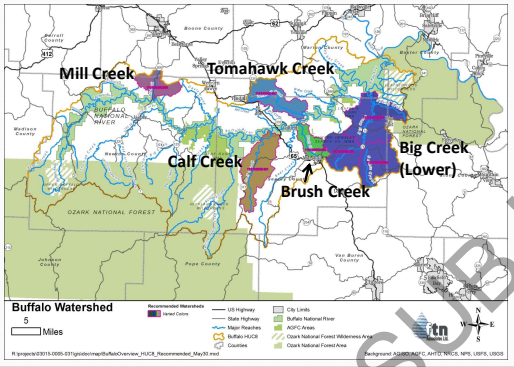
E. coli Analysis



Updated Screening Scores

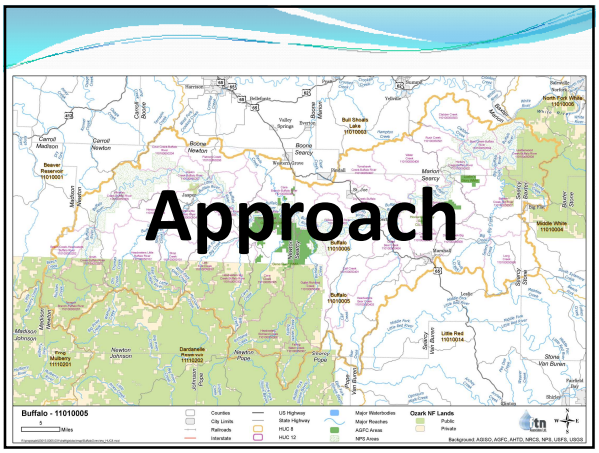


Recommended HUC12s



Screening Process Caveats

- **Not Exclusionary**
  - **Place to start ONLY.**
  - **Additional management practices positive, and encouraged, in any subwatershed**



Desired Outcome:
Sustain, improve water quality

- Three Goals:
  - Keep pollutants out of the water (surface and groundwater)
  - Minimize stream bank and bed disturbance
  - Leave no trace behind

Target Load Process

- 3 10-year periods
  - Look at trends over 30 years
  - Consider % reduction to 1985-1994 levels
- Constituents
  - Sediment – Very limited data, turbidity values only
  - Nitrate – 30 years of record*
  - Phosphorus – Last 10 years only (orthophosphate)
  - E. coli - Only one period – use F. coli trends*

* Management focus

Nitrate Trends

HUC12	1985-1994 median (Target) (mg/L)	1995-2004 median (mg/L)	2005-2015 median (mg/L)	Reduction Needed To Achieve Target
Mill Cr	0.438	0.581	0.727	40%
Calf Cr	0.230	0.321	0.337	32%
Brush Cr	0.515	0.570	0.770	33%
Tomahawk Cr	0.225	0.346	0.382	41%
Lower Big Cr	0.04	0.111	0.132	70%

Bacteria Trends (F. coli)

HUC12	1985-1994 median (Target) (cfu/100 mL)	1995-2004 median (cfu/100 mL)	2005-2016 median (cfu/100 mL)	Reduction Needed To Achieve Target
Mill Cr	18	26	72.5	75%
Calf Cr	16	20	12	0%
Brush Cr	8.5	20.5	20	53%
Tomahawk Cr	54	56.5	31	0%
Lower Big Cr	5.5	14	19	71%

Constituent Focus for Mgt

- Nitrate
  - Soluble – surface & groundwater considerations
  - Corresponding Ortho-P, other soluble constituent reductions
- E. coli
  - Particulate transport
  - Corresponding sediment, TP reductions

Emphasis

- Vegetative enhancement
- Soil health
- Streambank stablization
- Individual wastewater disposal systems

Suggested Practices

- Recommended at Jasper Meeting, and
- Additional considerations
  - Fencing
  - Prescribed/rotation grazing
  - Alternative water sources
  - Fertilizer application/nutrient management
  - Soil health management

Management Practice Efficiency

- Estimated Practice Efficiency
  - Arkansas BMP Tool II
  - NRCS Conservation Practice Standards
  - National Pollutant Removal Performance Database
  - International Stormwater BMP Database
  - Chesapeake Bay Program BMPs

Practices – Expected Reductions

Practice	Nitrogen Reduction	Coliform Reduction	Sediment Reduction	Phosphorus Reduction
Stream Exclusion/ Controlled Access	32%	30% - 95%	83%	76%
Off-stream Water Source	13% - 77%	57%	38% - 96%	74% - 97%
Forested stream buffer	37% - 70%	30%	45% - 94%	45% - 70%
Non-forest stream buffer	31% - 68%	41%	23% - 70%	50% - 70%

Practices – Expected Reductions

Practice	Nitrogen Reduction	Coliform Reduction	Sediment Reduction	Phosphorus Reduction
Prescribed Grazing	20%	60% - 72%	20% - 60%	20%
Streambank Stabilization			Up to 100%	X
Filter Strips	1% - 93%	30% - 100%	18% - 99%	2% - 93%
Pasture Planting/Mgt	66%	X	59%	67%
Pond	82%	X	77%	72% - 80%
Nutrient Management Plan	0 – 84%	X	72% - 92%	8% - 91%

Practices – Expected Reductions

Practice	Nitrogen Reduction	Coliform Reduction	Sediment Reduction	Phosphorus Reduction
Forestry BMPs	50%		34% - 95%	50%
Maintenance Unpaved Roads			48% - 95%	X
Indiv. WW Disposal Sys	100%	100%		100%
Feral hog capture	X	X	X	X

Nitrate Reduction Estimates

HUC12	1985-1994 median - Target (mg/L)	2005-2015 median (mg/L)	Nitrate Reduction Needed to Achieve Target	Sources
Mill Cr	0.438	0.727	40%	Indiv. WWT , pasture
Calf Cr	0.230	0.337	32%	Indiv. WWT , pasture
Brush Cr	0.515	0.770	33%	Indiv. WWT , pasture
Tomahawk Cr	0.225	0.382	41%	Indiv. WWT , pasture
Lower Big Cr	0.04	0.132	70%	Indiv. WWT , pasture

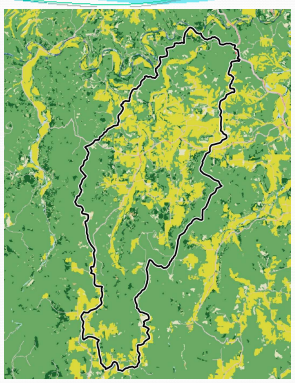
Bacteria Reduction Estimates

HUC12	1985-1994 median - Target (cfu/100 mL)	2005-2016 median (cfu/100 mL)	Bacteria Reduction Needed to Achieve Target	Sources
Mill Cr	18	72.5	75%	Indiv. WWT , pasture
Calf Cr	16	12	0%	
Brush Cr	8.5	20	53%	Indiv. WWT , pasture
Tomahawk Cr	54	31	0%	
Lower Big Cr	5.5	19	71%	Indiv. WWT , pasture

Calf Creek

31,755 acres

- 64% Forest
- 3.5% Developed
- 33% Pasture



Estimated Reduction/Cost*

Calf Creek Watershed = 31,755 ac (9,428 ac pasture)

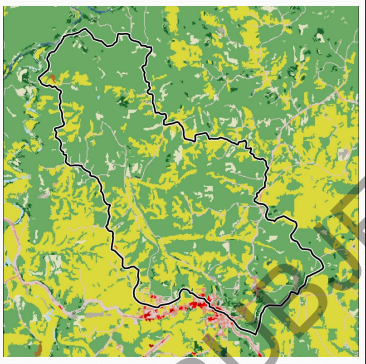
Practice	Amount	Cost ($ 1,000) **	Pasture N Redctn (46%)	Coliform Redctn	Sediment Redctn	Phos Redctn
Stream exclusion	165,000 ft 165 tanks	536	46%	41%	40%	36%
Forested buffer	162 ac	326	46%	29%	32%	36%
Non-forest buffer	238 ac	95	46%	34%	47%	53%
Pasture planting/ Mgt	1,100 ac	275	46%	Unknown	29%	37%

*Independent BMP implementation
**EQIP 2016 non-HUC allocation (approximately 75% of total cost)

Brush Creek

12,865 acres

67% Forest
5.3% Developed
28% Pasture



Estimated Reduction/Cost*

Brush Creek Watershed = 12,865 ac (3,138 ac pasture)

Practice	Amount	Cost ($ 1,000) **	Pasture N Redctn (47%)	Coliform Redctn (59%)	Sediment Redctn	Phos Redctn
Stream exclusion	40,000 ft 40 tanks	130	47%	47%	35%	38%
Forested buffer	40 ac	80	47%	34%	28%	38%
Non-forest buffer	58 ac	23	47%	39%	41%	55%
Pasture planting/ mgt	2,200 ac	550	47%	Unknown	25%	38%

*Independent BMP implementation
**EQIP 2016 non-HUC allocation (approximately 75% of total cost)

Estimated Reduction/Cost*

Brush Creek Watershed = 12,865 ac (3,138 ac pasture)

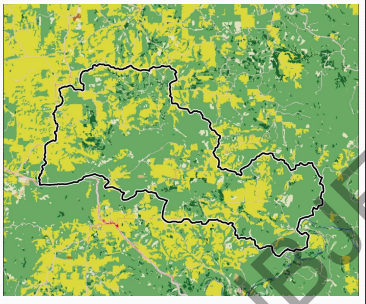
Practice	Amount	Cost ($ 1,000) **	Pasture N Redctn (47%)	Coliform Redctn (59%)	Sediment Redctn	Phos Redctn
Stream exclusion	51,000 ft 51 tanks	166	59%	59%	44%	47%
Forested buffer	60 ac	119	70%	50%	42%	56%
Non-forest buffer	60 ac	24	48%	40%	42%	56%
Prescribed grazing	3,000 ac	204	20%	59%	12%	16%

*Independent BMP implementation
**EQIP 2016 non-HUC allocation (approximately 75% of total cost)

Tomahawk Creek

23,589 acres

63% Forested
2.9% Developed
34% Pasture



Estimated Reduction/Cost*

Tomahawk Creek Watershed = 23,589 ac (7,275 ac pasture)

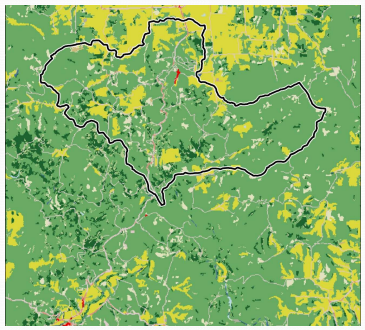
Practice	Amount	Cost ($ 1,000) **	Pasture N Redctn (59%)	Coliform Redctn	Sediment Redctn	Phos Redctn
Stream exclusion	161,000 ft 161 tanks	523	59%	52%	44%	47%
Forested buffer	158 ac	335	59%	42%	35%	47%
Pasture planting/Mgt	6,400 ac	1,600	59%	Unknown	31%	48%
Prescribed grazing	7,200 ac	490	20%	60%	12%	16%

*Independent BMP implementation
**EQIP 2016 non-HUC allocation (approximately 75% of total cost)

Mill Creek

13,607 acres

- 77% Forested
- 4.6% Developed
- 18% Pasture



Estimated Reduction/Cost*

Mill Creek Watershed = 13,607 ac (3,810 ac pasture)

Practice	Amount	Cost ($ 1,000) **	Pasture N Redctn (57%)	Coliform Redctn (83%)	Sediment Redctn	Phos Redctn
Stream exclusion	45,000 ft 45 tanks	146	57%	51%	43%	45%
Forested buffer	44 ac	87	57%	37%	34%	46%
Pasture planting/mgt	1,600 ac	400	57%	unknown	31%	46%
Indiv. WW disposal	unknown					

*Independent BMP implementation
**EQIP 2016 non-HUC allocation (approximately 75% of total cost)

Potential Funding Sources

- ANRC 319 Program – e.g., Conservation Districts
- NRCS EQIP – Individual Landowner
- FSA CRP – Individual Landowner
- NRCS MRBI – Individual Landowner
- NRCS RCPP – e.g., Conservation Districts
- USFWS Controlled Access Livestock Fencing (CALF) Program – Individual Landowner
- TNC – Individual Landowner

Not Starting From Scratch

- County Conservation Districts
  - Streambank restoration
  - Bank stabilization
  - Pasture planting
  - Stream exclusion with alternate water
  - Manure management
  - Equipment
- NRCS
  - Pasture planting
  - Manure management
  - Bank stabilization
- US NPS
  - Bank stabilization
  - Tree planting
  - Stream fencing

Next Steps

- Meeting Summary – distributed to everyone attending and on email list (or address)
- Continue to elicit your input
- Refine management practice analyses; add outreach and education
- Schedule next meeting; likely in September
- Next meetings topic
  - Draft Recommendations

Points of Contact

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ATTACHMENT 3

Questions Raised at the June 8 2017 Meeting and Responses

Question: Could the increase in DO over time be due to changes in the method for measuring DO?

Response: It is unlikely. Different probes or meters might have been used, but all are calibrated before use, so the results would be expected to be consistent.

Question: What is the difference between day and night DO?

Response: Daytime DO measurements include oxygen added to the water through plant photosynthesis. At night, this source of oxygen is not available to the stream and DO concentrations typically will be at their lowest concentration around sunrise. Most DO measurements are taken during the day, and may not capture these lower values.

Question: What time of year are the DO measurements from? DO is usually lowest in July and August.

Response: The data consist of quarterly samples, so they include measurements from winter, spring, summer, and fall.

Question: What is the source of the DO data?

Response: The DO data are primarily from the US National Park Service water quality monitoring program.

Question: Why have coliform levels declined in Calf Creek and Tomahawk Creek?

Response: We don't know.

Question: What is stream exclusion?

Response: These are practices that keep cattle out of streams. Usually it includes fencing along the stream and some kind of alternative water supply, since the cattle won't be able to drink from the stream.

Question: ADEQ is currently taking public comments on the permit renewal for the Marble Falls wastewater treatment facility. How will that affect the management?

Response: The WMP focuses only on non-regulatory management. The permit renewal is a permitted action that will not be included in the WMP.

Question: Why are you not recommending middle Big Creek because it has a permitted facility, but you are recommending Mill Creek, which has permitted sources?

Response: The inclusion of Mill Creek is not because it has permitted sources. Mill Creek was included because it ranked the highest considering all the screening criteria, and median concentrations and loads have increased over the 30 year period. Most of the subwatersheds have some permitted sources (some individual septic systems require a permit).

Question: If the point source permit for Marble Falls is not renewed, does it become a nonpoint source?

Response: No. If the permit is not renewed, the facility has to be shut down. This is an ADEQ action.

Question: Is litter application management included in the watershed management plan?

Response: Not specifically. Management of litter applications would be addressed in nutrient management plans and conservation management plans, which will be recommended in the plan.

Question: You are recommending planting (e.g. pasture planting). Do your recommendations include specific species?

Response: No. Appropriate species will depend upon the specific location or pasture. Since we don't know who will volunteer, we don't know where the planting will be done, and won't be able to include species recommendations in the plan. However, technical and possible financial assistance might be available to help individual landowners answer this question.

Question: You list federal sources for funding assistance. Will these sources be available in the future?

Response: Our assumption is that these sources will be available in the future. However, we have no idea of the level of funding that might be available.

Question: Does whether or not a stream is recommended in the plan affect the availability of funding assistance? Will projects not located in recommended watersheds be eligible for funding?

Response: Based on past WMP implementation, the first priority is typically for those subwatersheds recommended in the Plan. This, however, does not exclude other subwatersheds from being eligible for funding.

Question: Is the plan updated? How often? How do we go about changing or updating the plan?

Response: Once the WMP is accepted by EPA, it is provided to stakeholders for implementation. Stakeholder groups or organizations in other watersheds have taken responsibility for championing the implementation of the WMP and updating the plan. The

frequency is typically based on when significant actions or activities occur within the watersheds.

Question: What do you mean by leave no trace behind?

Response: "Leave no trace behind" is a program of the Buffalo National River that encourages park visitors to minimize impact on the Buffalo River. This includes minimizing streambank disturbance, properly disposing of human waste and litter, and similar activities. All users of Buffalo River watershed resources can minimize their impact on watershed resources and the Buffalo River by following the principles of "leave no trace behind".

Question: If I don't want to do any of the practices recommended in the plan am I going to be penalized in any way?

Response: No. This is a voluntary program.

Question: In your data analysis, do you differentiate whether the pollutants are from the watershed or the river?

Response: There are water quality monitoring stations on the river and on the major tributaries. This allows us characterize loads from the tributaries.

Question: Is there funding assistance for upgrading or fixing septic systems?

Response: No, not to our knowledge.

Questions: Will the BBRAC continue after the plan is done?

Response: It is our understanding the BBRAC will continue after the plan.

Question: Will the other agencies in the BBRAC have input into what happens in the watershed?

Response: The BBRAC agencies currently do have input into what happens in the watershed through their respective programs.

Question: What is the role of the BBRAC?

Response: The BBRAC is a non-regulatory organization that provides a forum for agencies to communicate and work together.

Question: Do we (stakeholders) have access to the data and analyses?

Response: Yes. You may make a request from ANRC.

Question: How can we implement a project, such as streambank erosion control?

Response: The WMP will have contacts for agencies and organizations that can provide technical and financial assistance for implementing various management practices, such as streambank erosion control.

Question: How do we submit an action item?

Response: The best approach is to raise the action item at the stakeholder meetings so it can be discussed by participants. Action items can be submitted to:

Tony Ramick, ANRC – Tony.Ramick@arkansas.gov; (501) 682-3914
Terry Horton, FTN – twh@ftn-assoc.com (501) 225-7779

All action items will be considered, but will not necessarily be included in the WMP. For example, a number of suggestions were made to increase economic opportunities in the watershed. This is an important issue, but doesn't necessarily relate to water quality. This action item will be forwarded to the Arkansas Economic Development Commission.