

# Arkansas Forestry Commission



U of A  
Cooperative  
Extension  
Service  
September 27-28,  
2017

2017 NPS 319(h) Project Review



**Intentions may be great, but action may be lacking.**

I'm Interested in 319h grant projects but  
eating lunch just wore me out today.



# Arkansas Silvicultural NPS Project

**Best Management Practices Assessment**

**Grant # C999610323**

**Project 15-1200**

**Major Task Include;**

- Technical Logger-Forester BMP Training
- Non-Technical Landowner BMP Training
- Courtesy Exams
- AFC BMP Guideline Books and Materials
- AFC Silviculture 8<sup>th</sup> BMP Implementation Assessment



# Technical BMP Training

## Forester – Logger Training

- Will conduct 9 BMP workshops
- Trainings will be both class room and Field
- To date 8 workshops with 409 Trainees



# Non-Technical BMP Training

## Landowner BMP Training

- Increase Landowner Awareness by conducting 3 workshops
- To date 2 Workshops have been held with 146 participants





# Courtesy Exams

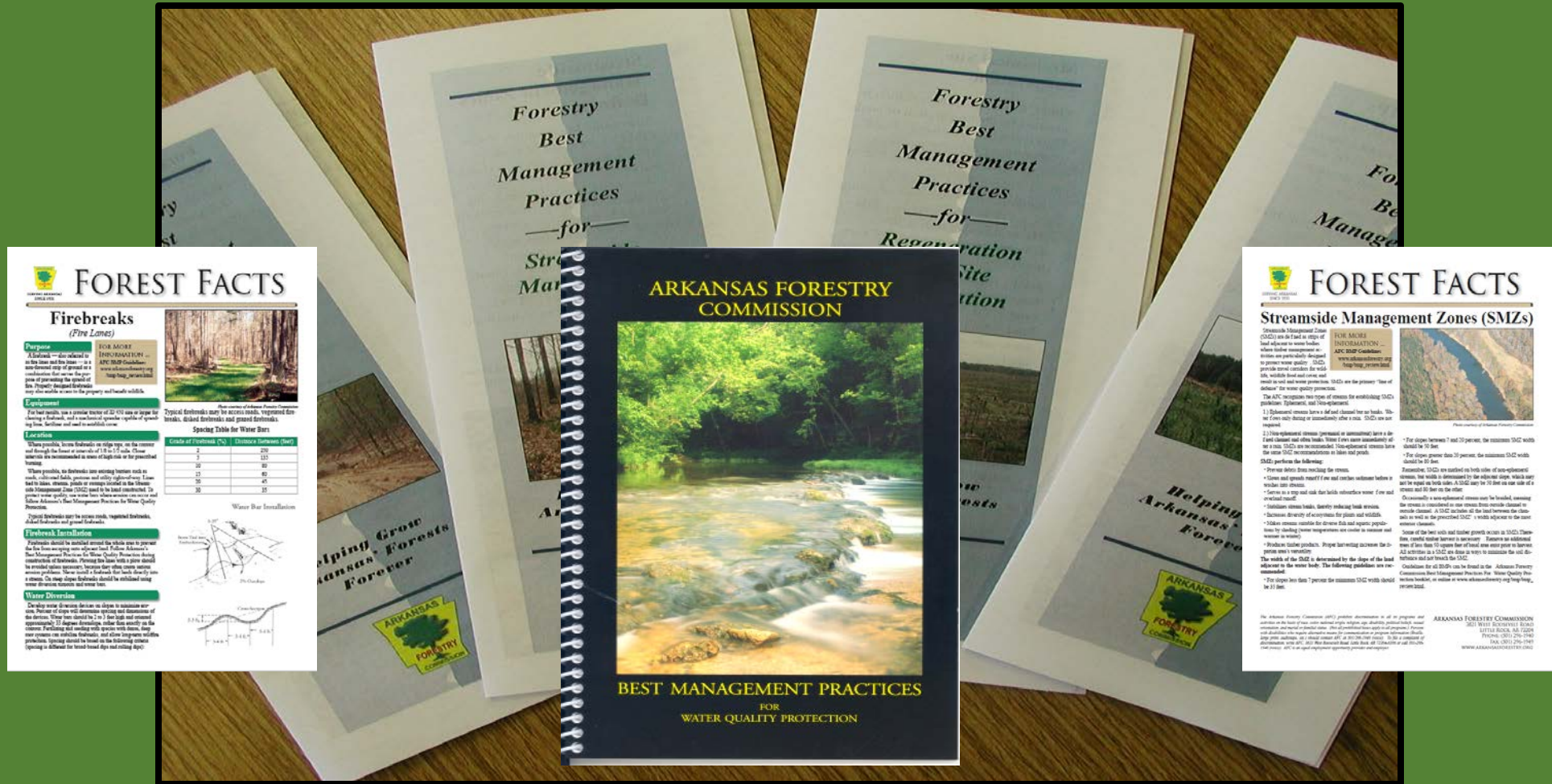
## Prevent before the event

- Provide 3 site specific technical on the ground assistance
- 2 Sessions with 8 Foresters, 5 Loggers, 2 Contractors and 4 Landowners
- Exam address SMZ, temporary road BMP's, and a technical assistance summary report of site specific BMP recommendations.



# BMP Guideline Book & Materials

- AFC will redesign and print handouts
- Will re-print AFC BMP BOOK





# BMP Guideline Book & Materials

## RECOMMENDED MANAGEMENT PRACTICES FOR THE PROTECTION OF THE KARST LANDSCAPE

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The Ozarks is a region of karst that includes distinctive geological features and topography where the subsurface is formed by the dissolving of rocks by the karsting process. This process results in unique surface and subsurface features including sinkholes, losing streams, springs, caves, and complex underground drainage systems.

Surface waters are commonly transported through underground conduits contributing to the groundwater base. Surface water enters groundwater systems rapidly by passing through karstificated soil and fractured bedrock and groundwater in karst can travel as quickly as a few thousand feet in one single day. If the surface water is contaminated then groundwater is also contaminated because surface water and groundwater habitats are impaired. These and other characteristics of karst management require attention to the surface and groundwater environment that is highly susceptible to human disturbance.

Groundwater is used for public and personal water supplies, farm and ranch operations, and recharge surface water. At the same time, many highly sensitive fish and wildlife populations such as fish, salamanders, snails, and crayfish spend all or part of their life cycle in these unique and complex karst habitats.

The following management practices are recommended for implementation during land development activities in karst areas to protect groundwater resources in karst areas of karst.

**KARST CONSERVATION PRACTICES**

**UNDETERMINED KARST SENSITIVITY**

- Obtain a karst survey, geologic, or topographic losing stream map for an area without a determined karst management zone or karst survey. Apply the zoning for karst management practices (BMPs) for undetermined management zones. In addition, obtain a karst management zone map. Karst management zones are used to identify karst areas that are sensitive to a karst survey, sinkhole or non-sinkhole losing stream.
- Use karsting techniques that minimize soil disturbance if the karst forest floor and exposure of karst rock.

Arkansas Forestry Commission, 4101 The Foreword Blvd, Little Rock, AR 72204-0006  
Phone: 501-781-3199  
www.arkforestry.org



## FOREST FACTS

### Firebreaks (Fire Lines)

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**Purpose**  
A firebreak is an area cleared of trees and brush to prevent the spread of a wildfire. Firebreaks are used to prevent the spread of a wildfire and to protect the property and wildlife.

**FOR MORE INFORMATION:**  
www.arkforestry.org  
http://arkforestry.org

**Construction**  
A firebreak is a narrow trench of 20-30 feet wide by 18-24 inches deep for clearing brush, and a mechanical spreader capable of spreading lime, fertilizer and seed material.

**Locations**  
When possible, locate firebreaks on ridge tops, on the crests and along the base of steep hills. Firebreaks are recommended in areas of high risk or for prescribed burning.

**When possible, locate firebreaks on existing features such as roads, railroad beds, power and utility right-of-ways. Exposed tree limbs, stumps, piles or mounds should be the same as the Management Zone (SMZ) used for the land containing the firebreak. When possible, locate firebreaks on roads and other features. Do not locate firebreaks on the same side of the same road.**

**Typical firebreaks are:** spaced 200-300 feet apart, spaced 100-200 feet apart, spaced 50-100 feet apart, spaced 25-50 feet apart, spaced 10-25 feet apart.

**Spacing Table for Water Bars**

Grade of (Slope) (%)	Distance Between (Feet)
2	250
3	150
5	100
7	80
10	60
15	40
20	30

**Water Bar Installation**

Water bars should be installed across the slope to prevent the flow of water down the slope. The water bar should be constructed of a material that will not erode. The water bar should be installed across the slope to prevent the flow of water down the slope. The water bar should be constructed of a material that will not erode.

**Water Diversion**  
Diversion is a technique used to divert water away from a sensitive area. It involves the construction of a diversion structure that will divert water away from a sensitive area. It involves the construction of a diversion structure that will divert water away from a sensitive area.

## FOREST FACTS

### Streamside Management Zones (SMZs)

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**Streamside Management Zone (SMZ)** is the land on either side of a stream that is subject to erosion, sedimentation, and other disturbances that may affect the stream's ability to support a healthy aquatic ecosystem.

**FOR MORE INFORMATION:**  
www.arkforestry.org  
http://arkforestry.org

The ARC recognizes two types of streamside SMZs: **Standard SMZs** and **Enhanced SMZs**.

**1. Standard SMZs:** are established in areas where the stream is subject to erosion, sedimentation, and other disturbances that may affect the stream's ability to support a healthy aquatic ecosystem.

**2. Enhanced SMZs:** are established in areas where the stream is subject to erosion, sedimentation, and other disturbances that may affect the stream's ability to support a healthy aquatic ecosystem.

**SMZs provide the following:**

- Prevent erosion from reaching the stream.
- Reduce erosion of stream banks.
- Reduce erosion of stream banks.
- Reduce erosion of stream banks.

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## BEST MANAGEMENT PRACTICES COST SHARE ASSISTANCE

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The Riparian Forest Buffer Program (RF3) may be the best conservation program for landowners. The Conservation Reserve Program (CRP) provides a financial incentive for landowners to protect riparian areas. The RF3 program provides a financial incentive for landowners to protect riparian areas.

**RF3 offers annual rental payments for 10 to 15 years and 50 percent of the cost of installation and maintenance of riparian buffers. In addition, there is a CRP and a riparian program, a riparian practice incentive bonus, and a riparian program in riparian areas.**

**Water and Riparian Zones**  
The Cost Share Program allows credit against the tax imposed by the riparian program. The program provides a financial incentive for landowners to protect riparian areas. The program provides a financial incentive for landowners to protect riparian areas.

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# Silvicultural BMP Assessment

## Previous BMP Implementation Averages

- 7: 2010-2011 - 89%
- 6: 2007-2008 - 86%
- 5: 2005-2006 - 87%
- 4: 2002-2003 - 85%
- 3: 2000-2001 - 83%
- 2: 1998-1999 - 80%
- 1: 1996-1997 - 85%



### 2016 – 2017: In Progress

- Using Landsat Imagery we collected 3012 pool sites
- Started to look at 250 random selected sites starting July 2017
- Plan to complete survey by January 2017
- Plan to analyze data and publish data by April 2017

# Obstacles Encountered

None up to this point





# Acknowledgements



**Arkansas Natural Resource Commission**



**Environmental Protection Agency,  
Region 6**



**Arkansas Timber Producers Association**



**Arkansas Forestry Association**



**School of Forest Resources**

# Arkansas Forestry Commission



Questions?

[www.arkansasforestry.org](http://www.arkansasforestry.org)

Arnold Hameister  
AFC BMP Coordinator



# 8<sup>th</sup> BMP Implementation Survey Considerations

- 🌲 Site Selection Method
  - satellite imagery, severance tax, deeds, etc.
- 🌲 Ensuring Randomness
  - random number generator
- 🌲 Stratification
  - county, landowner, watershed.
- 🌲 Data Storage
  - database, spreadsheet, paper trail
- 🌲 Data Analysis