TIER 3 CATEGORICAL EXCLUSION

ARDOT JOB 080617

FAP NHPP-0036(26)

WOLF PEN CREEK STR. & APPRS. (S)

ROUTE 215, SECTION 4

JOHNSON COUNTY

Submitted Pursuant to 42 U.S.C. 4332(2)

By the

U.S. Department of Transportation

Federal Highway Administration

And the

Arkansas Department of Transportation

April 2022

April 25, 2022
Date of Approval

Randal Looney
Environmental Coordinator
Federal Highway Administration

The Environmental Division reviewed the referenced project and has determined it falls within the definition of the Tier 3 Categorical Exclusion as defined by the ARDOT/FHWA Programmatic Agreement on the processing of Categorical Exclusions. The following information is included for your review and, if acceptable, approval as the environmental documentation for this project.

The purpose of this project is to replace the bridge on Highway 215 over Wolf Pen Creek in Johnson County. The most recent bridge inspection report listed the deck, superstructure, and substructure as being in "poor condition", indicating the presence of advanced deterioration. Total length of the project is approximately 675'. A project location map is attached.

The existing roadway consists of two 10' wide paved travel lanes with no shoulders. The proposed roadway would maintain the 10' wide travel lanes but add 4' wide paved shoulders. The existing concrete over steel bridge would be replaced with a reinforced concrete slab bridge on the same alignment with traffic maintained throughout construction on a temporary one-lane detour constructed immediately downstream of the existing structure.

The average approximate right of way in the project area would increase from 80'-165' wide to 100-165' wide. Approximately 0.2 acre of right of way and 0.1 acre of temporary construction easements would be required for construction of the proposed project.

Design data for this project is as follows:

Design Year	Average Daily Traffic	Percent Trucks	Design Speed
2021	150 vpd	2	30 mph
2041	180 vpd		

There are no anticipated relocations or impacts to wetlands, regulatory floodplains, cultural resources, environmental justice populations, important farmland, hazardous materials sites, or underground storage tanks associated with this project. State Historic Preservation Office clearance is attached.

Based on the ARDOT noise policy, a noise analysis is not required for this project. The proposed bridge replacement would not involve adding capacity, substantially changing the roadway alignment, or exposing noise sensitive land uses to traffic noise sources. In compliance with federal guidelines, local authorities will not require notification.

The project is located within the Ozark-St. Francis National Forests. All of the proposed new right of way (0.2 acre) would be acquired from the U.S. Forest Service (USFS). Scoping letters were sent to all interested parties and property owners near the proposed project in November 2020. Native vegetation will be planted on all disturbed federal property following construction.

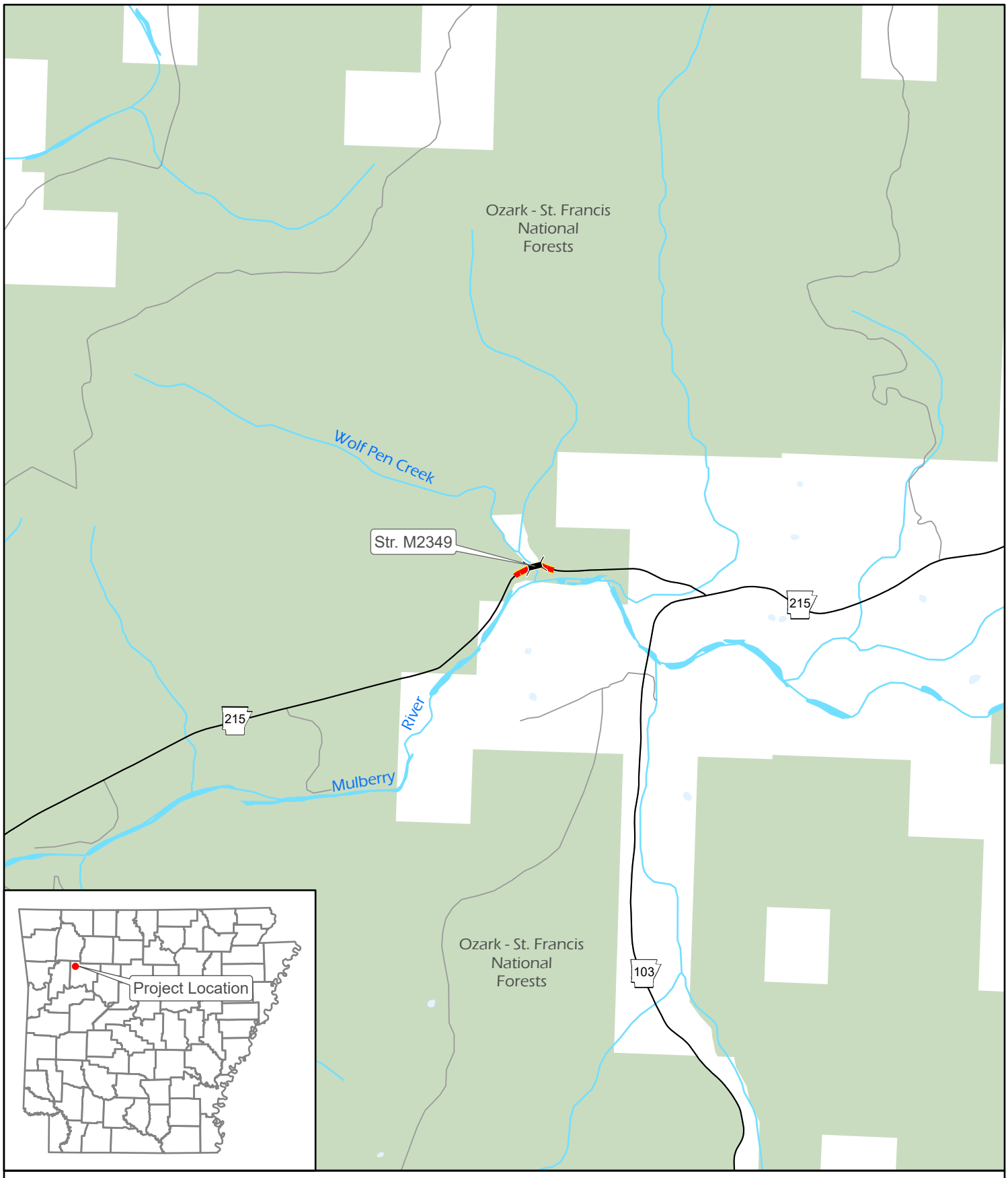
The proposed project is located approximately 200' upstream of the confluence of Wolf Pen Creek and the federally-designated Mulberry Wild and Scenic River (WSR). The proposed project was evaluated under Section 7 of the Wild and Scenic Rivers Act, which requires that federal agencies thoroughly consider impacts to WSRs as a result of their projects and/or decisions. The USFS is the agency responsible for evaluating the impacts of federal projects on the Mulberry WSR under Section 7. The USFS determined in the attached evaluation that the proposed bridge replacement project would not "invade the area or unreasonably diminish" the values which lead to the Mulberry River being designated a WSR.

The attached official species list obtained through the U.S. Fish and Wildlife Service Information for Planning and Consultation website identified the gray bat (*Myotis grisescens*), the Indiana bat (*Myotis sodalis*), the northern long-eared bat (*Myotis septentrionalis*), the Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*), the Piping Plover (*Charadrius melodus*), the Red Knot (*Calidris canutus rufa*), the American burying beetle (*Nicrophorus americanus*), and the Missouri bladderpod (*Physaria filiformis*), as potentially occurring in the project area.

It was determined that the project would have "no effect" on the Eastern Black Rail, Red Knot, Piping Plover, American burying beetle, and Missouri bladderpod due to the lack of suitable habitat and distance from known occurrences. It was determined that the project "may affect, but is not likely to adversely affect" the gray bat, Indiana Bat, and northern long-eared bat. The Biological Evaluation and USFWS concurrence from December 22, 2020 is attached.

Impacts to Wolf Pen Creek include 36 linear feet of permanent impacts and 32 linear feet of temporary impacts. Construction of the proposed project should be allowed under the terms of a Nationwide 14 Section 404 Permit for Linear Transportation Projects as defined in the Federal Register 82(4):1860-2008.

This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special mobile source air toxics (MSAT) concerns. This project would not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in MSAT impacts of the project from that of the no-build alternative.



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ARDOT - Environmental GIS - Dudley
March 21, 2022

Job 080617
Wolf Pen Creek Str. & Apprs.
(Hwy. 215)
Johnson County

Project Location

Asa Hutchinson
Governor
Stacy Hurst
Secretary

January 12, 2021

Mr. John Fleming
Division Head
Environmental Division
Arkansas Department of Transportation
P.O. Box 2261
Little Rock, AR 72203-2261

Re: Johnson County – General
Section 106 Review – FHWA
Wolf Pen Creek Str. & Apprs.
Route 215, Section 4
ARDOT Job Number 080617
AHPP Tracking Number 105699.02

Dear Mr. Fleming:

Thank you for the additional information requested by this office. Based on the provided information, the Arkansas Historic Preservation Program (AHPP) concurs the undertaking will not affect the proposed district (Property 1) (Hwy 215/FR 65 CCC Historic District). As discussed with the Arkansas Department of Transportation, this is a proposed district. It has not been fully documented or nominated. The AHPP also agrees that Site 3JO0422 is unevaluated for eligibility to the National Register. Based on the results of the survey within the area of potential effects, the undertaking will not diminish the integrity of the site, such that it will affect subsequent significance determinations.

Therefore, the AHPP will concur with a finding of **no historic properties affected pursuant to 36 CFR § 800.4(d)(1)**. In the event of a post-review discovery of historic properties within the area of potential effects, please contact the AHPP and other consulting parties in accordance with 36 CFR § 800.13(b)(3).

Tribes that have expressed an interest in the area include the Cherokee Nation, the Muscogee (Creek) Nation, the Osage Nation, the Quapaw Nation, the Shawnee Tribe, and the United Keetoowah Band of Cherokee Indians. We recommend consultation in accordance with 36 CFR § 800.2(c)(2).

Thank you for the opportunity to review this undertaking. If you have any questions, please contact Eric Mills of my staff at (501) 324-9784 or eric.mills@arkansas.gov.

Sincerely,

/s/ Eric Mills for

Scott Kaufman
Director, AHPP

cc: Dr. Melissa Zabecki, Arkansas Archeological Survey
Mr. Randal Looney, Federal Highway Administration

Forest Service **Southern Region** **1720 Peachtree Street, NW**
Atlanta, GA 30309

File Code: 2350 **Date:** March 11, 2022
Route To:

Subject: Mulberry Wild and Scenic River Section 7(a) Determination, Wolf Pen Creek Bridge Replacement

To: Forest Supervisor, Ozark-St. Francis National Forests

The request for a Section 7(a) determination under the Wild and Scenic River Act (P.L. 90-542) for a bridge replacement on Wolf Pen Creek, a tributary to the Mulberry Wild and Scenic River is approved. A regional staff review concurs with the Ozark-St. Francis National Forests analysis that the proposed action will not invade or unreasonably diminish the water quality, free flowing condition, or the Outstandingly Remarkable Values (ORVs) for which the Mulberry Wild and Scenic was designated.

For questions, please contact John Campbell, Wilderness & Wild and Scenic River Program Manager, at john.campbell@usda.gov or 404-805-8110.

KENDERICK ARNEY
Regional Forester

Enclosure

cc: Amy Burt, Robert Duggan, John Campbell

Section 7(a) Wild and Scenic Rivers Act Determination

Wolf Pen Creek Bridge Replacement
Johnson County, AR

The purpose of this document is to analyze whether the proposed bridge replacement on Highway 215, over Wolf Pen Creek, a tributary of the Mulberry Wild and Scenic River (WSR), would invade or unreasonably diminish the recreation and fisheries outstandingly remarkable values for which the Mulberry River was designated by Congress. This document, prepared in conjunction with the Arkansas Department of Transportation (ArDOT), the Federal Highway Administration and the U.S. Forest Service (USFS) Ozark-St. Francis National Forests, analyzes the effects of the project on the Mulberry WSR and the outstanding remarkable values **(Recreation & Fisheries)** for which the river was designated. The bridge must be replaced because it has substantial safety and structural issues such as deck, superstructure, and substructure deficiencies, along with inadequate roadway width.

Section 7(a) of the Wild and Scenic Rivers Act provides a specific standard for review of developments below or above or on a stream tributary to a designated river. Such developments may occur as long as the project "will not invade the area or unreasonably diminish the outstanding remarkable values, **(Recreation & Fisheries)** identified in the area as of the date of designation…" This standard applies to projects outside the river corridor but on the same river or tributary.

Proposed Activity

The ArDOT is proposing the replacement of the Highway 215 bridge crossing Wolf Pen Creek approximately 200 feet upstream of its confluence with the Mulberry WSR. The bridge must be replaced because it has substantial safety and structural issues. The deck, superstructure, and substructure all received ratings of 4, which is considered poor condition and indicative of advanced deterioration. The bridge width is also well below current highway standards. The proposed bridge would be located on the same alignment as the existing structure using a temporary one-lane detour immediately adjacent to and downstream of the existing structure to maintain traffic during construction. The proposed structure would be a two-span continuous reinforced concrete slab on spread footings. There would also be an in-stream temporary work road consisting of clean riprap and temporary culverts to maintain low-flow conditions constructed approximately 30' upstream of the existing structure. Figures showing the project design and maintenance of traffic are attached.

This project would have a short-term, temporary indirect effect on the scenic value of the Mulberry WSR due to the construction activities taking place approximately 200' upstream on the tributary to the main river channel and the ends of the approaches

encroaching upon the WSR-protected corridor. Implementation is planned to occur in the Fiscal Year of 2021-2022. It has been estimated that construction of the proposed project would take 125 to 150 working days to complete.

In an effort to minimize impacts, any work within a stream channel would take place in low flow periods, and erosion and sedimentation control measures would be implemented. These measures include but are not limited to:

- Installation of silt barriers at the base of cuts where applicable.
- Use of only native or non-persistent non-native species when seeding soil disturbing activities authorized by the U.S. Forest Service.

Based on mandatory erosion control measures and the limited scope and short duration of work involved, permanent adverse effects resulting from the proposed management actions would be unlikely. Although some short-term temporary reasonable reduction of water quality may occur while the repairs and bridge work are underway, overall stream health will be maintained and/or slightly improved. The temporary overall stream function and flow rates would be maintained during all phases of removal and construction operations. The bridge replacement would allow for improved current and future transportation needs of the area, while reducing the potential threat of stream degradation which could be caused by a failure of the Highway 215 bridge over Wolf Pen Creek.

All disturbed areas would be seeded with ARDOT's native seed mixes that include grasses and wildflowers native to the region. Concrete treatment would be applied to the bridge parapets to be visually appealing to highway motorists and to WSR users in leaf-off seasons when the bridge may be visible from the river.

In addition, aesthetic guardrail would be used that complement existing weathered guardrail used on the Highway 215 corridor. The weathered appearance is much less obtrusive to the visual landscape than the glossy and reflective galvanized coating typically used on state highways.

Location

The proposed project is located in Township 12 North, Range 25 West, Section 24 in Johnson County Arkansas (35.6877° N, 93.6065° W) at the Highway 215 crossing of Wolf Pen Creek and extending west on Highway 215. A project location map is attached.

Wolf Pen Creek is a tributary of the Mulberry WSR with their confluence approximately 200 feet downstream of the proposed bridge replacement. This section of the tributary is not part of the designated WSR nor the corridor, but can influence water flow as it

enters the Mulberry WSR, and current design plans show the western bridge approach encroaching upon the WSR corridor.

The Mulberry WSR, one of six designated Wild & Scenic Rivers on the Ozark-St. Francis National Forests, is comprised of two segments: Recreational (36.6 mile) and Scenic (19.4 miles). The 36.6-mile Upper Mulberry Recreational segment is from its origin in T13N, R23W, Section 32 to Big Eddy Hollow in T11N, R23W, Section 13. The 19.4-mile Lower Mulberry is from Big Eddy Hollow to the Ozark-St. Francis National Forests Boundary. In addition, the Mulberry WSR contains the only designated river trail (26.8 miles) on the Forests. The river trail starts at Hwy 103 in Oark, AR and ends at the Forest Boundary near Mill Creek. Wolf Pen Creek flows into the Upper Mulberry Recreational segment of the Mulberry WSR, just east of Oark, AR.

Evaluation Criteria for Section 7(a)

Section 7(a) of the Wild and Scenic Rivers Act provides a specific standard for review of developments below or above or on a stream tributary to a designated river. Such developments may occur as long as the project “will not invade the area or unreasonably diminish the outstanding remarkable values, **(Recreation & Fisheries)** identified in the area as of the date of designation…” This standard applies to projects outside the river corridor but on the same river or tributary.

The proposed bridge replacement is on Wolf Pen Creek approximately 200” upstream of its confluence with the Mulberry River. Although the project and all associated work is located outside of the designated Wild and Scenic River corridor, its location on a tributary of the Mulberry WSR, necessitates evaluation of the proposed bridge replacement project for potential effects under Section 7(a) of the Wild and Scenic Rivers Act.

The initial question to be addressed is whether or not the proposed project invades the designated river. The term invade is defined as “encroachment or intrusion upon”. If the project is determined to invade the designated river, the proponent would be advised to develop measures to eliminate this unacceptable effect.

If the proposed project does not invade the designated river, the next question to be answered, relative to the standard in Section 7(a), is whether or not the proposed project will “unreasonably diminish” any of the specified values. Given that the standard implies that some diminution of values may be determined reasonable, there are two questions to consider:

1. Does the proposed project cause diminution of the Recreation and Fisheries values of the designated river as present at the date of designation?

2. If there is diminution, is it unreasonable? This would suggest an evaluation of the magnitude of the loss. Factors to be considered include:
    1) Whether the value contributed to the designation of the river (i.e., outstandingly remarkable); and,
    2) The current condition and trends of the resource. (If diminution is determined unreasonable, measures may be recommended to reduce adverse effects to within acceptable levels.)

Rationale for Determination

The project currently qualifies as an FHWA categorical exclusion under the 2019 Programmatic Agreement Between the Federal Highway Administration, Arkansas Division and the Arkansas Department of Transportation Regarding the Processing of Actions Classified as Categorical Exclusions for Federal-Aid.

Does the Proposed Action Invade the Mulberry Wild and Scenic River?

The proposed project is not anticipated to invade the Mulberry WSR and its associated corridor. The existing bridge to be replaced over Wolf Pen Creek is approximately 200' upstream of the Mulberry WSR. The bridge would be located on the same alignment as the existing structure using a temporary one-lane detour immediately adjacent to and downstream of the existing structure to maintain traffic during construction. The proposed structure would be a two-span continuous reinforced concrete slab on spread footings. There would also be an in-stream temporary work road consisting of clean riprap and temporary culverts to maintaining low-flow conditions constructed approximately 30' upstream of the existing structure, but this work will not encroach upon the Mulberry WSR or its designated corridor.

Does the Proposed Action diminish the Wild and Scenic Values of the Mulberry Wild and Scenic River?

The proposed project is not anticipated to unreasonably diminish any of the specified values of the Mulberry River and its associated Wild and Scenic River corridor.

Outstanding Remarkable Values (ORV's)

Two outstandingly remarkable values were identified in the Final Environmental Impact Statement for Mulberry WSR Management Plan. Those values are **Recreation** and **Fisheries**. These outstanding remarkable values were the main criteria used to select Mulberry for WSR designation. No significant long-term or cumulative adverse effects are anticipated on either the recreation section (current project location) nor the downstream scenic-designated section of the river.

Recreation

The recreation outstandingly remarkable value description in the Mulberry River Wild and Scenic River Management Plan states that “canoeing, camping, swimming, and fishing are the primary forms of recreation.” All work will be conducted outside of the Wild and Scenic River corridor and best management practices will prevent indirect effects, such as sediment traveling downstream of the construction project, from affecting the Mulberry River. The proposed project will not permanently or temporarily limit or adversely affect recreational opportunities on the Mulberry WSR and is not expected to unreasonably diminish the recreation values of the Mulberry WSR.

Fisheries

The fisheries outstandingly remarkable value description in the Mulberry River Wild and Scenic River Management Plan states that the Mulberry River “has been recognized by the Arkansas Game and Fish Commission as one of the premier smallmouth and spotted bass fisheries in Arkansas.” The proposed project will replace the existing bridge with a new bridge, which accommodates the movement of fish and other aquatic organisms, and the new structure will be located on the same alignment as the existing structure using a temporary one-lane detour immediately adjacent to and downstream of the existing structure to maintain traffic during construction. The overall stream function and flow rates would be maintained during all phases of removal and construction operations. There may be temporary impacts to water quality on Wolf Pen Creek, but these effects are anticipated to be minor and not reach the Mulberry WSR through the use of sediment and erosion control best management practices during construction. The proposed project is not expected to unreasonably diminish the fisheries values of the Mulberry.

Analysis of Effects

Water Quality and Appearance

Water quality is determined by the physical, chemical, and biological characteristics of a waterway. Water quality constituents, such as sediment and nutrient concentration, are present at “background” levels in natural, well-functioning systems. Water quality standards for the Mulberry WSR are established by Arkansas Pollution Control and Ecology Commission Regulation 2 as an Extraordinary Resource Water. All water quality requirements designated by Regulation 2 for the Mulberry WSR are presently being met except for pH, which has been reported lower than the allowed range of 6.0 to 9.0.

The Total Maximum Daily Load (TMDL) pH document could not identify any permitted discharges or other known point source discharges and attributed the low pH levels to non-point sources of pollution or to natural background conditions. Because 95% of the watershed is within the Ozark-St. Francis National Forests with little to no man-made or

man-induced alterations, only 5% of the watershed has the potential to contribute non-point source pollution to the Mulberry WSR. It is likely that natural background conditions are the primary influence on the Mulberry WSR pH and other water quality factors. It was also noted that there were only three exceedances of the pH standard for the period in which data existed, approximately two years, and the report found that it was unlikely that these occasional exceedances would have any negative effect on the aquatic life communities in the stream. A TMDL of 6.0 to 9.0, with waste discharges to not affect that limit by more than 1.0 unit, was established to address future development in the watershed that could potentially result in additional impacts to the Mulberry WSR pH.

Impacts to the pH of the Mulberry River WSR are not anticipated. Any rock used on the project will be native stone, including bridge slopes, and ditch liners. The chemical treatment applied to the guardrail will be done off site by the treatment manufacturer. The concrete facades used on the bridge and concrete wall are colored with a water-based thermoplastic acrylic emulsion and only applied when weather conditions will be dry throughout the entire drying process. The storage, use, and disposal of the concrete-penetrating stain shall comply with all state and federal laws regulating the use of volatile organic compounds and solvents. Although they are not expected to erode or leach into the waterway, the concrete blocks themselves would not contribute to lower pH even if they did scour, as concrete leachate increases the pH of water.

The proposed construction is not anticipated to result in long-term adverse impacts to water quality on Wolf Pen Creek or the Mulberry River WSR. Temporary impacts due to construction are anticipated to be minor and minimized with implementation of the sediment and erosion control best management practices previously described. A Water Pollution Control Special Provision will be added to the project contract to further ensure the minimization of impacts to water quality.

Outstandingly Remarkable Values evaluation - Recreation

There are no established highly developed recreational facilities (e.g., public access points or campgrounds) in the project area, except for Hwy 215 Scenic Byway and the Mulberry River Trail. Impacts to free-flowing conditions and water quality have already been discussed, so the remaining impacts to recreation are primarily visual. The bridge replacement is within view of the Mulberry River WSR corridor and for river users, especially during off-leaf seasons.

The visual impacts of the upstream bridge replacement would be minimized through the bridge design with the use of textured and stained gravity blocks for walls to match the exposed rock in the project area. New guardrail on the bridge replacement would also have a stain that reacts with the galvanized coating to make it appear dull and weathered, allowing it to blend more with the surroundings than the regular shiny metal

galvanized coating. All additional rock used on the bridge would be native rock from the Ozark region of Arkansas and match the existing exposed rock seen along the Mulberry WSR and Highway 215 in the project area. Native seeding would be used to revegetate all disturbed areas. Overall, visual impacts as a result of the bridge replacement are anticipated to be minor and will continue to lessen over time as the area revegetates.

Outstandingly Remarkable Values evaluation- Fisheries

The impacts to the fisheries values for the Mulberry WSR, specifically spotted and smallmouth bass fishing, would primarily be water quality and recreation related, which have already been discussed in this document. Overall, impacts to fisheries would primarily be temporary and minor during construction, and minimized through the use of best management practices for sediment and erosion control.

Although some smallmouth bass may travel up Wolf Pen Creek, the primary benefit of this tributary is that it feeds into a deeper pool of the Mulberry WSR. Bass often sit in pools such as this and feed on macroinvertebrates and other aquatic species as they travel downstream on the tributary to the main river channel. The bridge on Wolf Pen Creek is being replaced with a new two-span continuous reinforced concrete slab on spread footings instead of the current four-sided concrete box culvert in order to maintain aquatic species connectivity on Wolf Pen Creek, which will support both the bass and their food sources that travel up and down the tributary.

Determination under Section 7(a) of the Wild and Scenic Rivers Act

The initial question to be addressed in this WSR Section 7(a) determination is whether the proposed action invades the designated river. The next question, relative to the standard in Section 7(a) is whether the proposed action will “unreasonably diminish” the recreational and fisheries values of the designated river. Given that the second standard implies some diminution of values may be acceptable, there are two questions to consider:

1) Does the proposed action cause diminution of the recreational and fisheries values of the designated river as present at the date of designation?
2) If there is diminution, is it unreasonable? This would suggest an evaluation of the magnitude of the loss. Factors to be considered include: (a) whether the values contributed to the designation of the river (i.e. outstandingly remarkable values); and, (b) the current conditions and trends of the resource, (If diminution is determined unreasonable, measure may be recommended to reduce adverse effects within acceptable levels).

The determination for the Mulberry WSR will be made by the Southern Regional Forester. Based upon the information presented, the following is a tabular summary of the conclusion:

WSR River Segment	Invade the WSR?	Unreasonable Diminishment of WSR	
		Recreation Value	Fishery Value
Mulberry WSR	No	No Change	Enhanced

The short-term temporary effects of the Wolf Pen Creek bridge replacement on water quality and appearance and the impacts to recreation and fisheries would be minimal and essentially mimic a periodic storm event and would dissipate shortly thereafter. In the long-term, replacing the bridge will improve natural flows for fisheries habitat. It would provide more seamless connectivity between the portion of the creek above the Wolf Pen Bridge and the Mulberry River. In addition, the replacement of the existing bridge with a two-span continuous reinforced concrete slab on spread footings is better able to accommodate the movement of fish and other aquatic organisms up and down Wolf Pen Creek.

I have reviewed the description of effects that are anticipated by the bridge replacement project on Highway 215 over Wolf Pen Creek, a tributary to the Mulberry Wild & Scenic River. The project will not "Invade the Area or Unreasonably Diminish" the values for which the Mulberry River was added to the National Wild and Scenic River System. I find the proposed bridge replacement to be fully consistent with the protections afforded by the Wild and Scenic Rivers Act.

Approved by:

KENDERICK ARNEY

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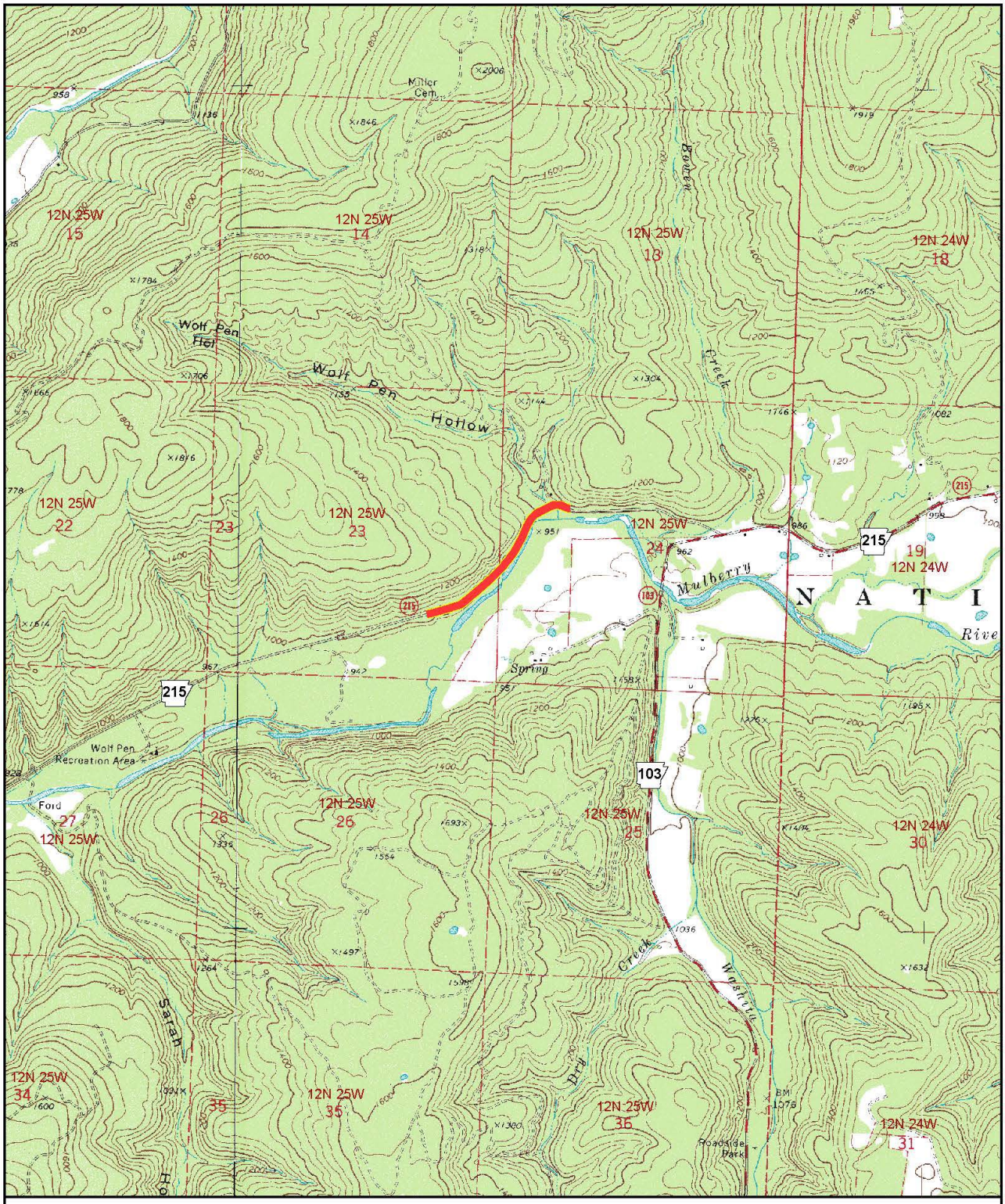
Kenderick Arney, Regional Forester
USDA Forest Service, Region 8

Date



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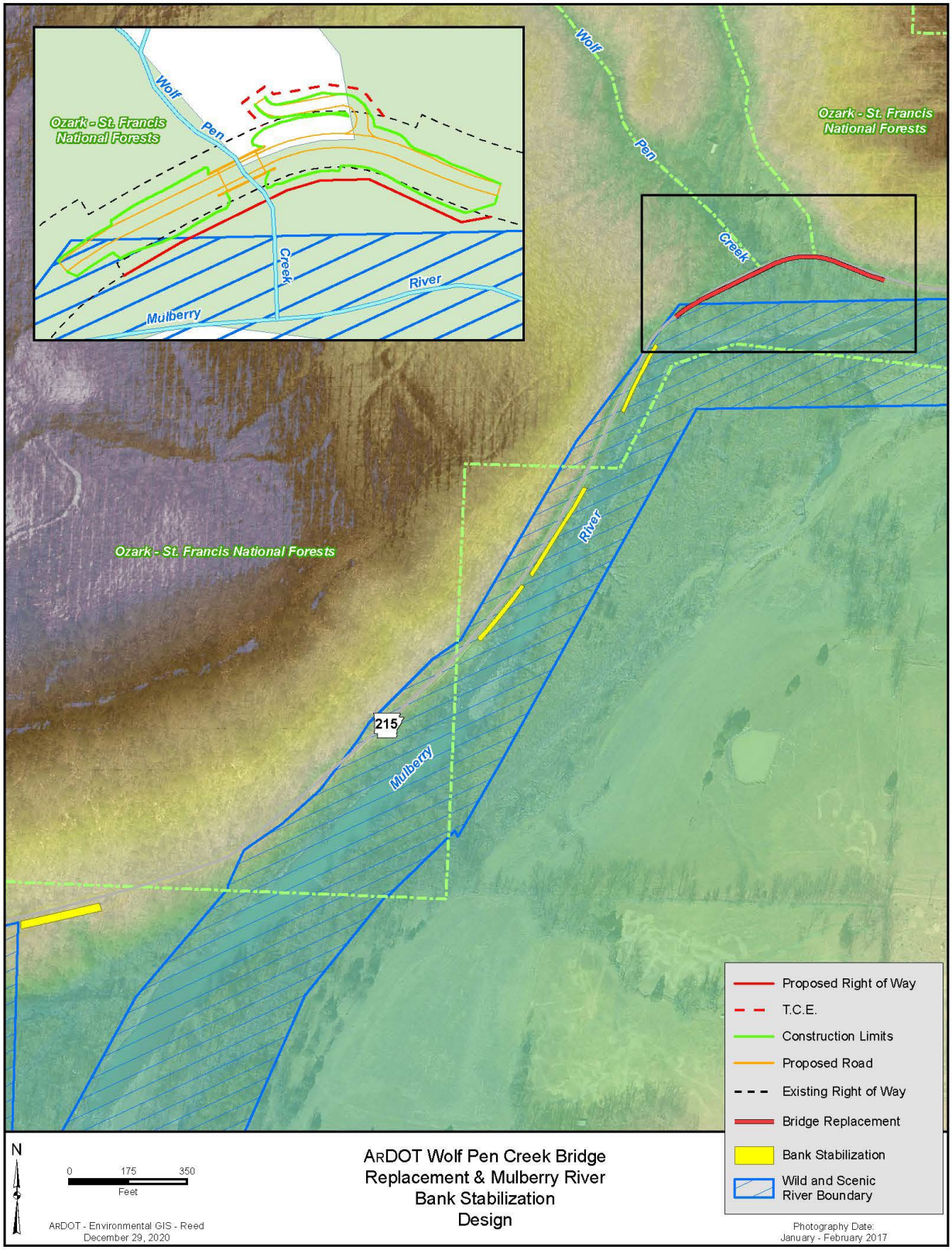
ARDOT - Environmental GIS - Reed
December 29, 2020

ARDOT Wolf Pen Creek Bridge Replacement & Mulberry River Bank Stabilization Project Location

Project Area

USGS Topographic Maps:
Oark 1973 and Yale 1973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ARDOT - Environmental GIS - Reed
December 29, 2020
ARDOT Wolf Pen Creek Bridge Replacement & Mulberry River Bank Stabilization Design
Proposed Right of Way
T.C.E.
Construction Limits
Proposed Road
Existing Right of Way
Bridge Replacement
Bank Stabilization
Wild and Scenic River Boundary
Photography Date:
January - February 2017


Ozark - St. Francis National Forests
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ARDOT - Environmental GIS - Reed
December 29, 2020
ARDOT Wolf Pen Creek Bridge
Replacement & Mulberry River
Bank Stabilization
Maintenance of Traffic
Stage 1
Stage 2
Stage 3
Wild and Scenic
River Boundary
Photography Date:
January - February 2017

ARDOT Highway 215 Bridge over Wolf Pen Creek (facing upstream)

Highway 215 at Wolf Pen Creek (facing west)

View from Bridge (facing south, towards the Mulberry WSR) downstream

View from Bridge (facing north) upstream

Confluence of Wolf Pen Creek and the Mulberry WSR (facing south)

View of the Bridge from the Mulberry WSR

Advanced Deterioration on Center Bridge Pier

From: Lewis, Lindsey
To: Schrum, Matthew C.
Subject: Re: [EXTERNAL] 080617 - Wolf Pen Creek Str. & Apprs. (S)
Date: Tuesday, December 22, 2020 8:14:35 AM

Matt,

As stated in the Consistency Letter, "The Service concurs with these “NLAA” and “No Effect” determination(s) for the listed species identified. No further consultation for this project is required for these species. The verification letter confirms you may rely on effect determinations provided in the Arkansas Determination Key for project review and guidance for federally listed species to satisfy agency consultation requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.; ESA)."

"The Service has received your concurrence verification letter and request to verify that the Proposed Action may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.). Based on the information you provided, you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, may affect, but is not likely to adversely affect (NLAA) Indiana Bat and Northern Long-Eared Bat. The Service verification letter confirms the concurrence that this action may rely on the PBO."

Please keep in mind that you must report any departures from the plans submitted; results of any surveys conducted; or any dead, injured, or sick listed bats that are found to this office. If this project is not completed within one year of this letter, you must update your determination and resubmit the required information.

The Service has no additional comments or concerns and agrees with the determinations, justifications provided, and concurrences made through the Arkansas Dkey, Indiana Bat and Northern Long-eared Bat (PBO) Dkey and ArDOT supplemental determinations of "no effect" for American Burying Beetle and Missouri Bladderpod.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300

Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
http://www.fws.gov/arkansas-es/

From: Schrum, Matthew C. <Matthew.Schrum@ardot.gov>
Sent: Thursday, December 17, 2020 10:30 AM
To: Lewis, Lindsey <lindsey_lewis@fws.gov>
Subject: [EXTERNAL] 080617 - Wolf Pen Creek Str. & Apprs. (S)

Lindsey,
ARDOT proposes to replace the bridge over Wolf Pen Creek along Hwy 215 in Johnson county AR. Please see the attached 60% plans.

The official species list obtained through US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) website identified the endangered gray bat (*Myotis grisescens*), the endangered Indiana bat (*Myotis sodalis*), the threatened northern long-eared bat (*Myotis septentionalis*), the threatened Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*), the threatened Piping Plover (*Charadrius melodus*), the threatened Red Knot (*Calidris canutus rufa*), the threatened American burying beetle (*Nicrophorus americanus*), and the threatened Missouri bladderpod (*Physaria filiformis*) as potentially occurring in the project area. Please see the attached USFWS Species list.

The AR DKey was evaluated for this project in IPaC. "No effect" determinations were provided for Eastern Black Rail, Red Knot, and Piping Plover. "May affect, not likely to adversely affect" determinations were given for gray bat, American burying beetle, and Missouri bladderpod. Please see attached USFWS MA Consistency Letter.

ARDOT contests the "may affect, not likely to adversely affect" determination for American burying beetle (ABB), as this project is outside of Arkansas's 2- and 3- acre ABB consultation areas. ARDOT makes a "no effect" determination for this species.

ARDOT also contests the "may affect, not likely to adversely affect" determination for Missouri bladderpod. The nearest record for this species is approximately 40 miles to the NW, in Washington County Arkansas, according to ANHC (2018) records. Additionally, there is no calcareous glade

habitat in the project area. ARDOT makes a “no effect” determination for this species.

The “FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat” determination key was evaluated for this project. “May affect, not likely to adversely affect determinations were given for Indiana and northern long-eared bats. Please see attached USFWS NLAA Consistency Letter for NLEB/IBAT.

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United States Department of the Interior

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In Reply Refer To: July 16, 2021
Consultation Code: 04ER1000-2021-SLI-0052
Event Code: 04ER1000-2021-E-03744
Project Name: 080617 - Wolf Pen Creek Str. & Apprs. (S) - BATS

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies endangered, threatened, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). **This letter only provides an official species list and technical assistance; if you determine that listed species and/or designated critical habitat may be affected in any way by the proposed project, even if the effect is wholly beneficial, consultation with the Service will be necessary.**

If you determine that this project will have no effect on listed species and their habitat in any way, then you have completed Section 7 consultation with the Service and may use this letter in your project file or application.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found on our website.

Please visit our website at http://www.fws.gov/arkansas-es/IPaC/home.html for species-specific guidance to avoid and minimize adverse effects to federally endangered, threatened, proposed, and candidate species. Our web site also contains additional information on species life history and habitat requirements that may be useful in project planning.

If your project involves in-stream construction activities, oil and natural gas infrastructure, road construction, transmission lines, or communication towers, please review our project specific guidance at http://www.fws.gov/arkansas-es/IPaC/ProjSpec.html.

The karst region of Arkansas is a unique region that covers the **northern third of Arkansas** and we have specific guidance to conserve sensitive cave-obligate and bat species. **Please visit http://www.fws.gov/arkansas-es/IPaC/Karst.html to determine if your project occurs in the karst region and to view karst specific-guidance.** Proper implementation and maintenance of best management practices specified in these guidance documents is necessary to avoid adverse effects to federally protected species and often avoids the more lengthy formal consultation process.

If your species list includes any mussels, Northern Long-eared Bat, Indiana Bat, Yellowcheek Darter, Red-cockaded Woodpecker, or American Burying Beetle, your project may require a presence/absence and/or habitat survey prior to commencing project activities. Please check the appropriate species-specific guidance on our website to determine if your project requires a survey. We strongly recommend that you contact the appropriate staff species lead biologist (see office directory or species page) prior to conducting presence/absence surveys to ensure the appropriate level of effort and methodology.

Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make “no effect” determinations. If you determine that your proposed action will have “no effect” on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take “after-the-fact.” For more information regarding formal consultation and HCPs, please see the Service’s Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, **the accuracy of this species list should be verified after 90 days.** This verification can be completed formally or informally as desired. The Service recommends that verification be

completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis*	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	
Piping Plover *Charadrius melodus*	Threatened
Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	
Red Knot *Calidris canutus rufa*	Threatened
There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1864	

Flowering Plants

NAME	STATUS
Missouri Bladderpod *Physaria filiformis*	Threatened
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5361	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

BIOLOGICAL EVALUATION

for

Activities Related to

Arkansas Department of Transportation
Job Number 080617
Wolf Pen Creek Str. & Apprs. (S)

Ozark National Forest
Pleasant Hill Ranger District
Johnson County, Arkansas

By

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June 2021

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PROJECT DESCRIPTION AND LOCATION

The Arkansas Department of Transportation (ArDOT) proposes to replace the bridge on Highway 215; crossing Wolf Pen Creek in Johnson County, within the Pleasant Hill Ranger District of the Ozark-St. Francis National Forest (OSFNF). The project area is located in Township 12 N, Range 25 W, Section 24 (USGS 2020a) (Figure 1). The project area lies in the Frog-Mulberry Watershed (8-digit HUC 11110201) within the Lower Arkansas Basin (6-digit HUC 111102) (ANRC 2006).

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Proposed improvements consist of replacing the existing 52.0' x 21.9' bridge with a 60.0' x 36.0' continuous reinforced concrete slab unit bridge (Figure 2). Currently, the bridge has 10-foot wide travel lanes with no shoulders. Proposed conditions include maintaining 10-foot wide travel lanes, and widening the shoulders to 4'.

One work road will be temporarily constructed on the NE side (upstream) of the Wolf Pen Creek bridge. The longitudinal extents of this work road will be approximately from station 106+20 – 106+70. Centerline of the work road will be approximately 30' upstream of centerline of the existing bridge. Top of work road will be 20' wide. Elevation of top of work road will be 948' above msl. Approximately 27.1 yards of fill will be used. Temporary culverts will be included to permit stream flow. Work road will be removed upon project completion.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed project is to replace the bridge, along Highway 215, over Wolf Pen Creek. The bridge is in poor condition (category 4); exhibiting advanced section loss, deterioration, spalling, or scour, and is not currently meeting modern highway safety standards.

The project will bring the structure up to modern safety standards, thus reducing the likelihood of accidents, and preventing possible closure of Highway 215.

ALTERNATIVES CONSIDERED

Replacing the existing bridges with 4-sided reinforced box culverts was considered by ArDOT's Roadway division. This alternative was withdrawn, as OSFNF's management plan stipulates that all new structures must be built with aquatic organism passage in consideration. Box culverts must be built oversized and counter-sunk to allow for aquatic organism passage and to prevent channel constriction (USFS 2008).

Not replacing the existing structures was another possible alternative. This alternative is untenable, because the outdated roadway and bridge dimensions lead to a greater risk of auto accidents than those demanded by modern highway safety standards. Also, continued deterioration of the physical condition of the bridge would eventually put motorists at risk.

The chosen alternative is to replace the existing bridge with new a bridge that meets current highway safety standards. Highway structures that span the width of the floodplain do not constrict the stream channel as severely as conventional box culverts, and allow for movement of natural stream bed material and better aquatic organism passage (USFS 2008).

Section 4(f) of the Department of Transportation Act of 1966 applies to projects funded or approved by a U.S. DOT agency that propose to impact public lands and/or historical sites. Prior to approval of projects potentially impacting Section 4(f) properties, the Federal Highway Administration (FHWA) must determine if adverse impacts will occur to the property, and if a feasible alternative exists to completely avoid impacts. As defined in Section 4(f), an alternative is deemed feasible if it can be constructed as a matter of sound engineering. If a feasible alternative does exist, then it must be selected.

PURPOSE AND NEED FOR THE BIOLOGICAL EVALUATION

This Biological Evaluation (BE) documents the potential effects of the proposed highway construction activities, including utility relocation and timber harvesting, on both known and potentially occurring populations and habitat of the OSFNF Proposed, Endangered, Threatened, and Sensitive species (PETS) (US Department of the Interior Fish and Wildlife Service [USFWS] 2018). This BE was conducted in accordance with methods given in Forest Service Manual 2672.43 (USFS 2005a).

As part of the National Environmental Policy Act decision-making process, the BE provides a review of ArDOT activities in sufficient detail to determine the potential effects of the proposed action on the listed PETS species. Objectives of the BE are as follows:

- To ensure that ArDOT actions do not contribute to loss of viability of any native or desired non-native plant or animal species or contribute to trends toward federal listing of any species.
- To comply with all requirements of the Endangered Species Act, that actions of federal agencies not put at risk or adversely modify critical habitat of federally listed species.
- To provide standardized procedures for evaluation of PETS species to ensure they receive full consideration in the decision-making process, so that no species is placed in jeopardy as a result of inadequate management actions.
- To adhere to the requirements of the Forest Service Manual 2672.43 (USFS 2005a), which provides direction for the inventory of PETS species in preparation of site-specific BEs.
- To address any potential impacts from management activities and incorporate conservation measures related to known PETS habitat or potential habitat.

Only those PETS species known to occur or have suitable habitat in the action area will be considered in this BE.

FIGURE 1. PROJECT LOCATION MAP

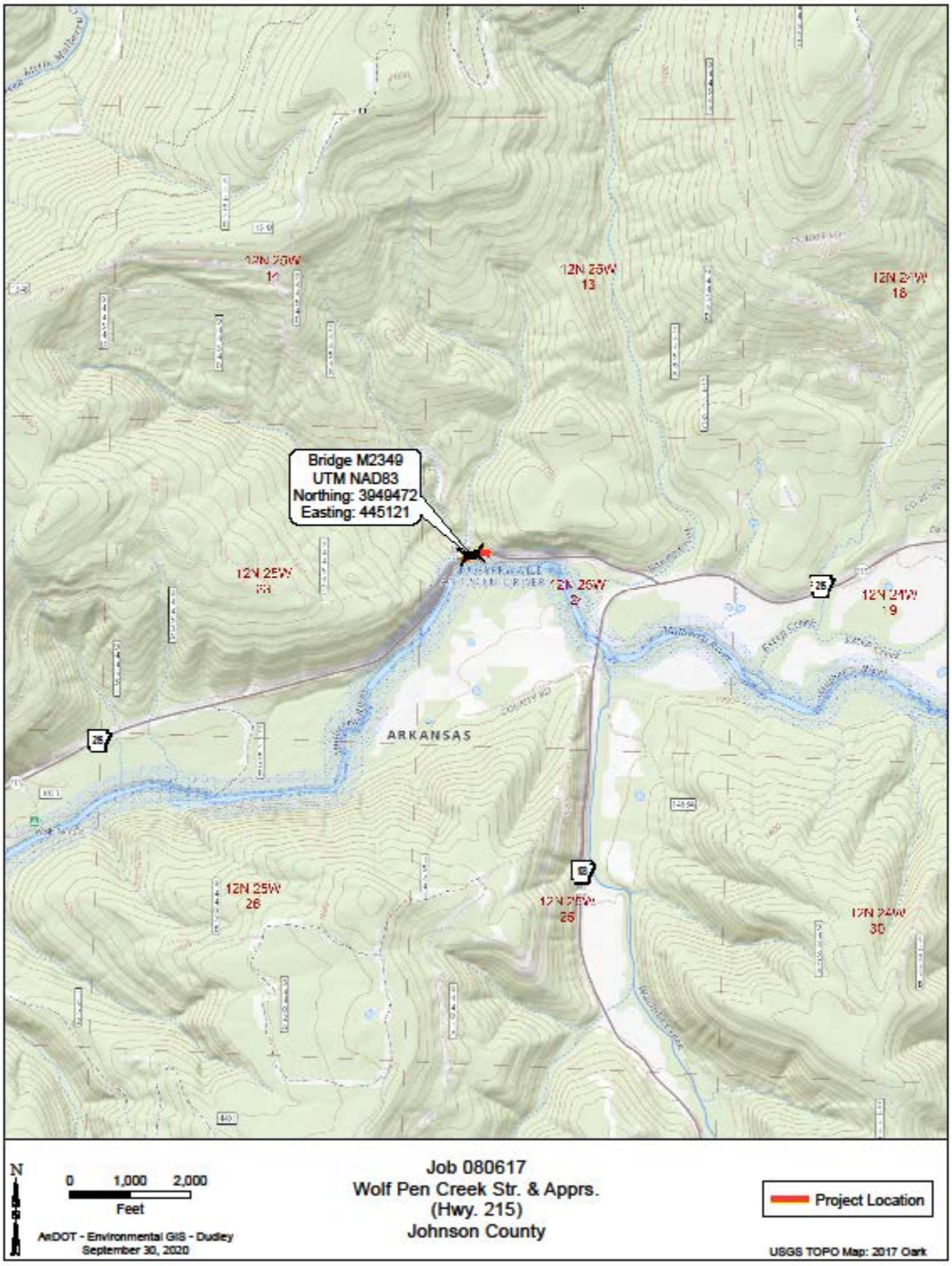
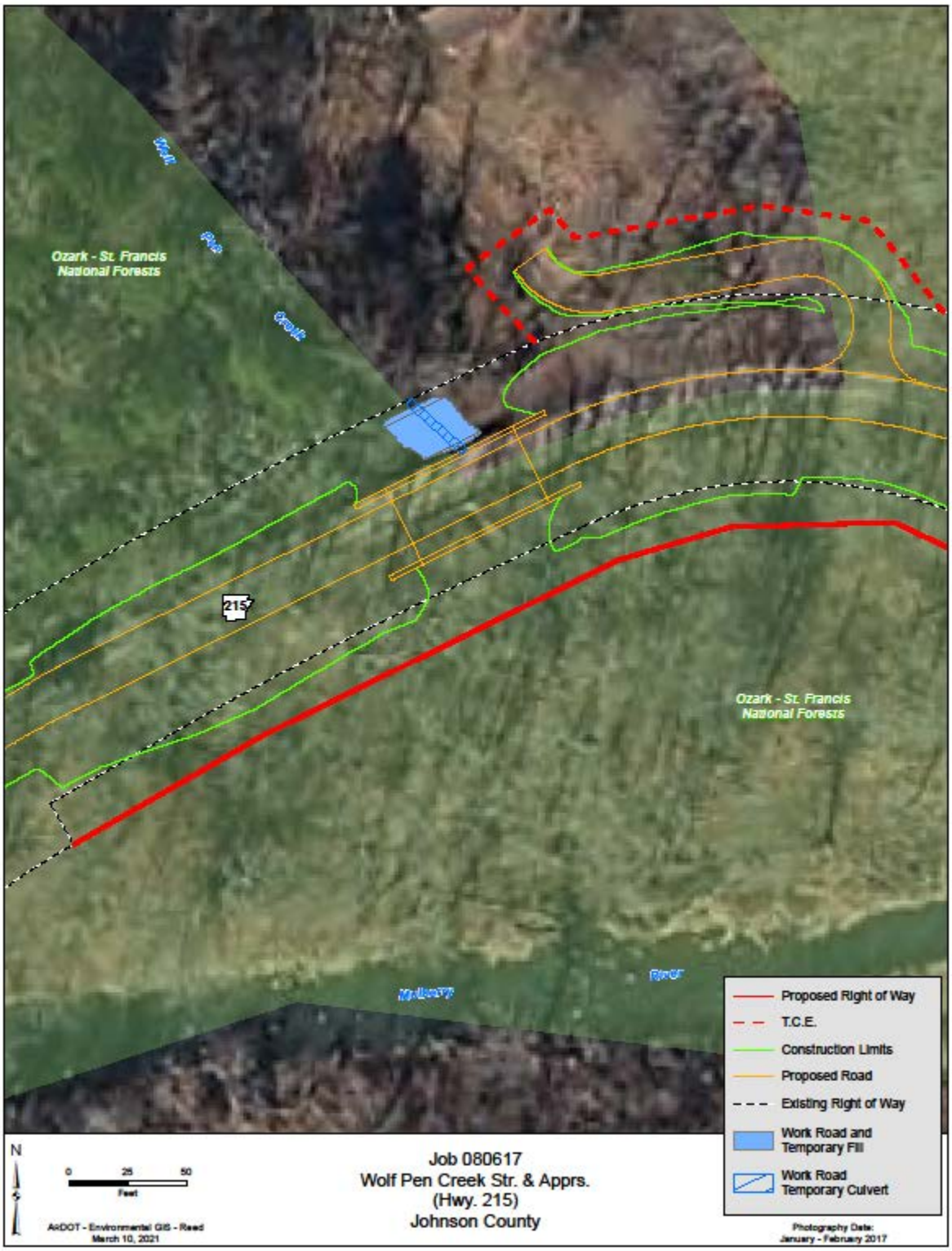


FIGURE 2. PROPOSED IMPROVEMENTS MAP



PROPOSED MANAGEMENT ACTIONS

Proposed management actions include use of Best Management Practices (BMPs) outlined in the National Pollution Discharge Elimination System (NPDES) and Section 404, Clean Water Act permits. These BMPs ensure that construction related activities associated with the project will not have detrimental effect on the water quality within the watershed.

INVENTORY HISTORY

This BE is based on the Arkansas Natural Heritage Commission (ANHC) 2018 records database, USFWS's Information for Planning and Consultation (IPaC) system, OSFNF PETS checklist (2018), NatureServe Explorer data (2020), and literature, as cited, for the various species known to occur on the OSFNF. Biological surveys for PETS plant species and their habitats for the proposed project were conducted on 02 June 2020 by ArDOT botanist Joseph Ledvina. Biological surveys for PETS aquatic animals and their habitat within Wolf Pen Creek were conducted on 27 July 2020 by ArDOT personnel Sarah DeVries and Matthew Schrum, and USFS biologists Matthew Anderson and Heather Custer. The results of the plant survey are included in ***Appendix B*** and aquatics surveys are included in ***Appendix C.*** Other pertinent literature and information concerning PETS populations and habitats are utilized as cited.

SPECIES CONSIDERED AND SPECIES EVALUATED

All PETS species will be evaluated and/or inventoried according to Forest Service Manual 2672.43 (USFS 2005a). All inventory and analysis for PETS species is based on "best available science." ***Appendix A*** lists the OSFNF PETS species and indicates whether or not each is known to occur within the action area. The status of each species within the Pleasant Hill Ranger District and within the action area is based on literature review of known surveys and information. As expressed for each species listed in ***Appendix A***, additional surveys are not needed at this time to provide more definitive information to improve the determination of effects on the evaluated PETS species.

EVALUATED SPECIES SURVEY INFORMATION

Based on the ANHC 2018 records database, the IPaC system, NatureServe Explorer data (2020), ArDOT and OSFNF personnel field surveys, and other pertinent information as cited, 19 PETS species are known to occur or may potentially occur within the action area. Of these 19 species, only 3 are federally listed: gray bat (*Myotis grisescens*), northern long-eared bat (*Myotis septentrionalis*), and Indiana bat (*Myotis sodalis*). The other 16 species are considered sensitive by the USFS, and include 2 bats, 1 bird, 1 fish, 2 crayfish, 1 butterfly, 1 isopod, 1 caddisfly, 1 mussel, and 6 plants (see ***Appendix A***). Only these 19 species will be evaluated in this BE for potential impacts from the proposed actions.

ENVIRONMENTAL BASELINE AND EFFECT OF PROPOSED MANAGEMENT ACTIONS

Each specific activity that is being considered will be evaluated to determine potential direct effects to the 19 PETS species of concern in this BE. The specific activities were listed in the "PROJECT DESCRIPTION AND LOCATION" section above. Cumulative effects, the incremental impacts of this action added to other past, present, and reasonably foreseeable future actions, will be considered below. The most likely *general* direct effects from the specific activities are as follows:

Highway Construction Activities:

- Would remove trees (forested habitat) from the site prior to other construction activities
- Would demolish the existing bridges (potential roosting habitat)
- Would cause temporary soil disturbance from heavy equipment operation
- Could temporarily increase sedimentation by exposing soils susceptible to erosion before the action area could be revegetated
- Could impact or crush individual plants and animals on the ground directly by heavy equipment operation
- Would create small patches of early successional habitat through the conversion of forested tracts to highway rights-of-way

These activities can be grouped or simplified into the four following impacts:

- **Soil disturbance impacts**
- **Stream sedimentation impacts**
- **Heavy equipment impacts**
- **Creation of early successional habitat impacts**

The four direct impacts will be evaluated below for the 3 federally listed and 16 PETS species that occur or may occur within the action area. Federally listed species are presented first, in alphabetical order, then the non-listed sensitive animal and plant species, respectively, also in alphabetical order.

POTENTIAL CUMULATIVE EFFECTS

In addition to the direct impacts outlined above, this project has the potential to contribute to cumulative impacts, when considered together with other past, present, and future reasonably foreseeable actions. These actions include:

- ArDOT Job 080666 Hwy 215 Slide Repair (Johnson Co.) (S) – This project involves the repair of 4 slide areas along Hwy. 215, approximately 80 meters SW of the Wolf Pen Creek

bridge. The 3 northernmost slide areas are just upslope from the Mulberry River, downstream of the confluence with Wolf Pen Creek. Prior to slide stabilization, these 3 slides were contributing fine and coarse sediment to the Mulberry River. Slide repair activities also have the potential to contribute sediment to the river. Additionally, some minor clearing was required in order to install repair materials. Though these repair activities may have temporarily negatively impacted water quality and sedimentation, the project reduced these negative impacts long-term by stabilizing the failing slopes. Construction on this job has not yet begun, but will likely start at the beginning of the inactive season for Indiana and northern long-eared bats.

- USFS Wolf Pen Project – Actions included in this project are thinning timber, herbicide application, decommissioning and improving roads, and prescribed burning. These actions could result in effects to water quality, reduced soil productivity, and herbicide impacts to aquatic organisms (USFS 2018).

These activities can be grouped or simplified into the following cumulative impacts:

- **Soil disturbance impacts**
- **Stream sedimentation impacts**
- **Herbicide application impacts**
- **Creation of early successional habitat impacts**

Both of the above projects are expected to have a net benefit to forest health and watershed resources in proximity to the Wolf Pen Creek bridge replacement project. Though there may be temporary increases in negative environmental impacts (i.e. sedimentation, tree clearing, herbicide application, and road construction), long-term environmental conditions will be improved over current conditions, thus no negative cumulative impacts are expected to occur.

Gray bat (*Myotis grisescens*) – Endangered
Global Rank: G4 – Apparently Secure
AR State Rank: S2S3 – Imperiled in Arkansas (uncertain rank)

The gray bat is found in limestone karst regions of the southeastern United States, primarily in Alabama, northern Arkansas, Kentucky, Missouri, and Tennessee, but also including portions of Florida, Georgia, Illinois, Indiana, North Carolina, and Oklahoma (USFWS 1997, NatureServe 2020). In Arkansas, they occur mostly in the Ozark Plateau and Boston Mountains Ecoregions (ANHC 2018, Perry et al. 2018). Gray bats use deep vertical caves for winter hibernation, and roost nearer the entrance of caves during the active season. Gray bats show a high degree of site fidelity for their winter caves (Tuttle 1976). In Arkansas, females typically enter hibernation caves in October, and males may not enter until November (Perry et al. 2018). Summer roost caves often occur in bluffs along rivers. In addition to natural caves, gray bats will roost in man-made structures, such as abandoned mines, quarries, bridges, and large culverts during the

summer active season (Mitchell 1998, Perry et al. 2018). Gray bats feed most often along streams, rivers, and lakes, and consume trichopterans, lepidopterans, coleopterans, dipterans, plecopterans, and ephemeropterans, from both aquatic and terrestrial sources (Brack and LaVal 2006). Threats to this species include, disturbance due to cave commercialization and recreation, loss of cave habitat due to reservoir construction and mining, and white-nose syndrome (WNS) (an introduced fungal disease that disturbs hibernating bats, causing them to use up energy reserves during hibernation, leading to starvation), though gray bats have not been demonstrated to experience the degree of massive population decline due to WNS seen in other cave-roosting bat species (Perry et al. 2018).

Direct Effects
The project area is within the known range of the gray bat and occurrences have been documented in Johnson County (ANHC 2018, Perry et al. 2018). Suitable foraging habitat and potential roosting habitat (existing bridge) for gray bats exists in the project area. The current project letting is November 2021, thus clearing and grubbing should take place during the inactive season. Under the proposed construction activities, heavy equipment disturbance and noise associated with construction activities could temporarily disrupt foraging opportunities in the vicinity of the project area. A bridge/structure assessment was conducted in July 2020 for the Wolf Pen Creek bridge on Hwy 215, following USFWS guidelines (USFWS 2016). No evidence of bats was observed during the bridge assessment. No direct effects on this are expected during demolition of the existing structure or from inactive season clearing and grubbing.

Indirect Effects
The corridor of the Mulberry River and Wolf Pen creek likely represent suitable forage habitat for this species. The removal of riparian vegetation may temporarily alter foraging habitat, and temporary sedimentation may smother aquatic insects, a food source for gray bats. Erosion control BMPs will be put in place to minimize the effects of sedimentation. Potential diminishment of forage base is an indirect effect expected to occur under the proposed activities—creation of early successional habitat, temporary soil disturbance and sedimentation—which will ultimately convert 0.56 acres of riparian forest to highway right-of-way.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects:
The proposed highway construction activities "may affect, but are not likely to adversely affect" the gray bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Clearing and temporary sedimentation may alter or diminish foraging. Project construction activities could lead to diminished foraging opportunities for this species.

Northern long-eared bat (*Myotis septentrionalis*) – Threatened
Global Rank: G1 – Critically Imperiled
AR State Rank: S4 – Apparently Secure

The northern long-eared bat is found in 37 states across most of the eastern and north central United States (NatureServe 2020). In Arkansas, the northern long-eared bat's range includes over 40 counties, mostly in the Ozarks, Boston Mountains, Ouachita Mountains, and the western part of Costal Plains Ecoregions. Hibernation primarily occurs in caves (USFWS 2011). Summer roosting and foraging habitat includes intact forested interiors with a large number of old trees, multiple forest strata, and standing snags and woody debris. Northern long-eared bats may be more likely than random to roost near roads during the active season (Perry et al 2008). Foraging typically occurs within forests and along forest edges (NatureServe 2020). In Missouri, northern long-eared bats almost exclusively foraged in upland forested areas, rather than in floodplain and riparian forests (LaVal and LaVal 1980). In Iowa, this species was found primarily foraging in mature deciduous upland forests adjacent to riparian areas (Kunz 1973). Northern long-eared bat populations are threatened by a range of stressors including diseases, including WNS, land use change, disturbance and destruction of roost trees, cave disturbance and vandalism, and climate change (NatureServe 2020).

The Final 4(d) Rule applies to the project's activities that have the potential to affect northern long-eared bats. The Final 4(d) Rule exempts the incidental take of northern long-eared bats from take prohibitions in the Endangered Species Act. The exemptions apply as long as the activities do not occur within 0.25 mile of a known hibernaculum or within 150 feet of a known occupied maternity roost from June 1 to July 31, and no known hibernacula or maternity roosts exist within the project limits. A Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form will be completed as part of our Section 7 consultation for northern long-eared bats.

Direct Effects
Potential foraging and roosting habitat for northern long-eared bats occurs in the project area, though northern long-eared bats have been demonstrated to prefer upland forests (LaVal and LaVal 1980). It is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Under the proposed construction activities, heavy equipment disturbance and noise associated with construction activities could disrupt potential foraging and roosting opportunities, temporarily, in the adjacent upland areas. No evidence of bats was observed during the bridge assessment, and clearing and grubbing are anticipated to take place during the inactive season..

Indirect Effects
Although the project area is within the known range of the northern long-eared bat and occurrences have been documented nearby (3.0 miles, ANHC 2018), several studies indicate that foraging and roosting primarily take place in upland forested settings. Since this species may be more likely to roost near roads during the summer, clearing represents a reduction of potentially summer roosting habitat. Clearing will ultimately convert 0.56 acres of riparian forest to highway right-of-way.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may affect, but are not likely to adversely affect" the northern long-eared bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Project construction activities could lead to diminished foraging opportunities for this species.*

Under the Final 4(d) Rule of the Endangered Species Act for northern long-eared bats, the proposed highway construction project and associated activities are exempt from any take prohibitions, specifically the incidental take of northern long-eared bats. A bridge assessment found no evidence of bats utilizing the bridge. This species has been documented to occur near the project area, and there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.

Indiana bat (*Myotis sodalis*) – Endangered
Global Rank: G2 - Imperiled
AR State Rank: S1 – Critically Imperiled

The Indiana bat is found in 24 states, across the eastern and central United States (NatureServe 2020). Approximately 37% of all Indiana bats hibernate in a single abandoned limestone mine in Missouri (Perry et al. 2018). During hibernation, the vast majority of individuals are concentrated in relatively few caves, with estimates that 88% of the total population relies on just 10 hibernacula (USFWS 2019). Indiana, Kentucky, Illinois, and New York have large populations of hibernating Indiana bats (USFWS 2006). There are a handful of hibernacula in the Ozarks of northern Arkansas, where population estimates recently increased from 1,722 to 2,749 hibernating bats (USFWS 2019). Maternity colonies are spread across a broad area during the active summer period (NatureServe 2020, USFWS 2007). Active maternity colonies had not been known from Arkansas, but a female bat was tracked from a hibernaculum in northern Arkansas to eastern Perry County in 2018, and a maternity colony was confirmed in northeastern Arkansas in 2019 at Shirey Bay WMA.

Indiana bats have low reproductive rates, with a mature female able to produce a single offspring per year (USFWS 2007). In the Ozark region, Indiana bats emerge from hibernacula from late March to mid-May, with the females emerging earlier and mostly departed by late April (LaVal and LaVal 1980). Females often migrate long distances quickly after emergence, with movements of up to 60 miles in a single day documented, and females found during the summer having migrated up to 357 miles (USFWS 2007). They roost under exfoliating tree bark, and occasionally also in crevices in boles or branches. They prefer dead trees, but may use dead

branches on living trees or trees with naturally exfoliating bark like shagbark (*Cary ovata*) and shellbark (*C. lacinosa*) hickory or white oak (*Quercus alba*) (USFWS 2007). They may forage as far as 5 miles from the roost trees, but most foraging trips are not farther than 2 miles (USFWS 2007).

The primary threats to the Indiana bat are alternations to hibernacula (especially changes in cave entrances that alter airflow and, consequently, temperatures), the loss of summer maternity habitat, WNS, and human disturbance during hibernation (NatureServe 2020). WNS has spread to at least 25 U.S. States, and is documented from several caves in Arkansas (USFWS 2014b). The total population is estimated to have declined by 19.2% since the arrival of WNS in New York in 2007 (USFWS 2019).

Direct Effects
Potential foraging and summer roosting habitat for Indiana bats occurs in the project area. Indiana bats show a preference for foraging in riparian corridors and forest edge habitat (LaVal and LaVal 1980). It is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Under the proposed construction activities, heavy equipment disturbance and noise associated with construction activities could disrupt potential foraging opportunities, temporarily, in the project area and adjacent forest. No evidence of bats was observed during the bridge assessment; thus, no direct effects are expected during demolition of the existing structure.

Indirect Effects
Although the project area is within the known range of the Indiana bat, and contains suitable foraging habitat, this species has not been recorded from the Pleasant Hill Range District. The nearest record is a roost tree from 2018 in the Boston Mountains Ranger District, approximately 15 miles to the west (ANHC 2018). This is farther than a typical Indiana bat foraging trip, though the corridors of the Mulberry River and Wolf Pen Creek represent suitable forage habitat for this species. The removal of riparian vegetation may temporarily alter foraging habitat, and temporary sedimentation may smother aquatic insects, a food source for Indiana bats. Soil erosion BMPs will be implemented to minimize the effects of sedimentation. Potential diminishment of forage base, until the project are revegetates, is an indirect effect expected to occur under the proposed activities—creation of early successional habitat, temporary soil disturbance and sedimentation—which will ultimately convert 0.56 acres of riparian forest to highway right-of-way.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects:
The proposed highway construction activities "may affect, but are not likely to adversely affect" the Indiana bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Project construction activities could lead to diminished foraging opportunities for this species.

Boston Mountains Crayfish (*Cambarus causeyi*) – Sensitive
Global Rank: G2 – Imperiled
AR State Rank: S1 – Critically Imperiled in Arkansas

The Boston Mountains Crayfish is a primary burrowing crayfish species endemic to Arkansas and the Boston Mountains Ecoregion (Robison et al. 2008). Unlike stream-dwelling crayfish, this species is not found in open water outside of the breeding season (likely between December – February), and instead spends the majority of its life in a burrow that it constructs in uplands near small streams, springs, and seepages (Robison and Leeds 1996). The crayfish excavates soil particles and small pieces of shale, and deposits them at the entrance to the burrow. Like other crayfish species, it likely feeds on invertebrates, carrion, plant matter, and detritus. Amphipods and isopods are nearly always found in the burrows of this species. The smaller crustaceans may feed on the same food source as the crayfish, or may serve as a food source for the crayfish. These burrows are sometimes constructed under large boulders. It has been observed in 7 counties (Franklin, Johnson, Madison, Newton, Pope, Searcy, and Stone) with the bulk of the records from Johnson County, within the Pleasant Hill Ranger District (ANHC 2018). Threats to this species include groundwater withdrawal, mineral extraction, and forestry activities (AGFC 2017). The nearest record is approximately 1.0 miles northwest, at Dip Vat Spring, a tributary of Wolf Pen Creek (ANHC 2018, Robison and Leeds 1996). No crayfish burrows were observed over the course of multiple site visits.

Direct Effects
Though no Boston Mountains Crayfish or burrows were observed in the project area, this species could potentially occur along Wolf Pen Creek. Detection probabilities for primary burrowing crayfish tend to be relatively low (Larson and Olden 2016), thus it's possible that this species could be overlooked. Heavy equipment operation and excavation associated with demolition of the existing bridge and construction of the new bridge could potentially crush overlooked crayfish and their burrows. Temporary water quality impairment could negatively affect crayfish. Soil erosion BMPs will be implemented to minimize the effects of sedimentation and turbidity.

Indirect Effects
Soil compaction by heavy equipment and excavation of material along Wolf Pen Creek and the roadside ditches could make these areas less suitable for burrowing crayfish habitat after project construction activities are completed. Water quality impacts to Wolf Pen Creek that could negatively affect crayfish will be temporary.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for Boston Mountains Crayfish. Soil compaction and temporary sedimentation and turbidity could affect this crayfish species. This species is not known to occur in the project area, thus this species is not likely to be significantly affected by project activities.*

Monarch butterfly (*Danaus plexippus*) – Proposed
Global Rank: G4 – Apparently Secure
AR State Rank: S5B - Apparently Secure Breeding Population in Arkansas

The Monarch Butterfly is proposed endangered in the United States. In December 2020, the USFWS announced that the listing was warranted, but precluded by higher priority species listings. North America is a main component of the monarch's range, but the overall range extends through Central America to northern South America (NatureServe 2020). The North American monarch populations are divided into two main groups—the Western, those west of the Rocky Mountains, and the Eastern, those east of the Rocky Mountains—both of which are migratory. Essential overwintering areas for the western and eastern populations, up to 90% of the entire species, are limited to few areas in eucalyptus groves in coastal California and the conifer forests in the mountains of Mexico (Vidal and Rendón-Salinas 2014). The monarchs' summer range include portions of the coterminous United States and southern portions of Canada bordering the United States. There are some non-migratory populations that occur in south Florida and along the Gulf Coast (NatureServe 2020).

In Arkansas, the monarch butterfly is found statewide. Most often monarchs are migrating through Arkansas heading north in late March to early May and migrating south in late August through October. Habitat is complex. In general, breeding areas are virtually all patches of milkweed in North America, as milkweeds are the larval food plants. Milkweeds and other nectar-producing forbs are important energy sources for adult monarchs and help fuel migration. Several sources conclude that the recent large-scale decline of North American monarch populations is primarily the result of changes in the core breeding habitat, not the illegal logging activities of wintering habitat in Mexico (Pleasants and Oberhauser 2013). The large decline in milkweed and other nectar producing forbs is attributed to changes in agricultural practices such as the widespread use of genetically modified herbicide-tolerant crops (NatureServe 2020).

Direct Effects
Although there are no recorded occurrences of the monarch butterfly in the project area, it is likely to occur during peak spring and fall migration periods. Milkweeds were not found in the

project area during recent plant surveys, though nectar-producing forbs that could serve as a food source for adults were present (***Appendix B***). During proposed construction activities, heavy equipment operation could disturb or crush adult monarchs. No direct effects are expected to immature monarchs.

Indirect Effects
Under the proposed activities, temporary soil disturbance and creation of early successional habitat would alter this species' preferred habitat. Also, creation of early successional habitat could benefit monarch butterflies by opening the canopy and providing suitable habitat for a few years. A Special Seeding Special Provision is included in the job contract to ensure only native forbs and grasses are seeded, which also benefits monarch butterflies. The following beneficial nectar and host plants to the monarch butterfly are included in the Special Seeding Special Provision: pale purple coneflower (*Echinacea pallida*), butterfly milkweed (*Asclepias tuberosa*), partridge pea (*Chamaecrista fasciculata*), wild bergamot (*Monarda fistulosa*), purple blazing star (*Liatris pycnostachya*), lanceleaf coreopsis (*Coreopsis lanceolata*), and black-eyed Susan (*Rudbeckia hirta*).

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the monarch butterfly. The species is likely to occur in the immediate project area, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities.*

William's crayfish (*Faxonius williamsi*) – sensitive
Global Rank: G3 - Vulnerable
AR State Rank: S1 – Critically Imperilled

The William's Crayfish is a stream-dwelling crayfish species that occurs in headwater reaches of the White River and Arkansas River drainages in the Ozarks and Boston Mountains of Arkansas and Missouri (NatureServe 2020, AGFC 2017). This species occurs in small streams, with course substrates, and no aquatic vegetation, and shows a strong preference for riffles (Wagner et al. 2010, Westhoff et al. 2006). Like other crayfish species, it likely feeds on invertebrates, carrion, plant matter, and detritus. Like other stream crayfish, it is threatened by competition from introduced crayfish species, gravel mining, population isolation and habitat fragmentation due to impoundments, and stream modification and degradation from development (NatureServe 2020, AGFC 2017). This species was not detected in our aquatics surveys (***Appendix C***), but the habitat in the project area is suitable for this species. Additionally, Meek's Crayfish (*Faxonius*

meeki) was found during aquatics surveys. This species is the closest habitat associate of *F. williamsi* (Wagner et al. 2010).

Direct Effects
Though no William's Crayfish were observed in the project area, this species could potentially occur in Wolf Pen Creek. This site represents suitable habitat for the species. Heavy equipment operation and excavation associated with demolition of the existing bridge and construction of the new bridge could potentially crush overlooked individuals. Temporary sedimentation could smother crayfish or the interstitial spaces in the substrate where they reside. Soil erosion BMPS will be implemented to minimize the effects of sedimentation and turbidity.

Indirect Effects
The riparian corridor of Wolf Pen Creek is currently completely forested, with little break in canopy cover. Removal of the riparian forests for roadway construction could open up the canopy, encouraging the growth of aquatic vegetation, particularly American water-willow (*Justicia americana*). William's crayfish displays a strong intolerance of aquatic vegetation (Wagner et al. 2010, Westhoff et al. 2006). Additionally, temporary water quality impairment and sedimentation have a general detrimental effect on aquatic macroinvertebrates. These effects could last until excess sediments are flushed from the site by high water events.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for William's Crayfish. Arkansas Natural Heritage Commission records (2005) indicate occurrences in a roadside spring, tributary to Washita Creek, approximately 2.4 miles south of the project area. This species was not detected in the project area, but habitat is suitable. Temporary sedimentation and turbidity. As well as the potential for increase aquatic vegetation would be detrimental to this species.*

An isopod (*Lirceus bicuspidatus*) – Sensitive
Global Rank: G3Q – Vulnerable (questionable taxonomy)
AR State Rank: S3 – Vulnerable in Arkansas

Lirceus biscupsidatus is an aquatic isopod species endemic to the state of Arkansas. It occurs in 12 counties (Robison et al. 2008). Its habitat includes small streams and springs in the Arkansas River Valley, Boston Mountains, Ouachita Mountains, and Ozark Highlands ecoregions (Hubricht and Mackin 1949). Like other aquatic isopods, it likely feeds on smaller invertebrates,

carrion, plant matter, and detritus. Aquatic isopods tend to prefer areas of streams with permanent water and little to no flow. This species is found approximately 3.0 miles southeast of the project area on Washita Creek (ANHC 2018). Threats to this species include sedimentation from resource extraction, and municipal and industrial point source pollution (AGFC 2017).

Direct Effects
Though aquatic macroinvertebrate surveys were not conducted, Wolf Pen Creek represents suitable habitat for this species, and it could potentially occur here. Excavation and heavy equipment operation associated with demolition of the existing bridge and construction of the new bridge could potentially crush isopods. Temporary water quality impairment could negatively affect isopods. Soil erosion BMPs will be implemented to minimize the negative effects of sedimentation and increased turbidity.

Indirect Effects
Excavation and water quality impacts to Wolf Pen Creek that could negatively affect isopods will be temporary, occurring during construction, thus no indirect effects are anticipated.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for the isopod Lirceus bicuspidatus. Arkansas Natural Heritage Commission records (2018) indicate occurrences on Washita Creek, approximately 3.0 mile southeast of the project area. This species is not known to occur in the project area. Though a few individuals may be susceptible to project construction activities, this species is not likely to be significantly affected by project activities.*

Eastern small-footed bat (*Myotis leibii*) – Sensitive
Global Rank: G4 - Apparently Secure
AR State Rank: S1 – Critically Imperiled

The eastern small-footed bat is the smallest bat species occurring in Arkansas (Perry et al. 2018). Arkansas is near the southwestern limit of the range of this bat, which extends from Oklahoma northeastward into Ontario (Best and Jennings 1997, NatureServe 2020). The bulk of occurrences are from Pennsylvania, New York, West Virginia, and Virginia (Amelon and Burhans 2006). Rare across its range, the eastern small-footed bat is known to inhabitant at least 289 hibernacula sites, but the true number of hibernacula is likely higher, due to the secretive nature of this bat, and the inaccessibility of potential hibernacula (NatureServe 2020, USFWS 2013a). This species hibernates in caves, mines, tunnels, rock outcrops, boulder fields, and is

sometimes found beneath rocks on cave floors. It is one of the most cold-tolerant North American bat species, hibernating near cave entrances, and other areas with low humidity, air flow, and great temperature fluctuation (Perry et al. 2018). During the active season, this species has been known to roost in crevices in outcrops and slopes, boulder fields, buildings, bridges, hollow trees, loose tree bark, caves, and mines, with an apparent preference for ridgetop talus slopes (NatureServe 2020). They typically forage in forested areas, below the canopy (Perry et al. 2018). The eastern small-footed bat has been documented across the Ozarks and Boston Mountains in Arkansas, and south of the Arkansas River at Mount Magazine. This species is susceptible to WNS, but the pathogen does not seem to have caused severe population declines (NatureServe 2020). Other threats include loss of hibernacula and mortality from human disturbance during hibernation, commercial cave development, deforestation, and the development of ridgetop talus slopes for wind energy (NatureServe 2020). The nearest record is from 2010 in the Boston Mountains Ranger District, approximately 15 miles to the west (ANHC 2018). It is also known from the Big Piney Ranger District to the east.

Direct Effects

Potential foraging habitat for eastern small-footed bats occurs in the project area. Roosting habitat in the project area would be poor, since this species shows a preference for ridgetop talus slopes, which do not occur in or adjacent to the project area. However, this species has been documented roosting in trees during the summer, though clearing on this project would happen during the inactive season. It is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Under the proposed construction activities, heavy equipment disturbance and noise associated with construction activities could disrupt potential foraging and active season roosting opportunities, temporarily, in the project area and adjacent forest. No evidence of bats was observed during the bridge assessment; thus, no direct effects are expected during demolition of the existing structure.

Indirect Effects

Although the project area is within the known range of the eastern small-footed bat, and contains suitable foraging habitat, this species has not been recorded from the Pleasant Hill Range District. The forests in and adjacent to the project area likely represent suitable forage habitat for this species. The removal of riparian vegetation may temporarily alter foraging habitat, and temporary sedimentation may smother aquatic insects, a food source for eastern small-footed bats. Thus, temporary alteration of foraging habitat is an indirect effect expected to occur under the proposed activities—creation of early successional habitat, temporary soil disturbance and sedimentation—which will ultimately convert 0.56 acres of riparian forest to highway right-of-way.

Cumulative Effects

The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the eastern small-footed bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Project construction activities could lead to diminished foraging opportunities for this species.*

Nearctic paduniellam caddisfly (*Paduniella nearctica*) – Sensitive

Global Rank: G2 – Imperiled
AR State Rank: S1? – Critically Imperiled in Arkansas (inexact numeric rank)

The nearctic paduniellan caddisfly is an endemic of the United States Interior Highlands in Arkansas and Missouri (Allen 1990). It is the sole representative of the subfamily Paduniellinae in North America. The subfamily occurs primarily in Africa, Asia, the Philippines and Indonesia. This species is found in and around small streams with moderate flow. The aquatic larvae of this species construct silk tubes attached to course stream substrate which they use to collect detritus, diatoms, filamentous algae, and vascular plant material for consumption (Stuart 1992). Adults emerge in the spring and summer to mate near their larval habitat. Adults do not feed, as they have vestigial mouthparts. Populations of this species appear to produce two generations each year, one in spring, and a second in late summer (Stuart 1990). Threats to this species include sedimentation from resource extraction and contaminants from municipal and industrial point sources (AGFC 2017). The nearest occurrence record for this species is approximately 2.0 miles SW of the project area in the Mulberry River (ANHC 2018).

Direct Effects

Though aquatic macroinvertebrate surveys were not conducted, Wolf Pen Creek represents suitable habitat for this species, and the nearctic paduniellan caddisfly could potentially occur here. Excavation associated with demolition of the existing bridge and construction of the new bridge could potentially crush larvae caddisflies. Temporary increases in sedimentation caused by construction activities could smother larvae. Soil erosion BMPs will be implemented to minimize the effects of sedimentation and turbiditiy.

Indirect Effects

Water quality impacts to Wolf Pen Creek could negatively affect caddisfly larvae for a period after construction, but will be temporary. Clearing of riparian vegetation could reduce the amount of breeding habitat for adult caddisflies, negatively affecting reproduction on a local scale, until riparian vegetation regenerates.

Cumulative Effects

The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for the nearctic paduniellan caddisfly. This species is not known to occur in the project area, though habitat is suitable, and any present individuals may be susceptible to project construction activities. This species is not likely to be significantly affected by this project.*

Longnose Darter (*Percina nasuta*) – Proposed
Global Rank: G3 - Vulnerable
AR State Rank: S2 - Imperiled

The Longnose Darter is a small-bodied (≤ 110mm) benthic fish. It occurs in the St. Francis, White, Little Red, and Arkansas River drainages in Missouri, Arkansas and Oklahoma (Robison and Buchanan 2020). Mitochondrial DNA analyses has revealed that the species is not monophyletic, and the populations occurring in the Arkansas River Drainage, including the Mulberry River, the White and Little Red Rivers, and the St. Francis River likely represent separate taxa (Robison et al. 2014). The Arkansas River drainage population inhabits Mulberry River, Big Piney Creek, Illinois Bayou, Point Remove Creek, and South Fourche LaFave River, rather than the mainstem Arkansas River (Robison and Buchanan 2020). The preferred habitat of this darter is high gradient small rivers and large streams that are clear, relatively silt-free, and contain course substrates. It is found in pools among cobble and boulders throughout most of the year, but moves into runs with moderate to strong current during the spring breeding season (March-May) (Robison and Buchanan 2020). Like other darters, this species feeds on benthic macroinvertebrates, primarily plecopterans, ephemoropterans, and trichopterans. Impoundments destroyed much of the formerly occupied habitat, and have left extant populations of Longnose Darter isolated (NatureServe 2020). Threats to extant populations of this species include altered temperature and flow regimes downstream of reservoirs, agricultural, municipal, and industrial runoff, gravel and sand mining, channel modifications, and sedimentation from livestock graving and road construction (AGFC 2017, NatureServe 2020). Our electrofishing surveys did not locate Longnose Darter in Wolf Pen Creek (***Appendix C***). This was not surprising, as Longnose Darter typically occurs in larger streams. Longnose Darter is known to occur in the Mulberry River near the confluence with Wolf Pen Creek (ANHC 2018).

Direct Effects
Longnose Darter was not located in our aquatics surveys (***Appendix C***), or previous surveys on the Wolf Pen Creek. This species is known to occur in Mulberry River in close proximity to the project area (ANHC 2018). Sedimentation from clearing and grubbing, and bridge demolition and construction could temporarily affect this species. Sedimentation is known to smother benthic fish eggs, and fill interstitial spaces in substrate where benthic fish shelter and feed (USDA-NRCS 1995). Soil erosion BMPS will be implemented on this project to minimize the effects of sedimentation and turbidity.

Indirect Effects
Sedimentation and turbidity will be minimized and temporary during constructions. No ongoing effects of ground disturbing activities are expected post-construction.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for Longnose Darter. Arkansas Natural Heritage Commission records indicate the species occurs in close proximity to the project area in the Mulberry River. This species could be negatively affected by temporary sedimentation and turbidity. BMPs will be in place to minimize these effects.*

Tricolored bat (*Perimyotis subflavus*) – Sensitive
Global Rank: G2G3 – Imperiled or Vulnerable
AR State Rank: S5 - Secure

The range of the tricolored bat extends from Nova Scotia, southern Quebec, Michigan, Minnesota, and South Dakota south to eastern and southern Mexico, Honduras, Texas, the U.S. Gulf Coast, and Florida, west to Wyoming, Colorado and New Mexico (Patterson et al. 2003). In Arkansas, tricolored bat is found statewide (Perry et al. 2018), and likely occurs in the vicinity of the project area. This species is not tracked by ANHC. These bats are associated with forested landscapes, where they forage for insects along waterways and forest edges. Throughout its range, most foraging occurs in riparian forests. Maternity and summer roosts are mainly in dead or live tree foliage. In Arkansas, roosts were found most often among dead leaves of oaks in mature hardwood forests, and some maternity roosts were found among boughs of dead needles in live, large pines (Perry et al 2018). Maternity colonies may also utilize manmade structures such as bridges. Caves, mines, and rock crevices may be used as night roosts between foraging outings. Hibernation sites are most often in caves, but they have been found to utilize abandoned mines and box culverts near forested areas (NatureServe 2020). Populations of tricolored bat have been greatly diminished by WNS. Populations in hibernacula in Canada were reduced by up to 75% by WNS (NatureServe 2020). WNS primarily occurs east of the Mississippi River, but has been found in several locations in Arkansas and Missouri. Wind turbine operation represents another major threat to this species.

Direct Effects
Under the proposed construction activities, heavy equipment disturbance and noise associated with construction activities could disrupt foraging and potential roosting opportunities in and immediately surrounding the project area temporarily. No evidence of bats using the bridge was observed; therefore, no direct effects are expected from the heavy equipment impacts from

demolishing the existing bridge. Clearing and grubbing is currently slated to take place during the inactive season (starting November 2021).

Indirect Effects
Proposed construction activities will result in the conversion of approximately 0.56 acres of riparian forest (i.e., foraging and roosting habitat) to mowed highway right-of-way. Temporary soil disturbance and sedimentation caused by construction activities could contribute to a temporary decrease in water quality, which could in turn affect aquatic insect assemblages; however, erosion control BMPs will in place to minimize sedimentation and turbidity. This creation of early successional habitat could alter this species' foraging and potential roosting habitat in the project area.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the tricolored bat. Although surveys were not conducted within the project area, a bridge assessment found no evidence of bats utilizing the bridge. This species is likely to occur in the project area, and there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Clearing could alter potential roosting and foraging habitat post-construction.*

Bachman's Sparrow (*Peucaea aestivalis*) – Sensitive
Global Rank: G3 – Vulnerable
AR State Rank: S3B – Breeding Population in Arkansas Vulnerable

The breeding range for Bachman's Sparrow includes southern Maryland, Ohio and Pennsylvania south to eastern Texas, including Arkansas, the Gulf Coast and southcentral Florida. Nonbreeding range is concentrated in the southeastern US, from eastern Texas to southeastern North Carolina (NatureServe 2020). Bachman's Sparrow is fairly common in the outer Coastal Plain, uncommon in the inner Coastal Plain, rare in the Piedmont region and absent or local in its former northeastern breeding range (Ridgely et al. 2003). In the southeastern US, Bachman's Sparrow is found year round in open pine woodland habitats with canopy coverage at 50% or less, dense herbaceous cover at greater than 60% and limited mid-story density at less than 10% (USFWS 2013b). Habitat loss is the predominant threat to Bachman's Sparrow due to pine plantation conversion, urbanization and agricultural practices and fire suppression. This species has been recorded in nearby Logan and Pope Counties (James and Neal 1986). The bird's preferred pine-woodland habitat does not occur in or adjacent to the project area.

Direct Effects
Although there is no recorded occurrence of Bachman's Sparrow in the project area, its breeding range does include the project area (Haggerty 1986, James and Neal 1986). Though unlikely, adult Bachman's Sparrows could be overlooked and not avoided during highway construction activities. Clearing and grubbing is slated to take place during winter 2021-2022, so nests, juveniles, and eggs would not be affected.

Indirect Effects
Canopy opening and creation of early successional habitat could benefit Bachman's sparrow by providing suitable habitat for a few years (USFWS 2013b).

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for Bachman's Sparrow. Although the species has not been recorded from the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. The creation of early successional habitat could be beneficial by providing suitable habitat to Bachman's Sparrow temporarily.*

Purple Lilliput (*Toxolasma lividum*) – Proposed
Global Rank: G3 - Vulnerable
AR State Rank: S2 - Imperiled

The Purple Lilliput occurs in Michigan; in Illinois, Indiana, Kentucky, and Ohio in the lower Ohio River drainage; most of the Tennessee River drainage in Alabama, northern Georgia, North Carolina, Tennessee and Virginia; and west of the Mississippi River in southern Missouri, northern Arkansas, and potentially into Oklahoma (Parmalee and Bogan 1998). In Arkansas, it is found throughout the Ozark and Ouachita Highlands (ANHC 2018). Habitat includes fine-particle, sand, gravel or cobble and boulder substrates in riffles of headwaters of small to medium sized rivers (NatureServe 2020). Like the vast majority of other North American freshwater mussels, the glochidia (larvae) of the Purple Lilliput is an obligate fish parasite, which attaches to the gill filaments or fins of a host-fish, until it reaches the sub-adults stage, at which point it drops to the substrate to assume a benthic life. The purple Lilliput is uses Longear Sunfish (*Lepomis megalotis*) and Green Sunfish (*Lepomis cyanellus*) as hosts (INHS 2017). Major threats to this species include pollution and sedimentation from land use practices, channel alteration, construction of dams and other river impoundments; although, this species tolerates impoundments better than other freshwater mussels (NatureServe 2020). There is one 1994 record of this species downstream on the Mulberry River, approximately 11 miles west of the project area (AGFC 2016). Wolf Pen Creek is a high-gradient, intermittent stream with very

course substrate and exposed bedrock shelves, thus not suitable habitat for freshwater mussels. No live mussels or shell material were found at this site. Additionally, gravel bar searches of Mulberry River downstream of the project area yielded no mussels or shell material. Both known host fish species were found in our electrofishing surveys (***Appendix C***), so host fish availability would not be a limiting factor for occurrence of Purple Lilliput.

Direct Effects
There is little suitable habitat for freshwater mussels located within the project area on Wolf Pen Creek; therefore, any direct effects would impact animals potentially occurring in the Mulberry River downstream of the confluence with Wolf Pen Creek. Potential negative effects include increased turbidity and sedimentation, which can bury mussels, causes by clearing and grubbing, demolition of existing bridge, and excavation associated with construction. Erosion control BMPs will in place to minimize the effects of sedimentation and turbidity.

Indirect Effects
No indirect effects of project construction activities are expected for this species.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Purple Lilliput. Arkansas Natural Heritage Commission and Arkansas Game and Fish Commission records indicate Purple Lilliput approximately 14.0 miles downstream of the project area on the Mulberry River near Cass. Although the species is not known from within the immediate project area, individuals from unknown populations downstream from the project area could be affected by construction activities.*

Ouachita false indigo (*Amorpha ouachitenses*) – Sensitive
Global Rank: G3 - Vulnerable
AR State Rank: S3 - Vulnerable

Ouachita false indigo is an endemic forb of the Ouachita Mountains of western Arkansas and southeastern Oklahoma. Habitat includes rocky creeks, stream banks, floodplains, rocky ridges, glades and dry, rocky, sandstone slopes (Masters 1993, NatureServe 2020). This species prefers an open canopy. Cattle grazing, logging, brush clearing, stream alteration, and road construction threaten Ouachita false indigo populations (Masters 1993, NatureServe 2020). ANHC (2018) records indicate an occurrence of this species approximately 12 miles SE of the project area in the Pleasant Hill Ranger District in Johnson County.

Direct Effects
Vascular plant surveys (Appendix B) conducted did not identify any Ouachita false indigo within the project area. Although the vascular plant survey did not detect the species within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Under proposed activities, heavy operating equipment could crush individuals. Temporary soil disturbance, creation of early successional habitat, and sedimentation should not have any direct negative effect on this species, especially since this species is capable of growing in disturbed conditions (NatureServe 2020).

Indirect Effects
Under the proposed activities, temporary soil disturbance, creation of early successional habitat and sedimentation may allow non-native species to become established and alter this species' preferred habitat. Potentially invasive species noted in the project area include orchard grass (*Dactylis glomerata*), sericea lespedeza (*Lespedeza cuneata*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), beefsteak plant (*Perilla frutescens*), multi-flora rose (*Rosa multiflora*), and tall fescue (*Schedonorus arundinaceus*). Clearing in the project are may create early successional habitat with a more open canopy, which could benefit this species.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Ouachita false indigo. Vascular plant surveys conducted within the project area did not identify the Ouachita false indigo. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Ozark chinquapin (*Castanea pumila var. azarkensis*) – Sensitive
Global Rank: T3 – Vulnerable Variety
AR State Rank: S3S4 – Vulnerable/Apparently Secure

Ozark chinquapin is found mainly in the Ozarks, but there are scattered populations in the Ouachita Mountains (ANHC 2018). Habitat includes oak-pine and oak-hickory forests on relatively dry, acidic soils, on ridge tops, tops of sandstone bluffs, and upper slopes adjacent to ravines. It is also noted from mesic sites in much of Arkansas, and less commonly in Missouri and Oklahoma (Masters 1993, NatureServe 2020). Although forest clearings pose a threat to the dwindling Ozark chinquapin populations, the declining population is mostly attributed to the chestnut blight, a fungal disease. Trees killed by the chestnut blight may produce numerous sprouts from the roots (Masters 1993, NatureServe 2020). ANHC (2018) records indicate an

occurrence of this species approximately 1.0 mile N of the project area in Johnson County in the Pleasant Hill Ranger District.

Direct Effects
Although the vascular plant survey (***Appendix B***) did not detect Ozark chinquapin within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Under proposed activities, heavy operating equipment could crush individuals. Temporary soil disturbance, creation of early successional habitat and sedimentation should not have any direct effect on this species that have undoubtedly already been exposed to the chestnut blight.

Indirect Effects
Under the proposed activities, temporary soil disturbance and creation of early successional habitat may allow non-native species to become established and alter this species' preferred habitat. Potentially invasive species noted in the project area include orchard grass (*Dactylis glomerata*), sericea lespedeza (*Lespedeza cuneata*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), beefsteak plant (*Perilla frutescens*), multi-flora rose (*Rosa multiflora*), and tall fescue (*Schedonorus arundinaceus*).

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the Ozark chinquapin. Vascular plant surveys conducted within the project area did not identify the Ozark chinquapin. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Kentucky lady's slipper (*Cypripedium kentuckiense*) – Sensitive
Global Rank: G3 - Vulnerable
AR State Rank: S2 - Imperiled

Kentucky lady's-slipper is an orchid that occurs within the Interior Highlands of Arkansas, Missouri, and Oklahoma; the Gulf Coastal Plain of Texas, Louisiana, Alabama, and Mississippi; and the Cumberland Plateau of Kentucky and northern Tennessee (NatureServe 2020). It has also recently been found in eastern Virginia. This species is common in the state of Arkansas, but less common in Oklahoma, the western extent of its range. The habitat for this species is mesic floodplain forests along stream terraces and along margins of seeps and springs. These areas are often inundated annually and have complete canopy cover. This species is also found on mesic north slopes in hardwood forests. It is most abundant above the flood level and away from

spring-saturated soils. It is one of the most common and widespread sensitive plant species on the OSFNF. Protective measures established under the Forest Plan (USDA FS 2005c) and FEIS (USDA FS 2005d) to ensure the integrity of streamside management areas and seeps/springs have greatly reduced the potential for impacts to this species during resource management activities. Although its status is improving, the KEntucky lady's slipper's habitat is threatened by logging, which converts suitable forest types into pine plantations and reservoir construction, which can permanently inundate floodplain forests. KEntucky lady's slipper is intolerant to anthropogenic disturbance (Masters 1993). ANHC (2018) records indicate occurrence of this species approximately 3 miles SW and NxNE of the project area in the Pleasant Hill Ranger District in Johnson County.

Direct Effects
Vascular plant surveys (Appendix B) conducted within the project area did not identify the Kentucky lady's slipper. Although the vascular plant survey did not detect the species within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Creation of early successional habitat could displace the Kentucky lady's slipper, while operating heavy equipment could crush individuals. Sedimentation should not have any direct effects on this species.

Indirect Effects
Under the proposed activities, temporary soil disturbance and creation of early successional habitat may allow nonnative species to become established, which could out-compete and decrease lady's slipper habitat. Potentially invasive species noted in the project area include orchard grass (*Dactylis glomerata*), sericea lespedeza (*Lespedeza cuneata*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), beefsteak plant (*Perilla frutescens*), multi-flora rose (*Rosa multiflora*), and tall fescue (*Schedonorus arundinaceus*).

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Kentucky lady's slipper. Vascular plant surveys conducted within the project area did not identify the Kentucky lady's slipper. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Moore's delphinium (*Delphinium newtonianum*) – Sensitive
Global Rank: G3 - Vulnerable
AR State Rank: S3 - Vulnerable

Moore's delphinium is a blue-flowered, Arkansas endemic forb (Robison and Allen 1995) with a large number of populations in a few Ozark counties and a smaller disjunct set of populations on the Ouachita National Forest (ANHC 2018). This species can be locally abundant within its limited range (Hardcastle and Gentry 2009). It is found in rich, mesic to dry-mesic forests (NatureServe 2020). In the Ozarks, it occurs on steep slopes or benches at moderately high elevations, while the Ouachita populations occur on floodplains at lower elevations (Hardcastle and Gentry 2009). It is considered to be of conservation concern due to the low number of populations and limited range (NatureServe 2020). Vascular plant surveys (***Appendix B***) conducted within the project area did not identify Moore's Delphinium.

Direct Effects
Although the vascular plant survey did not detect the species within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Creation of early successional habitat could displace the Moore's Delphinium, while operating heavy equipment could crush individuals. Sedimentation should not have any direct effects on this species.

Indirect Effects
Under the proposed activities, temporary soil disturbance and creation of early successional habitat may allow nonnative species to become established, which could out-compete and decrease Moore's Delphinium habitat. Potentially invasive species noted in the project area include orchard grass (*Dactylis glomerata*), sericea lespedeza (*Lespedeza cuneata*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), beefsteak plant (*Perilla frutescens*), multi-flora rose (*Rosa multiflora*), and tall fescue (*Schedonorus arundinaceus*).

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Moore's delphinium. Vascular plant surveys conducted within the project area did not identify the Moore's delphinium. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Small-head pipewort (*Eriocaulon koernickianum*) – Sensitive
Global Rank: G2 - Imperiled
AR State Rank: S2 - Imperiled

This diminutive graminoid is an early-successional species with disjunct distribution in Arkansas, Georgia, Oklahoma, and Texas (NatureServe 2020). In the interior highlands of Arkansas and Oklahoma, it is found in sparsely-vegetated areas in open-canopy, acidic seeps, including sandy hillside seeps and permanently moist seepage glades. In occurs adjacent to the Ouachita Mountains on the coastal plain in Texas and Oklahoma (NatureServe 2020). In the Georgia piedmont, a disjunct distribution occurs in seepages and wet depressions on granite outcrops (NatureServe 2020). Only 47 populations are known to persist, with 21 populations presumed extirpated, mostly in the western portion of its range (NatureServe 2020, Watson et al. 1994). Arkansas populations are concentrated in the Ozark Mountains, but there are also disjunct populations within the state, including occurrences in the Ouachita Mountains. In addition to its strict habitat requirements, several reproductive characteristics contribute to its vulnerability: monoecy, annual to short-perennial life history, low seed set, minimal seed banking, and low range-wide genetic diversity (Watson et al. 1994). Vegetation surveys did not find additional occurrences within or near the project area (***Appendix B***), though the nearest occurrence record is approximately 1.9 miles W (ANHC 2018).

Direct Effects
Although the vascular plant survey did not detect the species within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Creation of early successional habitat could displace the small-head pipewort, while operating heavy equipment could crush individuals. Sedimentation should not have any direct effects on this species.

Indirect Effects
Under the proposed activities, temporary soil disturbance and creation of early successional habitat may allow nonnative species to become established, which could out-compete and decrease small-head pipewort habitat. Potentially invasive species noted in the project area include orchard grass (*Dactylis glomerata*), sericea lespedeza (*Lespedeza cuneata*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), beefsteak plant (*Perilla frutescens*), multi-flora rose (*Rosa multiflora*), and tall fescue (*Schedonorus arundinaceus*).

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for small-head pipewort. Vascular plant surveys conducted within the project area did not identify the small-head pipewort. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Ozark spiderwort (*Tradescantia ozarkana*) – Sensitive
Global Rank: G3 - Vulnerable
AR State Rank: S3 - Vulnerable

This perennial monocot is endemic to the US Interior Highlands (Zollner et al. 2005). Its distribution is primarily in the Ozark Mountains in Missouri, Oklahoma, and several northwest Arkansas counties, with a number of disjunct occurrences in the Ouachita Mountains. It is generally found on dolomite or sandstone substrates in wooded slopes and ravines, dry to moist wooded ledges, and at the bases and lower slopes of bluffs (Steyermark 1963). Historically, large populations of this species were wiped out by construction of large reservoirs in the White River Basin. Oklahoman Ozark populations of this species have remained fairly stable during the last 50 years, though populations have experienced significant declines in the Ouachita Mountains (Watson 1989). Major threats to this species include housing development, roadway construction, feral hogs, logging, and clearing for pasture (NatureServe 2020). This species may actually benefit from decreasing canopy cover (NatureServe 2020). Plant surveys did not locate any individuals of this species in the project area (***Appendix B***). The nearest occurrence of Ozark spiderwort is approximately 8.4 miles NE of the project area in Johnson County, within the Pleasant Hill Ranger District (ANHC 2018).

Direct Effects
Although the vascular plant survey did not detect the species within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Creation of early successional habitat could displace the Ozark spiderwort, while operating heavy equipment could crush individuals. Sedimentation should not have any direct effects on this species.

Indirect Effects
Under the proposed activities, temporary soil disturbance and creation of early successional habitat may allow nonnative species to become established, which could out-compete and decrease Ozark spiderwort habitat. Potentially invasive species noted in the project area include orchard grass (*Dactylis glomerata*), sericea lespedeza (*Lespedeza cuneata*), Japanese honeysuckle (*Lonicera japonica*), Japanese stilt grass (*Microstegium vimineum*), beefsteak plant (*Perilla frutescens*), multi-flora rose (*Rosa multiflora*), and tall fescue (*Schedonorus arundinaceus*). Barring displacement by invasive species, Ozark spiderwort may actually benefit from opening the mostly closed canopy within the project area.

Cumulative Effects
The construction activities occurring within the OSFNF, associated with ArDOT's Hwy. 215 Slide Repair and OSFNF's Wolf Pen Project, have been reviewed above, ensuring compatibility with the Forest Plan (USFS 2005c) and FEIS (USFS 2005d). Further development within the area will likely be minimized due to the amount of property currently owned or maintained by OSFNF. As a result, no cumulative effects are expected to occur.

Determination of Effects: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Ozark spiderwort. Vascular plant surveys conducted within the project area did not identify the Ozark*

spiderwort. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.

CONSULTATION HISTORY WITH THE U.S. DEPARTMENT OF THE INTERIOR – U.S. FISH AND WILDLIFE SERVICE

A copy of this document as well as a Categorical Exclusion for this project will be provided to the USFWS for comment. Three federally listed species are known to occur in or near the proposed action area: gray bat (*Myotis griscecens*) and Indiana bat (*Myotis sodalis*) as endangered, and northern long-eared bat (*Myotis septentrionalis*) as threatened. Based on the findings of this document as well as previous consultations between OSFNF and the USFWS, a determination of not likely to adversely affect is appropriate, unless presented with new information.

COORDINATION HISTORY WITH THE U.S. ARMY CORP OF ENGINEERS

The proposed construction activities will require excavation or discharge of dredged or fill material into jurisdictional waters of the U.S.; thus, an USACE issued permit under the Section 404 of the Clean Water Act will need to be obtained for this project. A permit application will be submitted to the Little Rock District for this project.

DETERMINATION OF EFFECTS

***Based on the preceding documentation, discussions, and "best available science,"* the "determination of effects" for the proposed actions are as follows:**

A. Proposed, Threatened and Endangered Species

_____ No Effect

__X__ May affect, not likely to adversely affect

_____ May affect, likely to adversely affect

_____ 4(d) Rule

Gray bat: *The proposed highway construction activities "may affect, but are not likely to adversely affect" the gray bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could*

be overlooked or not avoided during highway construction activities. Clearing and temporary sedimentation may alter or diminish foraging. Project construction activities could lead to diminished foraging opportunities for this species.

Indiana bat: *The proposed highway construction activities "may affect, but are not likely to adversely affect" the Indiana bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Project construction activities could lead to diminished foraging opportunities for this species.*

B. Proposed, Threatened and Endangered Species

_____ No Effect

_____ May affect, not likely to adversely affect

_____ May affect, likely to adversely affect

___X___ 4(d) Rule

Northern long-eared bat*: The proposed highway construction activities "may affect, but are not likely to adversely affect" the northern long-eared bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities. Project construction activities could lead to diminished foraging opportunities for this species.*

The Final 4(d) Rule applies to the project's activities that have the potential to affect northern long-eared bats. The Final 4(d) Rule exempts the incidental take of northern long-eared bats from take prohibitions in the Endangered Species Act. The exemptions apply as long as the activities do not occur within 0.25 mile of a known hibernaculum or within 150 feet of a known occupied maternity roost from June 1 to July 31. No known hibernacula or maternity roosts exist within the project limits; therefore, the project can proceed without restrictions.

C. Sensitive Species

_____ No Impact

_____ Beneficial Impact

__X__ May impact individuals but is not likely to cause a trend to federal listing or loss of viability:

Boston Mountains Crayfish: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for Boston Mountains Crayfish. Soil compaction and temporary sedimentation and turbidity could affect this crayfish species. This species is not known to occur in the project area, thus this species is not likely to be significantly affected by project activities.*

Monarch butterfly: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the monarch butterfly. The species is likely to occur in the immediate project area, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities.*

William's Crayfish: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for William's Crayfish. Arkansas Natural Heritage Commission records (2005) indicate occurrences in a roadside spring, tributary to Washita Creek, approximately 2.4 miles south of the project area. This species was not detected in the project area, but habitat is suitable. Temporary sedimentation and turbidity. As well as the potential for increase aquatic vegetation would be detrimental to this species.*

An isopod - Lirceus bicuspidatus: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for the isopod Lirceus bicuspidatus. Arkansas Natural Heritage Commission records (2018) indicate occurrences on Washita Creek, approximately 3.0 mile southeast of the project area. This species is not known to occur in the project area. Though a few individuals may be susceptible to project construction activities, this species is not likely to be significantly affected by project activities.*

Eastern small-footed bat: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the eastern small-footed bat. The species may use the project area for foraging or summer habitat, and it is possible that individuals of this species could be overlooked or not avoided during highway construction activities.*

Project construction activities could lead to diminished foraging opportunities for this species.

Nearctic paduniellan caddisfly: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for the nearctic paduniellan caddisfly. This species is not known to occur in the project area, though habitat is suitable, and any present individuals may be susceptible to project construction activities. This species is not likely to be significantly affected by this project.*

Longnose Darter: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for Longnose Darter. Arkansas Natural Heritage Commission records indicate the species occurs in close proximity to the project area in the Mulberry River. This species could be negatively affected by temporary sedimentation and turbidity. BMPs will be in place to minimize these effects.*

Tricolored bat: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the tricolored bat. Although surveys were not conducted within the project area, a bridge assessment found no evidence of bats utilizing the bridge. This species is likely to occur in the project area, and there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. Clearing could alter potential roosting and foraging habitat post-construction.*

Bachman's Sparrow: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to federal listing or loss of viability" for Bachman's Sparrow. Although the species has not been recorded from the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities. The creation of early successional habitat could be beneficial by providing suitable habitat to Bachman's Sparrow temporarily.*

Purple Lilliput: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Purple Lilliput. Arkansas Natural Heritage Commission and Arkansas Game and Fish Commission records indicate Purple Lilliput approximately 14.0 miles downstream of the project area on the Mulberry River near Cass. Although the species is not known from within the immediate project area, individuals from unknown populations downstream from the project area could be affected by construction activities.*

Ouachita false indigo: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Ouachita false indigo. Vascular plant surveys conducted within the project area did not identify the Ouachita false indigo. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Ozark chinquapin*: The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for the Ozark Chinquapin. Vascular plant surveys conducted within the project area did not identify the Ozark Chinquapin. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Kentucky lady's slipper: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Southern lady's slipper. Vascular plant surveys conducted within the project area did not identify the Southern lady's slipper. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Moore's Delphinium: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Moore's delphinium. Vascular plant surveys conducted within the project area did not identify the Moore's delphinium. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Small-headed pipewort: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for small-head pipewort. Vascular plant surveys conducted within the project area did not identify the small-head pipewort. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.*

Ozark spiderwort: *The proposed highway construction activities "may impact individuals but are not likely to cause a trend to Federal listing or loss of viability" for Ozark spiderwort. Vascular plant surveys conducted within the*

project area did not identify the Ozark spiderwort. Although the species was not detected within the project area, there is the possibility that individuals of this species could be overlooked or not avoided during highway construction activities.

Matthew Schrum
ARDOT Aquatic Biologist

07/14/2021
Date

Concurrence by:

Gregory Taylor
Pleasant Hill District Wildlife Biologist

07/14/21
Date

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Appendix A

PETS Species Checklist

Survey Needs Based on FSM 2672.43(USDA FS 2005d)

Proposed, Endangered, Threatened, and Sensitive Species List

Common name	Scientific Name	Status*	Potentially Affected	Notes and Comments
FEDERALLY ENDANGERED and THREATENED SPECIES				
Red Knot	*Calidris canutus rufa*	T	No	Inland migratory habitat primarily consists of saline lakes, but may use some freshwater impoundments (Russel 2014, USFWS 2014), neither of which occur in the project area.
Piping Plover	*Charadrius melodus*	T	No	Suitable habitat is not available. Nests on sandbars of large rivers and lakes, with most records from the Mississippi Alluvial Plain (James and Neal 1986, USFWS 2015).
Eastern Black Rail	*Laterallus jamaicensis ssp. jamaicensis*	T	No	Suitable habitat, herbaceous marsh, does not occur in or near the project area (Natureserve Explorer 2020).
gray bat	*Myotis grisescens*	E	Yes	Suitable foraging habitat occurs in the project area. Hibernaculum located ~16miles WxSW of project area in Boston Mtn. Ranger Distrct, Franklin County (ANHC 2018).
northern long-eared bat	*Myotis septentrionalis*	T	Yes	Suitable summer roosting and foraging habitat occur in the project area. Mist-net capture (2013) ~2.5 miles SxSW of project area in Pleasant Hill Ranger Distrct, Johnson County (ANHC 2018).
Indiana bat	*Myotis sodalis*	E	Yes	Suitable summer roosting and foraging habitat occurs in the project area. Roost tree record (2004) ~15miles WxSW of project area in Boston Mtn. Ranger Distrct, Franklin County (ANHC 2018).
American burying beetle	*Nicrophorus americanus*	T	No	Project area outside of USFWS 2- and 3- acre consultation areas (USFWS 2017). Approximately 27 miles from closest ABB record (2014) (ANHC 2018).
Missouri bladderpod	*Physaria filiformis*	T	No	Limestone/dolomite glades not located in project area. Not known to occur in Johnson County or Pleasant Hill Ranger District (ANHC 2018).
FOREST SERVICE SENSITIVE SPECIES - ANIMALS				
Slippershell	*Alasmidonta viridis*	S	No	Does not occur in the Mulberry River drainage (ANHC 2018, Harris et al. 2009).
Henslow's Sparrow	*Ammodramus henslowii*	S	No	Rare, transient, winter resident (James and Neal 1986). No records in Pleasant Hill RD (ANHC 2018). Requires grassland habitat, which does not occur in project area (Burhans 2002).
Boston Mountains crayfish	*Cambarus causeyi*	S	Yes	Occurrence records (1994) within 1 mile of project area (ANHC 2018).

Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	S	No	Known from the St. Francis Ranger District, not from the rest of Ozark NF (ANHC 2018). In Arkansas, it prefers swamps and bottomland hardwood forests in the Gulf Coastal Plain (NatureServe Explorer 2020).
Western Fanshell	*Cyprogenia aberti*	P	No	Not known from the Mulberry River Watershed (AGFC 2016, ANHC 2018, Harris et al. 2009)
monarch butterfly	*Danaus plexippus*	P	Yes	Has a broad distribution across the Eastern United States, including Arkansas (NatureServe 2020).
Williams' crayfish	*Faxonius williamsi*	S	Yes	Occurrence records (2005) ~2.5 miles upstream of project area on Washita Creek (ANHC 2018).
Magazine Mountain middle-toother snail	*Inflectarius magazinensis*	S	No	Only known from the Magazine RD (ANHC 2018, Caldwell et al. 2014).
an isopod	*Lirceus bicuspidatus*	S	Yes	Known from Washita Creek, in the Mulberry River watershed, Pleasant Hill RD, ~3 miles SE of the project area (ANHC 2018).
southeastern bat	*Myotis austroriparius*	S	No	Prefers forested wetlands and floodplain forestin in southern and eastern AR. Not known from the Boston Mountains Ecoregion (ANHC 2018, Perry et al. 2018).
eastern small-footed bat	*Myotis leibii*	S	Yes	rock outcrop/cliff habitat occurs in project area. Known from Johnson Co. in the Big Piney RD, and ~15 miles in Boston Mtns. RD (ANHC 2018, Perry et al. 2018).
Ozark Shiner	*Notropis ozarcanus*	S	No	Does not occur in the Mulberry River drainage (ANHC 2018, Robison and Buchanan 2020).
nearctic paduniellan caddisfly	*Paduniella nearctica*	S	Yes	Occurrence records ~2 miles downstream from confluence on Mulberry River (ANHC 2018).
Longnose Darter	*Percina nasuta*	P	Yes	Occurs in Mulberry River. Recorded at confluence of Mulberry and Wolf Prn Cr. 2014 (ANHC 2018, Robison and Buchanan 2020).
tri-colored bat	*Perimyotis subflavus*	P	Yes	Suitable forest habitat present in project area. Widespread throughout AR (Perry et al. 2018).
Bachman's Sparrow	*Peucaea aestivalis*	S	Yes	Occurrence records in the Boston Mtns. RD, though uncommon outside of the Ouachitas and Coastal Plain (James and Neal 1986, Fowler 2015).
regal fritillary	*Speyeria idalia*	P	No	Suitable prairie/savannah habitat does not occur in project area. Thought to have been extirpated from AR, until observed at Chesney Prairie in Benton Co (ANHC 2019).
Purple Lilliput	*Toxolasma lividum*	P	Yes	Known from the Mulberry River, downstream of project area, in the Pleasant Hill RD (AGFC 2016).
Southern Cavefish	*Typhlichthys subterraneus*	S	No	Known only from the Sylamore RD of ONF (ANHC 2018, NatureServe Explorer 2020, USGS 2020). Karst habitat does not occur in the project area.
FOREST SERVICE SENSITIVE SPECIES - PLANTS				
ear-leaf false foxglove	*Agalinis auriculata*	S	No	Found in the Boston Mtns. RD (Carroll Co.), ~45 miles west of project area. Not known from Pleasant Hill RD or Johnson Co. (ANHC 2018).

Ouachita indigo-bush	*Amorpha ouachitensis*	S	Yes	Known from Pleanant Hill RD in Johnson Co. ~5.3 miles from project area (ANHC 2018).
Bush's poppy mallow	*Callirhoe bushii*	S	No	Not known from Pleasant Hill RD. Known from Newton Co. ~43 miles NE of project area (ANHC 2018).
Ozark chinquapin	*Castanea pumila var. ozarkensis*	S	Yes	Known from Pleasant Hill RD, ~1.0 mile from the project area (ANHC 2018).
Kentucky lady's-slipper	*Cypripedium kentuckiense*	S	Yes	Known from the Pleasant Hil RD, ~3.0 miles from the project area (ANHC 2018).
Moore's delphinium	*Delphinium newtonianum*	S	Yes	Not known from Pleasant Hill RD or Johnson Co., but suitable habitat exists. Known from Big Pney RD in Johnson Co. ~26.0 miles east of project area (ANHC 2018).
Trelease's larkspur	*Delphinium treleasei*	S	No	Does not occur in the Boston Mtns. Ecoregion (ANHC 2018). Requires exposed calcereous bedrock, which does not occur in the project area (NatureServe Explorer 2020).
open-ground whitlow-grass	*Draba aprica*	S	No	Not known from Pleasant Hill RD of Johnson Co. (ANHC 2018). Occurs ~44 miles north of project area in Madison Co.
Church's wild rye	*Elymus churchii*	S	No	Not known from Pleasant Hill RD or Johnson Co. Known from Newton Co. ~37miles NE of project area (ANHC 2018).
small-head pipewort	*Eriocaulon koernickianum*	S	Yes	Known from the Pleasant Hil RD, ~2.0 miles from the project area (ANHC 2018).
creeping St. John's wort	*Hypericum adpressum*	S	No	Not known to occur in the Boston Mtns. ecoregion (ANHC 2018).
butternut	*Juglans cinerea*	S	No	Not known from the Pleasant Hill RD or Johnson Co. Known from the Big Piney RD in Newton (ANHC 2018).
Alabama snow-wreath	*Neviusia alabamensis*	S	No	Not known from the Pleasant Hill RD or Johnson Co. Known from the Big Piney RD in Pope Co. ~34 miles from project area (ANHC 2018).
largeleaf grass of Parnassus	*Parnassia grandifolia*	S	No	Known only from Hot Spring and Montmogery Counties, not known from the Boston Mountains ecoregion (McDaniel et al. 1997).
maple-leaf oak	*Quercus acerifolia*	S	No	Not known from Pleasant Hill RD or Johnson Co. Known from the Mount Magazine RD ~44 miles south of project area (ANHC 2018).
bay star-vine	*Schisandra glabra*	S	No	Not known from the Boston Mnts. Ecoregion. Occurs in the St. Francis RD (ANHC 2018).
ovate-leaf catchfly	*Silene ovata*	S	No	Not known from Johnson County or the Pleasant Hill Ranger District (ANHC 2018).
royal catchfly	*Silene regia*	S	No	Not known from the Boston Mnts. Ecoregion. Occurs ~45.0 miles N of project area in Madison Co. (ANHC 2018).
Ouachita goldenrod	*Solidago ouachitensis*	S	No	Not known from Pleasant Hill RD. Known from Mtn. Magazine RD ~44.0 miles S of project area. Ouachita Mtns. endemic (ANHC 2018, NatureServe Explorer 2020).
Ozark spiderwort	*Tradescantia ozarkana*	S	Yes	Known from the Pleasant Hill RD in Johnson Co., ~8.5 miles from project area (ANHC 2018).

Ozark least trillium	*Trillium pusillum var. ozarkanum*	S	No	Not known from Pleasant Hill RD or Johnson Co. Known from Newton Co. ~32 miles NE of project area (ANHC 2018).
Nuttall's cornsalad	*Valerianella nuttallii*	S	No	Does not occur in the Boston Mtns. Ecoregion (ANHC 2018). Occurs in the Ouachita Mnts. on shale bedrock (NatureServe Explorer 2020).
Ozark cornsalad	*Valerianella ozarkana*	S	No	Not known from the Pleasant Hill RD. Required calcareous glade habitat does not occur in or around the project area. Nearest occurrence is ~63.0 miles NE in Searcy Co. (ANHC 2018).

* Status

P = Petitioned for federal listing as endangered or threatened

E = Federal endangered species

T = Federal threatened species

S = Amended Regional Forester's Sensitive Species List (Region 8 2018)

Appendix B
VASCULAR PLANT SURVEY

A vascular plant survey was conducted June 6th 2020, in the OSFNF near the bridge over Wolf Pen Creek on Highway 215 by ARDOT staff botanists Joe Ledvina. A total of 113 species were identified. Nineteen species (16.8%) were non-natives. Non-native species (*) and non-native invasive species (**) are noted below. No species tracked by the ANHC, or listed as PETS by the US Forest Service, were located in the project area.

TREES (species)

Altingiaceae	*Liquidambar styraciflua*	American sweetgum
Annonaceae	*Asimina triloba*	pawpaw
Betulaceae	*Carpinus caroliniana*	American hornbeam, blue-beech, musclewood
Cannabaceae	*Celtis occidentalis*	common/northern/American hackberry, sugarberry, beaverwood
Cornaceae	*Cornus florida*	flowering dogwood
Cupressaceae	*Juniperus virginianacedar*	eastern red cedar, Virginian juniper, red juniper, pencil cedar, aromatic
Ebenaceae	*Diospyros virginiana*	American/common/eastern persimmon, possumwood, possum apple, sugar plum
Fabaceae	*Gleditsia triacanthos*	Honey locust, thorny locust
Fagaceae	*Quercus rubra*	northern red oak
Juglandaceae	*Carya alba*	mockernut/white/whiteheart hickory, mockernut, hognut, bullnut
	Carya illinoinensis	pecan
Magnoliaceae	*Magnolia tripetala*	umbrella magnolia, umbrella-tree
Oleaceae	*Fraxinus pennsylvanica*	green ash
Pinaceae	*Pinus echinata*	shortleaf pine
Platanaceae	*Platanus occidentalis*	American sycamore, American planetree
Rosaceae	*Prunus serotine*	black cherry, wild black cherry, rum cherry

Salicaceae	*Salix caroliniana*	coastal plain/carolina willow
Sapindaceae	*Acer rubrum*	red/swamp/water/soft maple
	Acer saccharinum	silver/creek/silverleaf/soft maple
	Aesculus glabra	Ohio/American/fetid buckeye
Ulmaceae	*Ulmus alata*	winged/cork/small-leaf elm, wahoo
	Ulmus Americana	American/white/water elm
	Ulmus rubra	slippery/red elm

SHRUBS (4 species)

Adoxaceae	*Sambucus canadensis*	American/common elderberry
Caprifoliaceae	*Symphoricarpos orbiculatus*	coralberry, buckbrush, Indian currant
Lauraceae	*Lindera benzoin*	northern/common spicebush, wild allspice, Benjamin bush
Rosaceae	***Rosa multiflora*	multiflora/baby/Japanese rose

VINES (10 species)

Anacardiaceae	*Toxicodendron radicans*	poison ivy
Bignoniaceae	*Campsis radicans*	trumpet vine, trumpet creeper, cow itch vine, hummingbird vine
Caprifoliaceae	*Lonicera sempervirens*	coral/trumpet/scarlet honeysuckle
Convulvulaceae	*Ipomoea sp.*	morning glory
Menispermaceae	*Menispermum canadense*	common/Canadian moonseed, yellow parilla
Rosaceae	*Rubus sect. argutae*	blackberry
Smilacaceae	*Smilax bona-nox*	saw greenbrier, cat brier, zarzaparrilla, bullbrier
	Smilax rotundifolia	roundleaf/common greenbrier
Vitaceae	*Nekemias arborea*	peppervine
	Parthenocissus quinquefolia	Virginia/Victoria creeper, woodbine, five-leaved ivy

FORBS (55 species)

Alliaceae	*Allium canadense*	meadow/wild garlic
Apiaceae	*Osmorhiza longistylis*	aniseroot, sweet-cicely, sweetroot, sweet chervil
	Sanicula canadensis	Canadian black snakeroot, Canada sanicle
Araceae	*Arisaema triphyllum*	jack-in-the-pulpit, bog onion, brown dragon, Indian turnip
Asteraceae	**Taraxacum officinale*	common dandelion
	Ambrosia artemisiifolia	common/annual/low ragweed
	cf. Parthenium	false ragweed, quinine-weed, ragweed parthenium, Santa Maria
	Elephantopus carolinianus	Carolina elephantsfoot
	Erigeron annuus	annual fleabane, eastern daisy fleabane
	Eutrochium cf. *purpureum*	Joe-Pye weed, kidney-root
	Helianthus sp.	sunflower
	Krigia caespitosa	common/opposite-leaved/weedy dwarf dandelion
	Lactuca sp.	lettuce
	Polymnia canadensis	whiteflower leafcup
	Symphyotrichum sp.	aster
	Verbesina cf helianthoides	yellow crown beard, gravelweed
Balsaminaceae	*Impatiens capensis*	orange/common/spotted jewelweed, orange balsam, spotted touch-me-not
Boraginaceae	*Cynoglossum virginianum*	wild comfrey, blue houndstongue
	Myosotis macrosperma	largeseed forget-me-not, bigseed scorpiongrass
Campanulaceae	*Triodanis perfoliata*	clasping Venus' looking-glass, clasping bellflower
Caryophyllaceae	**Dianthus armeria*	Deptford/grass pink
Colchicaceae	*Uvularia grandiflora*	large-flowered bellwort, merrybells
Fabaceae	***Lespedeza cuneate*	Chinese bushcolver, sericea lespedeza, sericea
	**Kummerowia striata*	Japanese clover

	**Vicia sativa*	common vetch, garden vetch, tare
	Amphicarpaea bracteata	hog-peanut, ground bean
	Desmodium sp.	tick-trefoil, tick clover, hitch hikers, beggar lice
Geraniaceae	*Geranium carolinianum*	Carolina germanium, Carolina cranesbill
Hypericaceae	*Hypericum drummondii*	nits and lice, Drummond's St. John's-wort
Iridaceae	*Sisyrinchium angustifolium*	narrow-leaf blue-eyed-grass, grass flower
Lamiaceae	***Perilla frutescens*	beefsteak plant, Korean perilla
	Salvia lyrata	lyre-leaf sage, wild sage, cancerweed
	Scutellaria elliptica	hairy skullcap
Oxalidaceae	*Oxalis dillenii*	slender yellow woodsorrel, southern woodsorrel
Phrymaceae	*Phryma leptostachya*	American lopseed
Phytolaccaceae	*Phytolacca Americana*	American pokeweed, poke sallet, dragonberries
Plantaginaceae	**Plantago lanceolate*	narrowleaf/ribwort/English plaintain, ribleaf, lamb's tongue, buckhorn
	Nuttallanthus texanus	Texas toadflax
	Plantago rugelii	American/blackseed/pale/Rugel's plantain
	Plantago virginica	Virginia/paleseed/southern plantain
	**Veronica* cf. *arvensis*	wall/corn/common/rock/field speedwell
Polygonaceae	**Rumex crispus*	curly/curled/yellow dock
	Persicaria cf. *hydropiperoides*	swamp smartweed, false waterpepper
	Persicaria pensylvanica	Pennsylvania/pink smartweed, pink knotweed, pinkweed
	Persicaria virginiana	jumpseed, Virginia/woodland knotweed
Rosaceae	*Geum canadense*	white avens
Rubiaceae	**Cruciata pedemontana*	Piedmont bedstraw

	**Sherardia arvensis*	blue fieldmadder
	Diodia teres	poorjoe, rough buttonweed
	Galium aparine	cleavers, clivers, bedstraw, goosegrass, catchweed
	Galium arkansanum	Arkansas bedstraw
Solanaceae	*Solanum carolinense*	Carolina horsenettle, Carolina nightshade
Urticaceae	*Laportea Canadensis*	Canadian wood-nettle
Valerianaceae	*Valerianella radiate*	beaked corn salad
Violaceae	*Viola pubescens*	downy/hairy yellow violet

GRAMINOIDS (16 species)

Cyperaceae	*Carex annectens*	yellow-fruited fox sedge
	Carex rosea	rosy sedge, curly wood sedge
Poaceae	***Dactylis glomerata*	cock's-foot, orchard/cat grass
	***Microstegium vimineum*	Japanese stiltgrass, packing grass, Nepalese browntop
	***Schedonorus arundinaceus*	tall fescue
	**Briza minor*	lesser/little quaking-grass, shivery-grass
	**Bromus racemosus*	meadow/hairy brome, hairy chess
	**Poa annua*	annual meadow grass, annual bluegrass
	**Vulpia myuros*	annual/rat's-tail fescue
	Aira elegans	annual silver hairgrass, elegant/Mediterranean hairgrass
	Chasmanthium latifolium	woodoats, inland/northern sea oats, river oats
	Dichanthelium clandestinum	deertongue grass, rosette-panicgrass
	Elymus virginicus	Virginia wildrye
	Festuca subverticillata	nodding fescue
	Hordeum pusillum	little barley

	Poa sylvestris	woodland bluegrass

FERNS (1 species)

Dryopteridaceae	*Polystichum acrostichoides*	Christmas fern

Appendix C
AQUATICS SURVEY

An aquatics survey was conducted on July 27th 2020 in the OSFNF near the bridge over Wolf Pen Creek on Highway 215 by ARDOT staff biologist Matthew Schrum and Sarah DeVries, and USFS biologists Matthew Anderson and Heather Custer. The stream was sampled with a backpack electrofisher for approximately a gross total of 35 minutes, from the Hwy 215 bridge over Wolf Pen Creek, to approximately 328m upstream. A total of 10 species were identified, 9 fish and 1 crayfish. No species tracked by the ANHC, or listed as PETS by the US Forest Service, were located in the project area.

FISHES (9 Species)

Centrarchidae	*Lepomis megalotis*	Longear Sunfish
	Lepomis cyanellus	Green Sunfish
Cyprinidae	*Semotilus atromaculatus*	Creek Chub
	Campostoma spadiceum	Highland Stoneroller
Ictaluridae	*Noturus exilis*	Slender Madtom
Percidae	*Ethoeostoma* sp. *cf. pulchellum* I	Orangethroat Darter (Red Belly Form)
	Etheostoma flabellare	Fantail Darter
	Ethoeostoma whipplei	Redfin Darter
	Etheostoma blennioides	Greenside Darter

CRAYFISH (1 Species)

Cambaridae	*Faxonius meeki meeki*	Meek's Crayfish

ARDOT ENVIRONMENTAL VERIFICATION CHECKLIST
FOR CONSIDERATION OF POTENTIAL IMPACTS

ARDOT Job 080617 **FAP** NHPP-0036(26)

Job Title Wolf Pen Creek Str. & Apprs. (S)

Environmental Resource	None	Minimal	Major	Comments
Air Quality	X			No impacts anticipated
Cultural Resources	X			"No historic properties affected"
Economic	X			No impacts anticipated
Endangered Species		X		"No effect" and "Not likely" determinations
Environmental Justice/Title VI	X			No impacts anticipated
Fish and Wildlife	X			Temporary and minor during construction
Floodplains	X			No regulatory floodplains in project area
Forest Service Property		X		0.2 acre proposed right of way in OSFNFs
Hazardous Materials/Landfills	X			No impacts anticipated
Land Use		X		0.2 acre proposed ROW, 0.1 acre TCE
Migratory Birds	X			Migratory Bird Special Provision
Navigation/Coast Guard	X			No impacts anticipated
Noise Levels	X			No impacts anticipated
Prime Farmland	X			No impacts anticipated
Protected Waters		X		200' upstream of the Mulberry WSR
Public Recreation Lands	X			No impacts anticipated
Public Water Supply/WHPA	X			No impacts anticipated*
Relocatees	X			No relocations anticipated
Section 4(f)/6(f)	X			No impacts anticipated
Social	X			No impacts anticipated
Underground Storage Tanks	X			No impacts anticipated
Visual	X			No impacts anticipated
Streams		X		36' permanent impacts, 32' temporary
Water Quality		X		Temporary and minor during construction
Wetlands	X			No impacts anticipated
Wildlife Refuges	X			No impacts anticipated

Section 401 Water Quality Certification Required? No

Short-term Activity Authorization Required? Yes

Section 404 Permit Required? Yes Type Nationwide 14

Remarks:

*Wellhead protection area 1.6 miles from project area

Signature of Evaluator Susan Stafford Date April 11, 2022

Date Sent: July 22, 2020

ROADWAY DESIGN REQUEST

Job Number 080617 FAP No. _____ County Johnson

Job Name Wolf Pen Creek Str. & Apprs. (S)

Design Engineer Garver Environmental Staff _____

Brief Project Description Bridge construction

A. Existing Conditions:

Roadway Width: 20' Shoulder Type/Width: No shoulders

Number of Lanes and Width: 2-10' Existing Right-of-Way: Var. (80'-165')

Sidewalks? N/A Location: _____ Width: _____

Bike Lanes? N/A Location: _____ Width: _____

B. Proposed Conditions:

Roadway Width: 28' Shoulder Type/Width: 4' paved

Number of Lanes and Width: 2-10' Proposed Right-of-Way: Var. (100'-165')

Sidewalks? N/A Location: _____ Width: _____

Bike Lanes? N/A Location: _____ Width: _____

C. Construction Information:

If detour: Where: N/A Length: _____

D. Design Traffic Data:

2021 ADT: 150 2041 ADT: 180 % Trucks: 2%

Design Speed: 30 m.p.h.

E. Approximate total length of project: 0.15 mile(s)

F. Justification for proposed improvements: Structure replacement

G. Total Relocatees: 0 Residences: 0 Businesses: 0

H. Have you coordinated with any outside agencies (e.g., FHWA, City, County, etc.)? N/A

Agency/Official	Person Contacted	Date

Nationwide Permit No. 14

Linear Transportation Projects. Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case- specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization.

Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of

aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre- construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.
(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non- Federal applicant of the Corps' determination within 45 days of receipt of a complete pre- construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.
(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.
(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.
(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.
(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
(e) Prospective permittees should be aware that section 110k of the NHPA (54
U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that

may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:
(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.
(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.
(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).
(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.
(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.
(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.
(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).
(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.
(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to

the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

_____

(Date)

_____

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:
(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:
(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP

may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).
(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:
(1) Name, address and telephone numbers of the prospective permittee;
(2) Location of the proposed activity;
(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;
(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;
(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and
(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.
(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.
(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.
(2) Agency coordination is required for: (i) all NWP activities that require pre- construction notification and result in the loss

of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

1. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site- specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31)