U.S. DEPARTMENT OF AGRICULTURE

NRCS OPR.NW00.05.7010/EAXX-005-53-000-1726840403 May 2026

Big Creek Watershed NRCS Watershed Program Environmental Assessment

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PROPOSAL INFORMATION

General Information

Proposal Name: Big Creek Watershed NRCS Watershed Program

Proposal Tracking #: NRCS WFPO ID: OPR.NW00.05.7010 CEQ ID: EAXX-005-53-000-1726840403

Proponent Name: City of Turrell, Arkansas (Sponsoring Local Organization)

Signing Authority: State Conservationist, Natural Resources Conservation Service – Arkansas

Responsible Official: Amanda J. Mathis

Unit: NRCS Arkansas State Office

Proposal Record Location: https://www.abmawatershedproject.com/projects/city-of-turrell & https://www.nrcs.usda.gov/state-offices/arkansas

Proposal Webpage: https://www.abmawatershedproject.com/projects/city-of-turrell

General Location of Proposal: The proposed action is located within the Big Creek watershed in northeast Arkansas, primarily within the incorporated communities of Joiner (Mississippi County) and Turrell and Gilmore (Crittenden County), with minor portions of the watershed extending into Poinsett County. Project activities would occur within and adjacent to existing drainage features associated with Big Creek, Cypress Bayou, Frenchmans Bayou, and their associated tributaries. The project area lies within the Mississippi Alluvial Plain and includes low-lying, flat terrain characterized by agricultural land uses and developed residential areas. Proposed improvements are generally located along and near local roads and highways, including U.S. Highway 61, State Highways 77 and 118, and associated municipal streets within the three communities.

Purpose and Need: Why do we need to act?

Purpose

The purpose of the proposed action is to provide flood damage reduction within the Big Creek watershed, including the communities of Turrell, Gilmore, and Joiner, through the year 2077. The proposed action is authorized under Public Law 83-566, Watershed Protection and Flood Prevention Act, and is intended to reduce flood-related risks to public safety, residential and commercial structures, agricultural lands, roads, and other public infrastructure during major storm events.

Need

Flooding is a recurring and documented problem within the Big Creek watershed due to flat topography, poorly drained soils, limited drainage capacity, extensive agricultural land use, and the presence of wetlands. Existing drainage infrastructure in the planning area is frequently overwhelmed during moderate and major rainfall events, resulting in inundation of streets, homes, businesses, and cropland, as well as periodic damage to public infrastructure and disruptions to emergency access and transportation.

Under existing conditions, multiple neighborhoods within Turrell, Joiner, and Gilmore experience flooding during 10-year and 100-year storm events, with some structures affected at or above first-floor elevation. Standing water may persist for several days following storm events, increasing damage and limiting access. Without additional action, these conditions are expected to continue and may worsen under projected increase in storm intensity.

The desired condition is a watershed with improved capacity to convey and manage stormwater during major rainfall events, resulting in reduced flood damages and increased resilience of community infrastructure and land uses. Action is needed at this time to address ongoing flood damages, respond to local sponsor and community concerns, and implement practicable measures consistent with NRCS authority and watershed planning objectives.

Proposed Action: What are we proposing to do?

The proposed action consists of coordinated structural and nonstructural flood-damage-reduction measures in the communities of Joiner, Turrell, and Gilmore, including channel dredging, widening, and new channel construction; creation and connection of drainage ditches and culverts; construction of one detention pond in Joiner providing approximately 10.1 acre-feet of stormwater storage; dry floodproofing of 26 structures totaling approximately 55,366 square feet in Joiner and Turrell; and the buyout of one approximately 1,360-square-foot structure in Gilmore to improve conveyance capacity and community resilience. The design criteria for the proposed action include: compliance with NRCS engineering standards; hydrologic and hydraulic performance for the 1-percent annual exceedance probability (AEP) event; defined physical standards for detention ponds, channels, ditches, and culverts; incorporation of best management practices and measures to avoid and minimize environmental impacts; and implementation consistent with applicable federal safety, permitting, and long-term operation and maintenance requirements.

Alternatives to the Proposed Action: Are there other ways to meet the purpose and need?

A range of structural, nonstructural, and combined structural and nonstructural alternatives were analyzed in detail to address flooding within the Big Creek watershed. These alternatives included a No Action Alternative, area-specific structural alternatives focused individually on Joiner, Turrell, or Gilmore, a watershed-scale combined alternative integrating measures across all three communities, and nonstructural alternatives emphasizing floodproofing or property acquisition. Each alternative was evaluated based on its ability to reduce flood damages, protect public infrastructure and roadways, minimize adverse environmental and social impacts, comply with Public Law 83-566 and applicable regulatory requirements, and achieve cost-effective flood damage reduction. This detailed analysis informed selection of the preferred alternative, which was determined to best meet the project purpose and need while balancing effectiveness, efficiency, environmental protection, and community considerations.

No Action Alternative

The cities of Turrell, Joiner, and Gilmore do not have planned watershed rehabilitation projects. In such a case, the No Action Alternative provides the same scenario as the existing condition scenario. This alternative would not meet the purpose and need for this project but is required by NEPA. The No Action Alternative represents the scenario in which no federal investment is made in the watershed. Under this alternative, the Sponsor would not implement any federally supported flood mitigation measures and would instead continue with routine operations and maintenance activities as resources allow.

Currently, there are no planned flood mitigation projects in the watershed, and no future land use projections are available for the cities of Turrell, Joiner, or Gilmore. Therefore, the No Action Alternative assumes existing conditions persist, with the Sponsor potentially conducting basic maintenance such as clearing debris from drainage ditches, repairing culverts, and maintaining existing stormwater infrastructure to the extent feasible.

This No Action Alternative serves as the baseline for evaluating the effectiveness and benefits of all proposed action alternatives, in accordance with 40 CFR § 1502.13 and NWPM 501.12B

Alternative 1 (Joiner)

Joiner is a city in Mississippi County. Joiner is one of the most vulnerable areas within the planning area. The community's SVI is 0.928, one of the highest in the Nation. The community has a higher degree of urbanization and more developed neighborhoods compared to its regional counterparts. The main challenge stems from intense rainfall, which is further aggravated by the low capacity and suboptimal flow divergence in channels. A major consideration throughout the planning process is the substantial extent of flooding in the watershed. During a 100-year storm, the flood elevation can reach as high as 225.5 feet NAVD88 in Joiner and surrounding communities near Frenchmans Bayou and Ditch No. 7. More than 30 percent of the area within the city of Joiner has an elevation below 225.5 feet. The inadequate drainage infrastructure throughout Joiner contributes to ponding in neighborhood areas. The cumulative effect of these factors underscores the imperative for targeted interventions in stormwater management and drainage infrastructure to enhance Joiner's resilience against the adverse consequences of intense rainfall. Flooding could be mitigated by the creation of larger storage ponds and increasing drainage capacity.

Key Components of Alternative 1:

- Dredging and creating approximately 0.36 miles for Channel 1 along State Highway 118 W.
- Connecting existing Ditch No. 7 to a new Channel 2 for a total length of 0.51 miles,
- Connecting existing Ditch No. 7 to a new Channel 3 (along Magnolia Street) for a total length of 0.1 miles.
- One detention pond is proposed, which provides approximately 10.1 acre-feet of maximum flood volume stormwater detention capacity:

    - Within the perimeter formed by Magnolia Street, Legion Street, and US Highway 61.
- Installation of seven pipe culverts, facilitating the unimpeded flow across Magnolia Street, Cooney Street, and Letson Road, and directing it towards a tributary of Frenchman's Bayou and Ditch Number 7.
- The detention pond is up to seven feet deep with 3H:1V side slopes. The detention pond may be located on privately owned land.
- Dry floodproofing of nine structures, totaling approximately 24,025 square feet, to enhance community resilience and reduce flood-related damages.

Currently, approximately 17 acre-feet of offsite volume flows toward Magnolia St, impacting downstream roads and structures along Cooney St. The proposed detention pond will capture and detain most of this flow, preventing increased flooding along Cooney St. Channels 1, 2, and 3 will provide additional storage and convey more flow toward Ditch No. 7 and Frenchmans Bayou, thereby reducing roadway and structural damage.

Evaluation Against Completeness, Effectiveness, Efficiency, and Acceptability

Alternative 1 provides direct flood mitigation in the heart of the city of Joiner, which is within one of the highest-risk areas of the planning area. The alternative will serve a highly socially vulnerable population.

- It will directly mitigate the flood risk to 14 structures and 21 acres of land.
- According to the National Structure Inventory (NSI) dataset, 42 people will have direct flood reduction benefits.
- The study area has a weighted average SVI of 0.93.
- Project implementation benefits 0.12 miles of roadway.

In areas where frequent rains occur, man-made ponds like detention ponds can protect communities from flooding and shield waterways and water systems from becoming contaminated by acting as a silting basin. A federal project such as Alternative 1 can significantly contribute to the local economy. The detention pond area can create new wildlife habitat and increase urban biodiversity. This could help small-town residents connect with their local environment and develop a sense of stewardship over their natural resources. The detention pond may add natural beauty to the city and will have additional social and cultural benefits. In areas with significant cultural heritage, effective flood mitigation can help preserve important historical and cultural sites that might otherwise be damaged or destroyed by floods. Implementing local-level flood mitigation projects can strengthen a community's identity. It can provide a sense of shared responsibility and achievement and enhance the community's connection to their local environment.

The planned detention pond will enhance ecosystem services by providing new habitat, improving water clarity, absorbing excess nutrients from runoff, and enhancing natural beauty for residents to enjoy.

Alternative 2 (Turrell)

Turrell is located in northern Crittenden County and is bordered by the town of Gilmore to the north. Turrell is one of the most vulnerable areas within the planning area. The community's SVI is 0.7024, relatively high compared to the Nation. The community has a similar degree of urbanization as Joiner. The main challenge stems from intense rainfall, which is further aggravated by the low capacity and suboptimal flow divergence in channels. During a 100-year storm, the flood elevation can reach up to 223.3 feet NAVD88 in Turrell and surrounding communities near Cypress Bayou and Big Creek. More than 80 percent of the area within the city of Turrell has an elevation below 223.2 feet. The inadequate drainage infrastructure throughout Turrell contributes to ponding in neighborhood areas. Any stormwater management strategies should increase the drainage system's efficiency to mitigate flooding during intense rainfall.

Key Components of Alternative 2:

- Dredging and widening approximately 0.42 miles of existing Channel 1 and connecting with Cypress Bayou near Eureka Street where it meets Big Creek at the outfall.
- Connecting existing Channel 1 to a new 0.45-mile Channel 2 along State Route 77.
- Creating ten drainage ditches for a total length of 1.44 miles to increase the area's limited conveyance capacity.
- Connecting Big Creek to a new 0.78-mile Channel 3 along State Route 77.
- Connecting Cypress Bayou to a new 0.45-mile Channel 4. Installation of a series of pipe culverts.
- Dry floodproofing of seventeen structures, totaling approximately 31,341 square feet, to enhance community resilience and reduce flood-related damages.

The addition of the ten ditches around the residential area provides more adequate storage and faster drainage time. The current ditches in this area lack sufficient capacity and are often filled with sediment, causing water to remain stagnant. Channels 1, 2, 3, and 4 will increase drainage capacity toward Big Creek and Cypress Bayou, therefore reducing flooding depth around the surrounding areas.

Evaluation Against Completeness, Effectiveness, Efficiency, and Acceptability

Alternative 2 provides direct flood mitigation to:

- 27 structures and 206 acres of land.
- According to the National Structure Inventory (NSI) dataset, 81 people will have direct flood reduction benefits.
- 0.20 miles of roadway.

Alternative 3 (Gilmore)

Gilmore is a city in Crittenden County and is one of the most vulnerable areas within the planning area. The community's SVI is 0.51, relatively average for the Nation. The community is less urbanized and has a lower population compared to Joiner and Turrell. The main challenge stems from intense rainfall, which is further aggravated by the low capacity and suboptimal flow divergence in channels. In Gilmore and surrounding communities near Lamb Bayou and Cypress Bayou, flood elevation can reach up to

223.3 feet NAVD88 during a 100-year storm. More than 90 percent of the area within Gilmore has an elevation below 223.3 feet. The inadequate drainage infrastructure throughout Gilmore contributes to ponding in neighborhood areas. Any stormwater management strategy should increase the drainage system's efficiency to better mitigate flooding during intense rainfall.

Key Components of Alternative 3:

- Connecting Cypress Bayou to a new Channel 1 for a total length of 0.5 miles along the southern side of Gilmore, following Old Highway 63. Connecting Channel 1 to a 0.13-mile Ditch 1.
- Creating a new 0.46-mile Channel 2 that connects to Channel 1.
- Connecting Ditch Number 1 to a new Channel 3 for a total length of 0.46 miles along the eastern side of Gilmore. Creating three roadside drainage ditches (D2, D3, and D4) along Oliver Street, Park Road and Acwin Street that connect with Channel 2 for a total length of 0.38 miles to increase the area's limited conveyance capacity.
- Installation of a series of pipe culverts, facilitating the unimpeded flow across John Street and Acwin Street, and directing it towards a tributary of Cypress Bayou.
- Property buyout of one structure, approximately 1,360 square feet, to increase community resilience.

The addition of these four ditches around the residential area provides more adequate storage and faster drainage time. The current ditches in this area lack sufficient capacity and are often filled with sediment, causing water to remain stagnant. Channels 1, 2, and 3 will increase drainage capacity toward Ditch No.1, therefore reducing flooding depth in the surrounding area.

Evaluation Against Completeness, Effectiveness, Efficiency, and Acceptability

Alternative 3 directly mitigates flood risk for:

- Five structures, 20 residents, and 64 acres of land.
- 0.15 miles of roadway.
- The average SVI of the served community is 0.51.

Alternative 4 (Combination of Alternative 1, Alternative 2, and Alternative 3)

Joiner, Turrell, and Gilmore are among the most flood-vulnerable communities in the planning area, each facing challenges from intense rainfall, inadequate drainage infrastructure, and low-lying terrain. Joiner, located in Mississippi County, has a SVI of 0.928, one of the highest in the nation—and experiences flood elevations up to 225.5 feet NAVD88 during a 100-year storm, with over 30% of the city lying below this level. Turrell, in northern Crittenden County, has an SVI of 0.7024 and faces similar risks, with flood elevations reaching 223.3 feet NAVD88 and more than 80% of the city below that elevation. Gilmore, also in Crittenden County, is less urbanized with an SVI of 0.51, but over 90% of its area lies below the 223.3-foot flood elevation. All three communities suffer from poor drainage and ponding, underscoring the need for improved stormwater management. Alternative 4, the preferred mitigation strategy, reduces 100-year flood depths by up to 1.2 feet, offers the greatest economic benefit, and mitigates flooding for

14 structures in Joiner, 27 in Turrell, and 5 in Gilmore, directly benefiting 143 residents while maximizing environmental and public benefits.

Alternative 5 and Alternative 6

Additionally, two standalone nonstructural alternatives are proposed that involve voluntary buyouts or relocation of structures. For this analysis, frequently flooded structures were analyzed. To identify frequently flooded structures, model results from the 10% and 1% AEP events, corresponding to 10-year and 100-year flood events, were checked. These two standalone alternatives are identified as Alternative 5 and Alternative 6, respectively. The maximum water elevations were derived from these model results at each National Structure Inventory (NSI) data point within the city limits of Joiner, Turrell, and Gilmore. The NSI database provides the First Floor Elevation (FFE) for each structure. By comparing the model-derived water elevations with the FFE data, the water height over each structure FFE was calculated. Structures with a positive water depth over the FFE during either the 10-year or 100-year events were identified as candidates for potential voluntary buyouts or relocation.

Alternatives Considered but Not Analyzed in Detail

During planning and NEPA review, a range of structural and nonstructural alternatives were considered to address flooding within the Big Creek watershed. The Big Creek watershed has 26 communities spread along the 204 square miles area. Several alternatives were initially considered for various communities but were not analyzed in detail due to specific limitations. Focus was given to the communities with more severe flooding impacts. A total of 17 alternatives were initially checked, of which 6 were moved forward for detail analysis. For example, Alternative 17 in Shawnee involved adding multiple ditches to drain water from farmland; however, it was determined that these ditches would be ineffective, and the need for multiple detention ponds would result in excessive costs. This alternative was therefore deemed complete but not effective, acceptable, or efficient. Similarly, for communities such as Black Cat, Deckerville, Frenchmans Bayou, Lambethville, Muir, Norden, Pecan Point, Saint Thomas, Stacy, Wardell, and Westover, no alternatives were proposed because of either low population or the absence of affected structures. These factors led to the exclusion of these options from more detailed study and further consideration.

The proposed action was refined iteratively in response to technical analyses, agency coordination, and public input. Channel and ditch alignments were adjusted to avoid structures where practicable, minimize right-of-way acquisition, and reduce impacts to wetlands and farmland. Nonstructural measures, including targeted dry floodproofing and a limited buyout, were incorporated to address the most vulnerable structures where structural measures alone would not sufficiently reduce risk. These refinements demonstrate agency responsiveness and resulted in the preferred alternative that best meets the project purpose and need while minimizing adverse impacts.

Summary of Initial Alternatives

Alt No.	Description / Improvements
Alternative 1	Joiner Dredging and creating Channel 1, approximately 0.36 miles along State Highway 118 W, Connecting existing Ditch 7 to a new Channel 2 for a total length of 0.51 miles, Connecting existing Ditch 7 to a new Channel 3 along Magnolia St for a total length of 0.1 miles, One detention pond is proposed, which provides approximately 10.1 acre-feet of maximum flood volume stormwater detention capacity. Rationale: Was carried forward to the second screen. Shows significant WSE reduction. The costs incurred are reasonable. Complete, effective, acceptable, and efficient.
Alternative 2	Turrell Dredging and widening approximately 0.42 miles of existing Channel 1, Connecting existing Channel 1 to a new Channel 2 along State Route 77 for a total length of 0.45 miles, Creating multiple drainage ditches (D1-D10), Connecting Big Creek to a new Channel 3 along State Route 77 for a total length of 0.78 miles. Rationale: Was carried forward to the second screen. Shows significant WSE reduction. The costs incurred are reasonable. Complete, effective, acceptable, and efficient.
Alternative 3	Gilmore Connecting Cypress Bayou to a new Channel 1 for a total length of 0.5 miles in the southern portion of the city of Gilmore Creating new Channel 2 which is connected to Channel 1 for a length of 0.46 miles. Connecting Ditch Number 1 to a new Channel 3 for a total length of 0.46 miles along the eastern side of the city of Gilmore. Creating three drainage ditches (D2, D3, and D4) along Oliver St, Park Rd, and Acwin St. Rationale: Was carried forward to the second screen. Shows significant WSE reduction. The costs incurred reasonable. Complete, effective, acceptable, and efficient.
Alternative 4	Combination of Alternative 1, Alternative 2, and Alternative 3
Alternative 5 (Nonstructural Alternative)	Property buyouts suggested in Joiner, Turrell, and Gilmore Buyouts for property flooded in 10-yr flood. Joiner: 6 structures Turrell: 17 Structures Gilmore: 1 structure Rationale: carried forward to the second screen. The alternative shows good benefits compared to the existing conditions. The costs incurred are reasonable. Effective and efficient.
Alternative 6 (Nonstructural Alternative)	Property buyouts suggested in Joiner, Turrell, and Gilmore Alternative 6: Buyouts for property flooded in 100-yr flood. Joiner: 14 structures Turrell: 22 Structures Gilmore: 1 structure Rationale: carried forward to the second screen. The alternative shows good benefits compared to the existing conditions. The costs incurred are reasonable. Effective and efficient.
Alternative 7	Bassett Added two ditches along Basset community and Blues Hwy to drain water through Ditch Number 5. Rationale: Was not carried forward to the second screen. Complete, effective, and acceptable, but not efficient. This alternative shows significant WSE reduction. However, the costs incurred would be high.
Alternative 8	Birdsong Added multiple ditches in Birdsong to drain water through Little Cypress Ditch. Rationale: Was not carried forward to the second screen. Complete, effective, and acceptable, but not efficient. This alternative shows significant WSE reduction. However, the costs incurred would be high.
Alternative 9	Golden Lake No structures affected. Added two ditches and a culvert. Rationale: Was not carried forward to the second screen. Only minimal flood reduction was seen. Complete, not effective, efficient, not acceptable.

Alt No.	Description / Improvements
Alternative 10	Heafer Added multiple ditches along Heafer Rd and Hwy 42 to drain water through Big Creek and tested detention pond. Rationale: Was not carried forward to the second screen. Complete, effective, and acceptable, but not efficient. This alternative shows significant WSE reduction. However, the costs incurred would be high.
Alternative 11	Denwood No structures affected. Added ditches and a culvert. Rationale: Was not carried forward to the second screen. Only minimal flood reduction was seen. Moreover, the costs incurred would be too high. Complete, not effective, not acceptable, not efficient.
Alternative 12	Meneshea Added multiple ditches along Stacy Rd and Meneshea Rd to drain water from roads through Meneshea Lake Rationale: Was not carried forward to the second screen. Draining in Meneshea Lake is not an acceptable option. However, the option showed potential for drainage improvement. Complete, effective, not acceptable, efficient.
Alternative 13	Beasley Added multiple ditches and tested detention pond. Rationale: Was not carried forward to the second screen. Only minimal flood reduction was seen. Additionally, the costs incurred would be high. Complete, not effective, not acceptable, not efficient.
Alternative 14	Chelford Low Population. No structures affected. Added multiple ditches and tested detention pond. Rationale: Was not carried forward to the second screen. Only minimal flood reduction was seen. Moreover, the costs incurred would be high. Complete, not effective, not acceptable, not efficient.
Alternative 15	Dimple No structures found. Added multiple ditches and tested detention pond. Rationale: Was not carried forward to the second screen. Only minimal flood reduction was seen. Ponds are not effective. Moreover, the costs incurred would be high. Complete, not effective, not acceptable, not efficient.
Alternative 16	Bardstown Several structures are within an oxbow lake. Added multiple ditches and tested detention pond. Rationale: Was not carried forward to the second screen. Several structures are within an oxbow lake which is hard to drain, and the bottom elevation of the oxbow lake is lower than the outfall channel which is supposed to drain the lake area. Complete, not effective, not acceptable, efficient.
Alternative 17	Shawnee Low Population. No structures affected. Added multiple ditches to drain water from farmland. Rationale: Was not carried forward to the second screen. Ditches look ineffective for draining water from farmland. Multiple detention ponds are needed, but their costs could be too high. Complete, not effective, not acceptable, not efficient.

INTERDISCIPLINARY PROPOSAL SCREENING

Given the nature of the proposal, the responsible official is requesting documentation to demonstrate compliance with the following legal and regulatory considerations in addition to NEPA:

☒ Endangered Species Act (ESA)

☒ National Historic Preservation Act (NHPA)

☒ Tribal Consultation (EO 13175)

☒ Clean Air Act (CAA)

☒ Clean Water Act (CWA)

☒ Pertinent Executive Orders

Special Management Areas:

☐ Coastal Zone Management Areas

☐ Conservation Easements

☐ Coral Reefs

☐ Inventoried Roadless

☐ Marine Sanctuaries

☐ National Recreation Areas

☐ National Scenic & Historic Trails

☐ Research or Experimental Areas

☐ Wild & Scenic River Corridors

☐ Wilderness

☐ Other: specify area type

Scope of Analysis

The following describes how the agency drew a reasonable and manageable line relating to its consideration of environmental effects from the proposed action (and action alternatives, if any) that extend outside the geographical territory of the proposal or might materialize later in time.

The scope of analysis for this Environmental Assessment was defined to focus on environmental effects reasonably foreseeable from implementation of the proposed action and action alternatives within the Big Creek watershed and the immediately connected drainage network. The primary geographic boundary includes areas where construction, land acquisition, and flood-damage-reduction measures would occur, as well as downstream waters that could experience changes in hydrology as a result of improved conveyance and storage. Potential downstream effects were evaluated

qualitatively using watershed-scale hydrologic and hydraulic modeling to ensure that the proposed action would not increase flood risk or adverse effects beyond the project area. Effects from actions or developments outside NRCS authority, including independent third-party projects or land-use changes, were not analyzed in detail because they are speculative and not required for reasoned decision-making.

The temporal scope of analysis includes short-term construction effects and long-term operational effects over the evaluated project life of approximately 50 years, consistent with NRCS watershed planning guidance. Short-term effects such as soil disturbance, turbidity, and noise were considered during construction, while long-term effects such as altered drainage patterns, reduced flood damages, and changes in maintenance conditions were evaluated for the operational period. Effects that could occur beyond the evaluated life of the project or that depend on uncertain future conditions were not analyzed in detail due to uncertainty and limited decision relevance. Based on these considerations, NRCS determined that the spatial and temporal boundaries used in this EA provide a reasonable and manageable basis for evaluating the environmental effects of the proposed action and alternatives.

Agencies and Persons Consulted

Given the nature of the proposal, the responsible official consulted the following agencies, organizations, tribes, and persons during development and analysis of the proposal:

Agencies

U.S. Army Corps of Engineers, Memphis District (Planning Division and Regulatory Functions)
U.S. Department of the Interior, Fish and Wildlife Service
U.S. Department of the Interior, Office of Environmental Policy and Compliance
U.S. Environmental Protection Agency
Natural Resources Conservation Service
Arkansas Department of Agriculture, Natural Resources Division
Arkansas Department of Agriculture, Forestry Division
Arkansas Department of Environmental Quality
Arkansas Department of Health
Arkansas Department of Transportation
Arkansas Department of Transportation, District 10
Arkansas Economic Development Commission
Arkansas Game and Fish Commission
Arkansas Historic Preservation Program
Arkansas Natural Heritage Commission
Arkansas Pollution Control and Ecology Commission
Arkansas Waterways Commission
Office of the Arkansas State Geologist

Local Government Agencies:

City of Turrell
City of Gilmore
City of Joiner

Native American Tribes
Absentee Shawnee Tribe of Indians of Oklahoma
Alabama-Quassarte Tribal Town
Caddo Nation of Oklahoma
Cherokee Nation
The Chickasaw Nation
The Choctaw Nation of Oklahoma
Coushatta Tribe of Louisiana
Delaware Nation, Oklahoma
Eastern Shawnee Tribe of Oklahoma
Jena Band of Choctaw Indians
Kialegee Tribal Town
Mississippi Band of Choctaw Indians
The Muscogee (Creek) Nation
The Osage Nation
Quapaw Nation
The Seminole Nation of Oklahoma
Shawnee Tribe
Thlopthlocco Tribal Town
Tunica-Biloxi Indian Tribe
United Keetoowah Band of Cherokee Indians in Oklahoma
Wichita and Affiliated Tribes (Wichita, Keechi, Waco, & Tawakonie)
Individuals
Crittenden County Judge and Mississippi County Judge

Table 1: Applicable proposal record documentation to support agencies/persons consulted

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Agency Consultation and Coordination Summary	Included in Watershed Plan–EA, Sections 1.6, 3.2, and 7.0
Endangered Species Act Coordination (USFWS)	Included in Watershed Plan–EA, Section 7.0 and Appendix A
Cultural Resources and Tribal Consultation	Included in Watershed Plan–EA, Section 3.2.13 and Appendix A
Programmatic Agreement (NHPA Section 106)	Included in Appendix A of the Watershed Plan–EA
Public and Local Government Coordination	Documented throughout Watershed Plan–EA (Chapters 1, 2, and 6)

Substantive Issues Considered for Analysis

Based on agency scoping, technical studies, and interagency coordination, NRCS identified the following substantive issues for analysis in this Environmental Assessment. These issues were selected because they are relevant to the purpose and need for flood damage reduction within the Big Creek watershed and may be affected by the proposed action or action alternatives.

Floodplain management and hydrology
Flooding of residential structures, roads, and public infrastructure is the primary issue driving the proposed action. Analysis focused on changes to flood depths, floodplain extent, drainage conveyance, and stormwater detention, as well as consistency with Executive Order 11988 (Floodplain Management) and participation in the National Flood Insurance Program.

Water resources, waters of the United States, and wetlands
The proposed alternatives include work within and adjacent to streams, drainage ditches, and detention features associated with Big Creek, Cypress Bayou, Frenchmans Bayou, and their tributaries. Potential effects to surface waters, wetlands, and aquatic resources were considered, including short-term construction effects and long-term hydrologic changes, along with permitting requirements under the Clean Water Act.

Soils, erosion, and sedimentation
The project area is characterized by flat, poorly drained, and highly erodible soils. Analysis considered soil disturbance, erosion potential, sediment transport, and the effectiveness of best management practices to minimize short-term construction impacts and long-term sedimentation within channels and downstream waters.

Prime farmland and land use
Much of the planning area consists of actively cultivated farmland. The analysis evaluated potential temporary or permanent conversion of farmland, right-of-way acquisition, and consistency with the Farmland Protection Policy Act, as well as longer-term land use effects associated with reduced flooding.

Biological resources
Fish and wildlife habitat, riparian areas, forest resources, migratory birds, and federally listed or proposed species were identified as substantive issues due to the presence of suitable habitat and the potential for disturbance associated with construction activities. Effects determinations and conservation measures were evaluated consistent with the Endangered Species Act and the Migratory Bird Treaty Act.

Cultural resources and Tribal interests
The presence of known and potential archaeological and historic resources within the project area resulted in cultural resources being identified as a substantive issue. Effects to historic properties are being addressed through consultation under Section 106 of the NHPA, including implementation of a Programmatic Agreement (PA) that provides for phased identification and evaluation prior to construction.

Public health and safety
Chronic flooding affects emergency access, transportation, and community safety. The analysis evaluated how each alternative would reduce risks to public health and safety, including access to roads, neighborhoods, and essential services during and after storm events.

Issues Considered but Dismissed from Detailed Analysis

During scoping and review of existing conditions, NRCS considered a broad range of potential issues. The following issues were reviewed but dismissed from detailed analysis because they were not found to be substantive or were determined to have no potential for meaningful environmental effects based on the nature of the proposed action, existing conditions, or applicable regulatory frameworks.

Air quality

The project area is located in an attainment area for all National Ambient Air Quality Standards. Construction activities would result in only short-term, localized emissions from equipment, which would not result in measurable or lasting effects on air quality. Therefore, air quality was dismissed from detailed analysis.

Sole source aquifers and groundwater resources

There are no designated sole source aquifers within the project area. The proposed action involves shallow excavation and surface-water conveyance improvements and would not involve groundwater withdrawals or activities with the potential to affect groundwater quality or quantity. As a result, groundwater resources were not analyzed in detail.

Coastal zone management

The project area is inland and not located within a coastal zone management area. Accordingly, coastal zone resources were dismissed from further consideration.

Wild and scenic rivers

No rivers or streams within or adjacent to the project area are designated as wild or scenic under the National Wild and Scenic Rivers System. The proposed action would not affect any designated or eligible wild and scenic rivers; therefore, this issue was dismissed.

Coral reefs, essential fish habitat, and marine resources

The project area is entirely inland and does not include marine or coastal habitats. These resource categories were not applicable and were dismissed from analysis.

Invasive species

The proposed action would occur primarily within previously disturbed or managed areas such as existing channels, ditches, and developed areas. No activities were identified that would reasonably introduce or spread invasive species beyond existing conditions. Standard construction practices would further limit this potential; therefore, invasive species were dismissed from detailed analysis.

Scenic or visual resources

There are no designated scenic byways, scenic vistas, or visually sensitive landscapes within the project area. Proposed improvements would be located primarily within existing drainage corridors and urban or agricultural settings and would not result in notable changes to visual character. Visual resources were therefore dismissed.

Noise

Construction-related noise would be temporary, localized, and limited to daytime hours. No sensitive receptors requiring special analysis were identified. Long-term operational noise increases are not expected. As such, noise was dismissed from detailed analysis.

ENVIRONMENTAL REVIEW & CONSULTATION

The following documents compliance with the National Environmental Policy Act (NEPA) and other relevant environmental laws, executive orders, and regulations.

NEPA: Consideration of Reasonably Foreseeable Impacts

Potentially Affected Environment

The proposed action is located within the Big Creek watershed in northeast Arkansas and includes portions of Crittenden, Mississippi, and Poinsett Counties. Activities would primarily affect the incorporated communities of Joiner, Turrell, and Gilmore. The watershed lies within the Mississippi Alluvial Plain and is characterized by flat, low-lying topography, poorly drained soils, and limited natural relief. Existing land use within the study area is predominantly agricultural, with cultivated crops comprising the majority of land cover, interspersed with residential development, drainage infrastructure, woodlands, and wetlands.

Physical setting and water resources

The affected environment includes surface waters associated with Big Creek, Cypress Bayou, Frenchmans Bayou, Dry Bayou, and their tributaries, as well as constructed drainage ditches, channels, and ponds. Portions of the study area are located within mapped FEMA floodplains and experience frequent inundation during major storm events. Soils are generally silty clay with high erodibility and poor permeability, contributing to sedimentation and reduced drainage capacity. Wetlands, primarily forested and shrub wetlands, are present throughout the study area and perform important hydrologic and ecological functions.

Biological resources

Biological resources within the study area include bottomland hardwood forests, riparian corridors, wetlands, pasture, and aquatic habitats that support fish and wildlife typical of the Mississippi Alluvial Plain. Federally listed and proposed species, migratory birds, and other wildlife species have known ranges or suitable habitat within or near the study area. Adjacent natural features include the Wapanocca National Wildlife Refuge, which lies near, but outside, areas proposed for construction. Proposed activities have the potential to result in short-term disturbance to vegetation and habitat in localized areas.

Cultural resources

Archaeological sites and historic properties have been documented within the planning area, and cultural resources may be present within areas subject to ground disturbance. Effects to cultural resources are being addressed through compliance with Section 106 of the NHPA, including consultation with the Arkansas State Historic Preservation Office (SHPO) and federally recognized Tribes. A PA provides for phased identification and evaluation of cultural resources prior to construction.

Social, land use, and economic conditions

Communities within the study area are small and largely rural, with economies that depend heavily on agriculture and local services. Flooding has historically affected residential structures, roads, public infrastructure, and cropland, resulting in property damage, roadway closures, and safety concerns. Most land within the project area is

privately owned. Implementation of flood-damage-reduction measures may require acquisition of real property interests in limited locations. Long-term reductions in flood damages are expected to improve public safety, protect critical infrastructure, and support economic stability and land use continuity within the affected communities.

Other ongoing or reasonably foreseeable actions

Other actions influencing environmental conditions within the watershed include routine maintenance of existing drainage systems by local entities, ongoing agricultural operations, implementation of local land use controls, and participation in federal and state floodplain management and water quality programs. No major, unrelated flood-control projects are currently planned within the watershed. Under the No Action Alternative, these existing activities would continue, and flooding, erosion, and sedimentation issues would persist. The alternatives were evaluated in the context of these foreseeable conditions to assess their potential environmental effects.

Environmental Impacts

What are the reasonably foreseeable short- and long-term and adverse or beneficial effects of the proposed action and alternatives (if any) on the environment, to public health and safety, on economics, and to the quality of life of the American people?

The proposed action and action alternatives are intended to reduce flood damages within the Big Creek watershed through structural and nonstructural flood-damage-reduction measures. Their environmental effects include both short-term and long-term adverse and beneficial impacts to natural resources, public health and safety, economic conditions, and overall quality of life. Short-term effects. Short-term adverse effects would primarily occur during project construction and implementation activities. These include localized soil disturbance, vegetation removal, and temporary increases in turbidity within affected channels, ditches, and adjacent waters. Minor, temporary disturbances to wetlands, riparian areas, forested areas, and wildlife habitat could occur where construction is conducted within or adjacent to surface waters. Construction activities may also result in short-term noise, traffic disruptions, and temporary access limitations near work areas. These effects would be localized, short in duration, and minimized through application of best management practices, erosion and sediment controls, and compliance with applicable regulatory requirements. Short-term beneficial effects include temporary employment and economic activity associated with engineering, construction, and project implementation. Over the evaluated life of the project, the proposed action and action alternatives would result in substantial long-term beneficial effects. These include reduced flood depths and durations, protection of residential structures, roads, agricultural lands, and public infrastructure, and improved floodplain management within the watershed. Long-term reductions in flood-related erosion and sedimentation would improve watershed stability and contribute to neutral to beneficial water quality conditions when compared to existing conditions. Biological resources are expected to experience neutral to beneficial long-term effects. Although some permanent conversion of land to drainage features may occur, improved hydrologic performance, stabilized channels, and revegetation would allow disturbed

areas to recover and function effectively over time. Nonstructural measures, such as voluntary buyouts, may provide opportunities for long-term open space or habitat restoration. Public health and safety would benefit from reduced flood hazards, improved access to roads and emergency services during storm events, and reduced risks associated with inundation, standing water, and infrastructure damage. Long-term economic benefits include reduced flood-related property losses, improved reliability of transportation infrastructure, and enhanced conditions for residential stability, agricultural productivity, and business investment, thereby improving the overall quality of life within the affected communities.

What are the negative environmental impacts or consequences to public health and safety, economics, or the quality of life of the American people if the proposed action or alternatives (if any) are not implemented?

If the proposed action or action alternatives are not implemented, existing conditions would persist under the No Action Alternative. Flooding of homes, roads, and agricultural lands would continue during storm events, resulting in ongoing and long-term adverse effects to public safety, property, and local infrastructure. Recurrent inundation would continue to contribute to soil erosion, sedimentation of channels and ditches, and localized water quality concerns. Damage to private property, public facilities, and transportation networks would continue to impose economic burdens on residents, local governments, and emergency service providers.

Over time, the absence of flood-damage-reduction measures would negatively affect community resilience and quality of life by increasing risks to public health and safety, limiting reliable access during flood events, and discouraging long-term economic stability and investment. The No Action Alternative would avoid short-term construction impacts, but would allow chronic flood-related adverse effects to continue or worsen over the long term.

Will the proposed action or action alternatives (if any) make an irreversible or irretrievable commitment of Federal resources?

Yes. Implementation of the proposed action would result in irreversible or irretrievable commitments of federally protected natural resources and environmental functions. These commitments include permanent or long-term alterations to floodplains, wetlands, surface waters, soils, and associated aquatic and riparian habitats that are subject to federal regulatory oversight and protection. Construction of drainage improvements, channel modifications, detention facilities, and related infrastructure would permanently change certain physical characteristics of the watershed, and these environmental conditions could not be fully restored to pre-project conditions once implemented.

How will the irreversible or irretrievable commitment of Federal resources, if any, contribute to a loss of long-term productivity for the human environment?

The irreversible or irretrievable commitment of federally protected natural resources associated with the proposed action is not expected to result in a loss of long-term productivity for the human environment. While some floodplain, wetland, and surface-water features would be permanently modified, these changes are designed to

improve watershed function by reducing erosion, sedimentation, and flood-related disturbance; stabilizing soils and channels; and improving the reliability of natural and engineered drainage systems. Over the long term, the proposed action is expected to enhance the productive capacity of federally regulated natural resources by supporting improved floodplain management, protecting agricultural lands and infrastructure, and increasing community resilience. Accordingly, the long-term benefits to the human environment outweigh the irreversible commitments of federal natural resources required to implement the project.

Endangered Species Act

Based on USFWS coordination, no ‘may affect, likely to adversely affect’ determinations were made. All species evaluations resulted in ‘no effect’ or ‘not likely to adversely affect’ determinations.

Potential effects to listed species and their habitats were evaluated based on existing conditions within the Big Creek watershed, including the presence of agricultural lands, wetlands, riparian corridors, and modified drainage systems, as well as the nature and extent of proposed activities. The proposed action would result in minor, temporary, and localized construction-related impacts associated with channel work, drainage improvements, and detention features, which would be minimized through implementation of best management practices and project design criteria. These factors, along with the predominantly disturbed and managed condition of much of the project area, support the conclusion that adverse effects to federally listed species are not anticipated.

Table 2: Applicable proposal record documentation to support ESA compliance

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Threatened and Endangered Species Review	Included in Watershed Plan–EA, Section 7.0
IPaC Species List and Effects Analysis	Included in Watershed Plan–EA, Section 7.0 and Appendix A

National Historic Preservation Act – Section 106 Review

The pertinent subject matter expert has reviewed the proposed action (and action alternatives, if any) and made the following determination:

Section 106 review meets compliance stipulations of a Programmatic Agreement (see comments section).

The proposed action is an undertaking subject to Section 106 of the NHPA (54 U.S.C. § 306108). Cultural resources considerations were addressed during development of the Watershed Plan–Environmental Assessment through records review and consultation with the SHPO and federally recognized Tribes with ancestral interests in the project area.

Because the Watershed Plan–EA is programmatic in nature and final design and construction limits are not yet defined, NRCS executed a PA to provide for phased identification, evaluation, and treatment of historic properties prior to construction, consistent with 36 CFR 800.14(b)(2). The PA outlines procedures for cultural resources investigations, evaluation of National Register eligibility, assessment of effects, and implementation of avoidance, minimization, or mitigation measures prior to initiation of ground-disturbing activities.

Design criteria incorporated into the proposed action require that areas subject to disturbance be evaluated for cultural resources and that no construction occur until Section 106 requirements are satisfied in accordance with the PA. The PA also includes provisions for the treatment of unanticipated discoveries.

Table 3: Applicable proposal record documentation to support NHPA compliance

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Cultural Resources and Tribal Consultation Summary	Included in Watershed Plan–EA, Section 3.2.13
Programmatic Agreement (NHPA Section 106)	Included in Appendix A of the Watershed Plan–EA

Consultation with Federally Recognized Tribes

Consultation with federally recognized tribes was conducted as follows:

NRCS initiated government-to-government consultation with federally recognized Tribes with ancestral interests in the project area in accordance with Section 106 of the NHPA and NRCS policy. Consultation was conducted during development of the Watershed Plan–EA and culminated in execution of a PA that provides for phased identification and evaluation of cultural resources prior to construction. No objections to the proposed planning-level action were received. Consultation will continue, as appropriate, during project-specific design and implementation phases pursuant to the PA.

Tribes Consulted:

Absentee Shawnee Tribe of Indians of Oklahoma, Alabama-Quassarte Tribal Town, Caddo Nation of Oklahoma, Cherokee Nation, The Chickasaw Nation, The Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Delaware Nation, Oklahoma, Eastern Shawnee Tribe of Oklahoma, Jena Band of Choctaw Indians, Kialegee Tribal Town, Mississippi Band of Choctaw Indians, The Muscogee (Creek) Nation, The Osage Nation, Quapaw Nation, The Seminole Nation of Oklahoma, Shawnee Tribe, Thlopthlocco Tribal Town, Tunica-Biloxi Indian Tribe, United Keetoowah Band of Cherokee Indians in Oklahoma, and Wichita and Affiliated Tribes (Wichita, Keechi, Waco, & Tawakonie)

Dates of Consultation:

Consultation initiated in 2024 and concluded at the planning level in 2025 with execution of a PA.

Outcome:

Consultation completed at the planning level; PA executed. No adverse effects identified at this stage.

Table 4: Applicable proposal record documentation to support tribal consultation

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Cultural Resources and Tribal Consultation Summary	Included in Watershed Plan-EA, Section 3.2.13
Programmatic Agreement (NHPA Section 106)	Appendix A, Watershed Plan-EA

Clean Water Act

The pertinent subject matter expert has reviewed the proposed action (and action alternatives, if any) and made the following determination:

Project may or will affect waters, including wetlands. Modifications/design criteria have been included to ensure compliance with CWA is met. All permits received and modifications/design features are clearly presented and documented in the analysis.

The proposed action may involve work in waters of the United States, including streams, drainage channels, and adjacent wetlands. Compliance with applicable Clean Water Act Sections (including Sections 404 and 401, as applicable) will be achieved through avoidance and minimization during design and through acquisition of required permits prior to construction. The Watershed Plan–EA identifies potential impacts at a planning level; project-specific permitting determinations will be completed during final design and implementation.

Table 5: Applicable proposal record documentation to support CWA compliance

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Wetlands and Waters Analysis	Included in Watershed Plan-EA, Sections 3.2.6 and 5.3.6
Future Permits (404/401)	To be obtained during final design

Clean Air Act

The pertinent subject matter expert has reviewed the proposed action (and action alternatives, if any) and made the following determination:

The project will not result in permanent air emissions and no modifications or further coordination needs to occur to ensure compliance.

The proposed action would result in short-term, localized emissions associated with construction equipment and vehicles. These emissions would be temporary and minor and would not violate any federal or state ambient air quality standards. No long-term air quality impacts are anticipated. Therefore, the proposed action is in compliance with the Clean Air Act.

Table 6: Applicable proposal record documentation to support CAA compliance

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Environmental Impacts Analysis	Included in Watershed Plan-EA, Section 5.0

Special Management Area Considerations

The pertinent subject matter expert has reviewed the proposed action (and action alternatives, if any) and made the following determinations based on special management area presence, proximity, or lack of:

No activities are proposed within or in the vicinity of Special Management Areas.

Table 7: Applicable proposal record documentation to support special management area compliance

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)

Pertinent Executive Orders

The applicable subject matter experts have determined the proposed action (and action alternatives, if any) are in compliance with the following Executive Orders (EO), which were deemed pertinent based on the nature of the proposal:

EO 11988, Floodplain Management – requires determination of action occurring in a floodplain, using U.S. Department of Housing and Urban Development (HUD) floodplain map or more detailed map if available.

The proposed action and action alternatives involve activities within mapped floodplains. Floodplain presence was evaluated using FEMA Flood Insurance Rate Maps (FIRMs), Base Level Engineering data, and project-specific hydrologic and hydraulic modeling developed as part of the Watershed Plan–EA. The purpose of the proposed action is flood damage reduction, and project measures are specifically designed to reduce flood depths, flood duration, and risks to people and property consistent with EO 11988. The proposed action avoids supporting inappropriate development in floodplains and incorporates structural and nonstructural measures that reduce long-term flood risk and improve floodplain function.

EO 11990, Protection of Wetlands – avoid actions within wetlands unless there are no practical alternatives, and the action includes all practicable means to minimize harm to wetlands.

Wetlands within the study area were identified using the National Wetlands Inventory and resource mapping conducted during watershed planning. Certain project components may occur within or adjacent to wetlands where avoidance is not practicable due to existing infrastructure, drainage constraints, and project purpose. The proposed action minimizes wetland impacts through design optimization, avoidance where feasible, and implementation of best management practices. Any unavoidable impacts to wetlands will be addressed through applicable permitting requirements and mitigation measures to minimize harm to wetland functions and values.

EO 13007, Indian Sacred Sites – avoid adversely affecting the physical integrity of these sites.

NRCS conducted consultation with federally recognized Tribes with ancestral interests in the project area as part of Section 106 compliance. No Indian sacred sites have been identified within the project area at the planning level. The PA executed for this project provides procedures for continued Tribal consultation and for addressing any unanticipated discoveries prior to construction. The proposed action includes measures to avoid adverse effects to cultural and sacred resources should such sites be identified during phased review.

EO 13112, Invasive Species – prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

The proposed action is not expected to intentionally introduce invasive species. Construction and maintenance activities will incorporate standard NRCS practices to prevent the spread of invasive species, including equipment cleaning, use of appropriate vegetation stabilization and seeding practices, and site restoration following construction. These measures are expected to minimize the risk of invasive species introduction and associated ecological or economic impacts.

EO 13186, Migratory Birds – identify actions that may have a measurable negative effect on migratory bird populations.

Migratory bird species potentially present within the study area were considered during project development. Short-term disturbance to migratory birds may occur during construction due to noise and vegetation removal; however, impacts are expected to be localized and temporary. Where practicable, conservation measures such as timing considerations and minimization of tree clearing will be implemented to reduce effects on migratory birds. Long-term effects are expected to be neutral to beneficial due to improved habitat conditions and reduced flood disturbance.

EO 13443, Facilitation of Hunting Heritage and Wildlife Conservation – expand and enhance hunting opportunities.

The proposed action does not restrict access to lands traditionally available for hunting or wildlife-related recreation. In some cases, nonstructural measures and restored open spaces may enhance wildlife habitat and associated conservation opportunities over the long term. The project supports wildlife conservation goals by improving watershed health and habitat stability without diminishing hunting heritage or recreational access.

Table 8: Applicable proposal record documentation to support EO compliance

Documentation Type	File Name (if applicable/needed)
Watershed Plan – Environmental Assessment	Final Big Creek Watershed Plan–Environmental Assessment (May 2026)
Floodplain Mapping and Hydrologic Analysis	Included in Watershed Plan-EA, Sections 3.2.5 and 5.3.5
Wetlands Identification and Impact Analysis	Included in Watershed Plan-EA, Sections 3.2.6 and 5.3.6
Cultural Resources and Tribal Consultation	Included in Watershed Plan-EA, Section 3.2.13 and Appendix A
Programmatic Agreement (NHPA Section 106)	Included in Appendix A of Watershed Plan-EA
Threatened and Endangered Species Review	Included in Watershed Plan-EA, Sections 3.2.8 and 7.0
Migratory Birds Evaluation	Included in Watershed Plan-EA, Section 3.2.9
Best Management Practices and Site Restoration Measures	Included throughout Watershed Plan-EA, Sections 5.0 and 6.6

Certifying Statement for EA Page Limit and Deadline

The Responsible Official certifies that this EA:

☒ Demonstrates the agency has thoroughly considered the factors mandated by NEPA;

☒ Represents the agency's good-faith effort to prioritize documentation of the substantive issues and most important considerations required by NEPA within the congressionally mandated page limits;

☒ Reflects the agency's expert judgment;

☒ Addressed briefly, or left unaddressed, any issues or considerations that were, in the agency's judgment, comparatively not of a substantive nature;

☒ Represents the agency's good-faith effort to fulfill NEPA's requirements within the Congressional timeline (or within the minimally extended timeline) and this effort is substantially complete; and

☒ Contains analysis that is adequate to inform and reasonably explain the responsible official's final decision regarding the proposed action or selected alternative.