



# Arkansas Water Plan Fish and Wildlife Flows

**Water Supply Availability Meeting**  
**October 22, 2013**

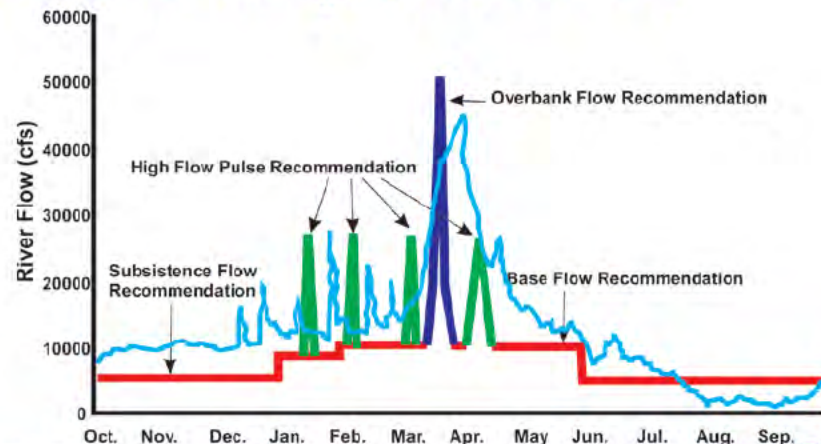


# Process To Date

- **Technical workshop – March 2013**
  - Reviewed the Arkansas Method, Modified Tennant Method
  - Reviewed national and southeastern methods for estimating instream flows
  - Recommended path forward
- **Prepared an adaptive management framework for incorporating improved methods into the Arkansas Water Plan**
- **Developed a concept for flow management targets to reduce the likelihood of declared shortages**

# Recommendations

- Use the Arkansas Method for estimating fish and wildlife flows and updating excess flow estimates for the 2014 Arkansas Water Plan
- Determine flow-ecology relationships and develop an empirical, risk-based method for estimating flow-ecology (e.g., fishery) relationships, based on:
  - Magnitude
  - Frequency
  - Duration
  - Timing, and
  - Rate of change of flow

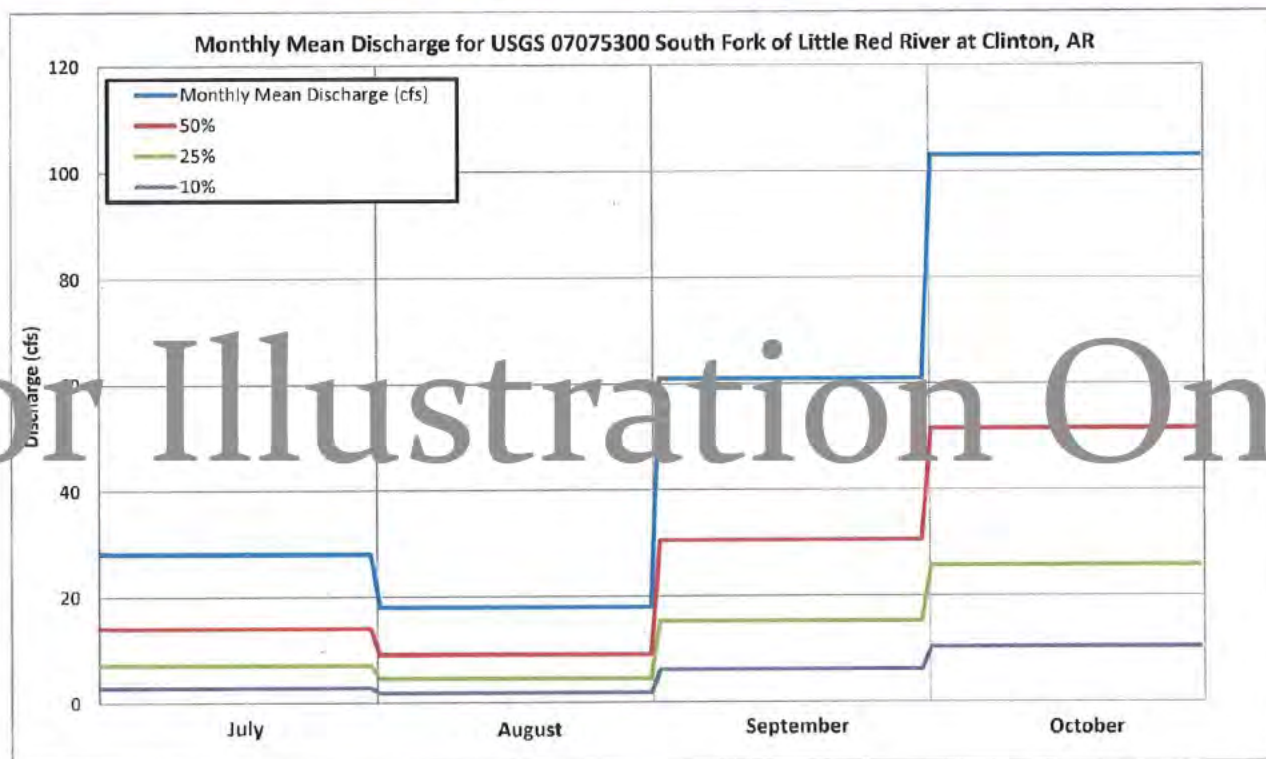


# Recommendations (Continued)

- **Framework for adopting alternative methods for F&W flows into Arkansas Water Plan (i.e., adaptive management), which requires:**
  1. **Defining how flows were determined (e.g., USGS gauge)**
  2. **Specifying the applicable stream classes (e.g. extraordinary resource waters)**
  3. **Documenting the current hydrologic status**
  4. **Confirming the flow-ecology relationships are scientifically defensible**
  5. **Documenting the stakeholder process used to refine, if needed, flows to achieve all designated uses**
  6. **Monitoring and periodically assessing flow-ecology relations**

# Recommendations (Continued)

- Propose approaches for reducing the likelihood of declared water shortages and stopping withdrawals



# Next Steps

- **Incorporate comments and finalize the recommendations**
- **Develop alternative approaches for reducing the likelihood of declared water shortages**
- **Review these alternative approaches and provide a recommendation for ANRC adoption**

# Questions?