APPENDIX H-7

U.S. Fish and Wildlife (USFWS) Correspondence

MEETING MINUTES

Date: **June 26, 2017**

Time: **11:00 am – 12:00 p.m. EST**

Meeting: **I-69 ORX – Section 7 Discussion**

Location: **USFWS Bloomington Office/KYTC's Frankfort Office - WebEx**

List of Attendees

NAME	ORGANIZATION
Robin McWilliams-Munson	U.S. Fish and Wildlife Service
Phil DeGarmo	U.S. Fish and Wildlife Service
Lee Andrews	U.S. Fish and Wildlife Service
Janelle Lemon	INDOT
Marshall Carrier	KYTC
Gary Valentine	KYTC
Paul Boone	INDOT
Laura Hilden	INDOT
Dave Waldner	KYTC
Nathan Click	KYTC
Michelle Allen	FHWA
Eric Rothermel	FHWA
Duane Thomas	FHWA
Steve Nicaise	Parsons
Dan Prevost	Parsons
Dan Miller	Parsons
James Kiser	Stantec
Nancy Allen	Stantec
Cory Grayburn	Parsons
Luke Eggering	Parsons

SUMMARY

A meeting was held on Monday, June 26, 2017, to discuss Endangered, Threatened and Rare (ETR) species survey requirements for the I-69 Ohio River Crossing Project to ensure the project maintains compliance with Section 7 of the Endangered Species Act. Prior to the meeting, on June 20, 2017, the USFWS Frankfort, KY and Bloomington, IN Field Offices held a conference call. The following questions were discussed during the conference call, and the conclusions were verified/clarified at the meeting:

1) Will the USFWS select a lead Ecological Services Field Office, either Bloomington, IN or Frankfort, KY to coordinate the overall T&E issues?
    - Per USFWS 1st Email Response (6/20/2017): The KY Field Office will assume the lead for consultation and coordination responses.
    - UPDATE: This was verified during the meeting. ACTION ITEMS: None.

2) Since the KYTC Programmatic Agreement allows a 20-mile buffer for projects outside of Kentucky, will the USFWS Bloomington Ecological Services Field Office concur that the KYTC Programmatic Agreement and use of the Imperiled Bat Conservation Fund (IBCF) for mitigation would be appropriate for the I-69 ORX DEIS including the Indiana portions of the project?
    - Per USFWS 1st Email Response (6/20/2017): IN and KY Field Office's agree that the KY programmatic consultation process can be used to address adverse effects on bats in both Indiana and Kentucky. USFWS could not be specific on mitigation measures until they have a better understanding of the proposed impacts. In general, seasonal tree cutting restrictions are likely for impacts associated with Indiana.
    - USFWS 2nd Email Response (6/20/2017): It's likely that Indiana's mitigation measures would vary from the PA. More specifically, the formula for calculating the mitigation may be different. Kentucky can expect what is currently in the Conservation Strategy and Mitigation Guidance.
    - UPDATE: Both offices verified that the KYTC Programmatic Agreement will be used throughout the project. However, the typical tree clearing restrictions in Indiana (no clearing of trees >3" diameter at breast height allowed from April 1 to September 30) will be required.

      Mitigation requirements were discussed. Kentucky will use the multipliers discussed in the Conservation Strategy and Mitigation Guidance. USFWS

Bloomington, IN field office will review the PA and determine what ratios will be applied to this project.

The project team asked how the mitigation funds will be dispersed. It was determined that the funds would be paid by INDOT (KYTC will pay back it's share) to the USFWS KY field office. The funds will then be distributed between the two states. All impacts in Indiana will be addressed in Indiana and all impacts in Kentucky will be addressed in Kentucky.

- ACTION ITEMS: The USFWS Bloomington field office will review the costs/multiplier and determine what will be appropriate/allowed for impacts in Indiana.

3) Would Bloomington Ecological Services Field Office concur that no additional bat surveys would need to be competed in Indiana?
    - USFWS 1st Email Response (6/20/2017): No additional mist net surveys are required if FHWA determines to use the programmatic consultation. The project is in known maternity habitat.
    - UPDATE: As previously stated, the KYTC PA will be used for the entire project. The USFWS Bloomington Field Office confirmed that mist netting will not be required. The project team asked if the Bloomington Field Office would allow mist netting to be conducted if the costs/multipliers are substantially higher than those proposed in the KYTC PA. USFWS responded that mist netting would not be allowed, and that the project would follow the KYTC PA in regards to survey requirements. USFWS stated that areas could potentially be determined as non-habitat, but that determination would not be through the use of surveys.

      Survey requirements for gray bats (Myotis grisescens) were discussed. USFWS IN confirmed that there are no records of gray bats within the project area in Indiana. USFWS KY confirmed that the project is within Kentucky's range for gray bats. In Kentucky, KYTC assumes presence; requires a search for roosting habitat (sinkholes, mines, bridges); and installs specific erosion and sediment control measures to reduce impacts. USFWS IN stated that what's done in Kentucky should be done in Indiana as well.

    - ACTION ITEMS: The typical KY requirements for gray bats will be required for the project (in KY and IN).

4) Would Bloomington Ecological Services Field Office require additional or more stringent mitigation measures (e.g. such as not allowing tree-clearing during pup season) than those allowed in the KYTC Programmatic Agreement in Indiana?
    - USFWS 1st Email Response (6/20/2017): IN and KY Field Office's agree that the KY programmatic consultation process can be used to address adverse effects on bats in both Indiana and Kentucky. USFWS could not be specific on mitigation measures until they have a better understanding of the proposed impacts. In general, seasonal tree cutting restrictions are likely for impacts associated with Indiana.
    - UPDATE: As previously stated, the typical tree clearing restrictions in Indiana (no clearing of trees >3" diameter at breast height from April 1 to September 30) will be required. Costs per acre will be reviewed for IN and provided to the project team. ACTION ITEMS: None.

5) Would Bloomington Ecological Services Field Office require least tern surveys along the Ohio River? If so, would the surveys be required in 2017 prior to the I-69 ORX DEIS or could they be completed following the selection of the preferred alternative?
    - USFWS 1st Email Response (6/20/2017): No least tern surveys are required at this time due to lack of habitat; however, USFWS does request that a contingency measure be included that surveys may be necessary in case of low water/suitable habitat is observed.
    - UPDATE: Currently, surveys will not be required as there is no suitable habitat. Changes in the river caused by drought, etc., could occur before or during the project's construction. Therefore, if suitable habitat (such as a sandbar or a shoal) becomes present during the project development process and/or construction, surveys will be required to ensure this habitat is not being used for nesting.
    - ACTION ITEMS: A project commitment will be added requiring nest surveys should changes in the river occur and suitable habitat becomes present.

6) Would Bloomington Ecological Services Field Office require mussel surveys in 2017 prior to the I-69 ORX DEIS or could they be completed following the selection of the preferred alternative?

- USFWS 1st Email Response (6/20/2017): Mussel surveys may be conducted following the selection of the preferred alternative. USFWS currently has a fat pocketbook occurrence record where the Green River enters the Ohio River.
- UPDATE: The timing of the mussel surveys was discussed in detail at the meeting. It was determined that the surveys could occur after completion of the DEIS, but before the FEIS/ROD. The timing of when the surveys happen, and whether or not they occur before or after the DEIS, will be discussed and determined by the project team. USFWS suggested that "habitat reconnaissance" surveys could potentially be conducted in lieu of formal surveys. This reconnaissance would work well for most mussel species, but not for the fat pocketbook (Potamilus capax). The effectiveness of the surveys will depend on where and how construction will take place.

  USFWS stated that having sonar work done could potentially save time as well, as it could eliminate areas that do not provide habitat (areas where moving sand waves are evident). The project team stated that bathymetric surveys have been done in this area. USFWS will review the data and determine its usefulness for this project. USFWS also stated that they often use divers out of Paducah and use data they've collected on dam removal for locating and moving mussels.
- ACTION ITEMS: The project team will continue to discuss what surveys would be appropriate and what timing for the surveys would best serve the project. The project team will provide USFWS with the previously conducted surveys. USFWS will review the surveys and determine their usefulness for this project.

7) Does Bloomington Ecological Services Field Office have any other concerns regarding the I-69 ORX DEIS at this time?
   - USFWS 1st Email Response (6/20/2017): USFWS had no further comments, but they indicated that they would be available for a future webinar the week of June 26-30,2017, if needed.
   - UPDATE: Currently, USFWS has no additional concerns. ACTION ITEMS: None.

From:	McWilliams, Robin
To:	Miller, Daniel J
Cc:	Phil DeGarmo
Subject:	Re: I-69 Ohio River Crossing Project - Section 7 Coordination Meeting - Final Meeting Minutes
Date:	Tuesday, July 18, 2017 1:33:23 PM
Attachments:	image003.png

Hi Dan,

I think the meeting notes look accurate. The only comment I have is that I believe some of the questions were not specific to the Bloomington, Indiana Field office (as noted), but for the USFWS in general (tern surveys, mussel surveys, etc.).

I have looked some into the dollar amount for mitigation calculation in Indiana. The PA for Ibats/nlebs uses the USDA price/acre for crop land. Indiana crop land is considerably higher than Kentucky. The $10,600 per acre that was mentioned during our call includes overhead for the TNC, which I assume would not be needed if the funds are going directly to the fund KY uses. We can look up these values fairly easily. This may be what KY bases their price/ac on as well.

Sincerely,
Robin

Robin McWilliams Munson

U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 46403
812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p
Wednesday, Thursday - telework 8:30a-3:00p

On Fri, Jul 14, 2017 at 3:45 PM, Miller, Daniel J <Daniel.J.Miller@parsons.com> wrote:

> All,
>
> Attached are the final meeting minutes for the I-69 Ohio River Crossing Project - Section 7 Coordination Meeting held on June 26, 2017. Please let me know if you have any questions or comments.
>
> Thanks,
> Dan

Daniel J. Miller
Principal Environmental Planner
101 West Ohio Street, Suite 2121 - Indianapolis, IN 46204
Daniel.J.Miller@Parsons.com #317.616.4663

PARSONS – Envision More
www.parsons.com | LinkedIn | Twitter | Facebook

MEETING SUMMARY

Date: **September 11, 2017**

Time: **10:00 AM ET**

Meeting: **I-69 ORX Section 7 Meeting; Mussel Survey Approach**

Location: **Kentucky Transportation Cabinet; 200 Mero Street, Frankfort, KY 40622**

List of Attendees:

NAME	ORGANIZATION	EMAIL
Dan Miller	Parsons	Daniel.J.Miller@parsons.com
Nancy Allen	Stantec	nancy.allen@stantec.com
Lee Andrews	U.S. Fish and Wildlife Service	Lee_Andrews@fws.gov
James Kiser	Stantec	James.Kiser@stantec.com
Leroy Koch	U.S. Fish and Wildlife Service	Leroy_Koch@fws.gov
Dave Harmon	KYTC/DEA	Dave.Harmon@ky.gov
Phil Degarmo	U.S. Fish and Wildlife Service	Phil_DeGarmo@fws.gov
Tim Foreman	KYTC	Tim.Foreman@ky.gov
Nathan Click	KYTC	nathan.click@ky.gov
Dan Prevost	Parsons	Daniel.Prevost@parsons.com
Eric Rothermal	FHWA	Eric.Rothermel@dot.gov
David Waldner	KYTC	David.Waldner@ky.gov

SUMMARY

1) Dave Waldner discussed the purpose of the meeting: To determine whether the benefits of getting mussel/habitat work done this fall outweigh the benefits of waiting and doing all of the work next year.

2) Dan Prevost, Parsons' Environmental Lead for the I-69 Ohio River Crossing (ORX) Project, gave an overview of the project:
   a) The project started with five corridors (alternatives), and has been narrowed down to three (both eastern corridors have been eliminated).
   b) Regarding the crossing of the Ohio, both west corridors are identical; immediately adjacent to the current US 41 bridges.

c) Central Corridor 1 is approximately 1.5 miles upstream, and must occur in-between two existing interchanges, limiting the potential study area. Utilities, a state forest, TV tower, and an Imperiled Bat Conservation Fund (IBCF) property also limit where the bridge can potentially be placed.

3) Phil DeGarmo, U.S. Fish and Wildlife Service (USFWS) asked what was currently proposed for the existing bridges. Dan Prevost stated;
   - The bridges are approximately 80 and 50 years old, and are currently not in great condition.
   - All options are currently on the table and will be evaluated as part of the environmental process.
     i. If the west corridor is built, both existing bridges may potentially be eliminated.
     ii. If the central corridor is built, options for keeping both, one, or none of the existing bridges will be evaluated.
   - The new bridge will potentially be tolled. This may affect the existing bridges.
     i. Traffic access may potentially be limited.
     ii. The existing bridges may potentially be tolled.

   Phil DeGarmo, USFWS, stated that for the purpose of this meeting, the "worst-case" scenario (removing both bridges) would be assumed. Therefore, mussel surveys will be conducted at two locations; Central Corridor 1 and at the crossing for both West Corridors (at the existing bridges and potential new crossing).

4) Dan Prevost gave an overview of the project schedule.
   - The draft environmental impact statement (DEIS) is scheduled to be completed in the fall of 2018. The DEIS will identify the Preferred Alternative.
   - A combined final environmental impact statement (FEIS)/record of decision (ROD) is scheduled to be completed in the fall of 2019.

5) Phil DeGarmo stated that, until the results of the FEIS are finalized, USFWS will assume an impact on the West Corridors. Nathan Click, KYTC, clarified that it will be an assumed *habitat impact*, due to the known presence of mussels in the Green River and within this stretch of the Ohio, and the likelihood that suitable habitat is present. James Kiser, Stantec, noted that habitat around the existing piers has likely been reduced due to scour.

6) Lee Andrews, USFWS, noted that:
   - The survey area is relatively small.
   - Data collected won't change whether it is collected this year or next.
   - Collecting data this year provides the benefit of additional time to react to what is found and figuring out solutions.

7) Phil DeGarmo discussed the side-scan sonar, and asked if it could be done within the same season as the official survey. He also asked if there were benefits to doing only the side-scan survey this season (without field verification), and doing all of field work next year.
   - James Kiser replied that, yes, it could be done in the same season. However, doing the side-scan sonar without field verification limits the accuracy and value of the sonar data.
   - Leroy Koch, USFWS, stated that doing the side-scan sonar without field verification would provide information on scour and stability. He noted that, whenever it is done, the data would be valid for a few years, and advised that it be done when it best fit into the project needs.

8) Dan Prevost asked if the side-scan sonar survey and field follow-up could eliminate the need for a formal survey.
    - Leroy Koch stated that it would not likely eliminate the need for the formal survey, but could significantly reduce the area of investigation. He also clarified that the side-scan sonar would require field verification, whether it is done this year or the following.

9) James Kiser noted that there is only likely 1.5 months remaining of safe dive time this year, if it is decided to do the side-scan sonar and field follow-up this year. He also noted that if Hurricane Irma brings a substantial amount of rain, the remaining field season could be affected/eliminated.

10) The project team and USFWS further discussed the different benefits between the side-scan sonar and field follow-up being conducted this year and the next.
    - Leroy Koch reiterated that there is likely habitat present where sensitive species could occur. Particularly the Fat Pocketbook, (*Potamilus capax*), which prefers soft sediment/sand that is relatively stable. His opinion was that doing the side-scan survey this year would benefit next year's survey. He also noted that a quick "drop down" follow-up by divers would help provide a lot of useful information.
    - Phil DeGarmo stated that the benefit would be saving time and reducing the level of effort on the following year's investigation. He reiterated that both surveys could be done back to back next year.
    - Tim Foreman, KYTC, stated that it comes down to risk/reward. He noted that the data must be collected at some point, and that doing it this year will have time savings and not force the project team to schedule two dive surveys within one season.
    - James Kiser stated that collecting the data this year also helps with the DEIS being prepared for the project by allowing the project team to better compare both alternatives and their potential impacts to endangered or threatened mussel species.

11) Nathan Click asked, if the side-scan sonar was done this year for both alternatives, and the preferred alternative is chosen before the formal survey, could the formal survey be done for just the preferred alternative?
    - Dan Prevost noted that by the time the preferred alternative is chosen, the project team will know:
        - What will happen with the existing bridges.
        - What type of new bridges will be built.
        - The location of the piers (the number of piers on the Central Corridor will depend on the # of spans used).
    - Leroy Koch noted that it would be very beneficial to have the follow-up surveys done with the side-scan sonar. Divers could take buckets of existing sediment and get photos (the project team was referred to a recent study done in Ohio).

12) David Waldner asked for clarification on if there was value to doing the side-scan sonar without verification now, and whether the side-scan survey alone could help reduce the area of investigations required for the formal survey.
    - Leroy Koch noted that by doing a side-scan survey without field testing, potential errors (or wrong assumptions) or difficult sediments, such as mixtures of sand and gravel, etc., could not be corrected or verified.
    - Lee Andrews noted that it could still be clarified at a later date, as the data from the side-scan sonar would still be valid.

- Dave Waldner noted that by waiting, the project team would know the location of the piers and the decision on what is to happen to the existing bridges.

13) Dave Waldner asked, if the project team did the side-scan sonar and follow-up field work now, would it definitely eliminate transects?
    - Leroy Koch and Lee Andrews both noted that they could not definitely promise less transects before the data is known.

14) James Kiser asked whether or not dredging would definitely be required for the removal of the existing bridges.
    - Lee Andrews noted that side-scan sonar would let you know how deep you are, and help plan out what methods may be required.
    - Phil DeGarmo stated that not everything can be foreseen, such as barge staging requirements, etc.
    - Dave Harmon, KYTC/DEA, noted that the side-scan survey would provide information on habitat needed for permitting.

15) After these discussions, Phil DeGarmo suggested that side-scan sonar and field verification be conducted this year, due to the benefits and the likelihood that it could help direct and refine recommendations throughout the process.

16) Dave Waldner asked for clarification on the proposal for the work to be done.
    - Dan Prevost stated that cost proposals have already been received for the side-scan sonar work.
    - James Kiser noted that the level of effort needed to be clarified to be able to put together the proposal for the follow-up field work.
        - Leroy Koch stated that the follow-up is not a full mussel survey, but just a quick check identifying substrate with minimal work done if any mussels are found. He noted that the survey would provide a quick quality assurance to the side-scan sonar. He reiterated that the follow-up checks are necessary to get more useful information such as percent substrate, and again noted the example from another location on the Ohio River as a template.
    - Tim Foreman stated that the work done this year needs to cover demolition impacts and the farthest reach of construction impacts.
    - Dave Waldner concurred, and asked for clarifications on a conservative survey area to ensure additional work would not be required later in the process.
    - Phil DeGarmo stated that side-scan sonar will help USFWS define the reach of construction impacts. He noted that if there is a minor change in limits, it should not have a substantial effect as the information collected will also provide information on what should be further upstream.
    - Leroy Koch and Phil DeGarmo determined that the project team should survey 300 meters downstream and 100 meters upstream of the areas of impact for the side-scan sonar. They noted that this has been used on other large bridge surveys.

17) Dan Prevost asked whether the side-scan survey results may help determine/affect the demolition options on the existing bridges, and whether there could potentially be information collected this year that would drive the project team to a certain alternative.
    - Phil DeGarmo stated that the level of impacts can be substantially different depending on how a bridge is dismantled, etc. He noted that knowing the substrate type could help determine

recommendations for how the work will be done. The level of impacts would be defined by what is found in the surveys.

18) James Kiser noted that, historically, if a project finds a decent concentration of mussels, USFWS typically assumes that endangered species known within the area will be present and considered impacted.
    - Leroy Koch confirmed that USFWS would assume listed species are present if such populations were found. He stated that if mussel populations are present, USFWS would want to see assemblages. From current known information, this is not likely. USFWS would want to know the number of Fat Pocketbook identified. Also, if the project team found more riverine assemblages, more work may be required.
    - Phil DeGarmo stated that, although the listed species were assumed, the impact would be more defined (much smaller than the entire reach).

19) Lee Andrews stated that due to the presence of the Green River, the sediment that it brings into the area, and the known species within the area, there is likely habitat present within the project area.

20) Nathan Click asked for a consensus that the side-scan survey and field follow-up will be conducted this year, and a full survey will occur next year within defined areas within the preferred alternative. This was agreed upon by everyone present.

CONCLUSIONS

- A side-scan survey and field follow-up will be conducted this year, and a full survey will occur next year within defined areas within the preferred alternative.
- The project team will survey 300 meters downstream and 100 meters upstream of the areas of impact for the side-scan sonar.
- A report will be prepared detailing the information found.

MEETING SUMMARY

Date: July 16, 2018

Time: 2:00 PM ET

Meeting: Mussel Survey Work Plan Discussion for KYTC #2-1088; I-69 Henderson, Ohio River Bridge

Location: Kentucky Transportation Cabinet; 200 Mero Street, Frankfort, KY 40622

List of Attendees:

Name	Organization	Email
Phil DeGarmo	U.S. Fish and Wildlife Service	Phil_DeGarmo@fws.gov
Leroy Koch	U.S. Fish and Wildlife Service	Leroy_Koch@fws.gov
Eric Rothermal	FHWA	Eric.Rothermel@dot.gov
Laura Hilden (by phone)	INDOT	lhilden@indot.IN.gov
Kristi Todd (by phone)	INDOT	KTodd1@indot.IN.gov
Sandy Bowman (by phone)	INDOT	sbowman@indot.IN.gov
Marshall Carrier	KYTC	marshall.carrier@ky.gov
Dave Harmon	KYTC	Dave.Harmon@ky.gov
Tim Foreman	KYTC	Tim.Foreman@ky.gov
Nathan Click	KYTC	nathan.click@ky.gov
Steve Nicaise (by phone)	Parsons	Steven.Nicaise@parsons.com
Dan Prevost	Parsons	Daniel.Prevost@parsons.com
Dan Miller	Parsons	Daniel.J.Miller@parsons.com
Cody Fleece	Stantec	cody.fleece@stantec.com
Dillon McNulty	Stantec	dillon.mcnulty@stantec.com

A copy of the agenda is provided as Attachment A

SUMMARY

1) Dan Prevost provided an overview of DEIS and project schedule.
2) Phil DeGarmo asked for clarification regarding schedule with respect to Section 7 Consultation. Reminded group that consultation must be complete before issuance of permit.
   Dan Prevost explained that Section 7 would be completed before the combined

FEIS/ROD (estimated November 2019). The Section 404 permit would be applied for after the ROD.

3) Cody Fleece provided an overview of the proposed study plan (see Attachment B).
4) Laura Hilden: Asked about USFWS determination if no listed mussels were located during the survey.
   Phil DeGarmo: This survey was a likelihood of presence survey given that not every mussel in the disturbance area will be collected. USFWS would make a determination based on the quality of the beds present and types of species identified as to whether listed mussels are likely present.
5) Phil DeGarmo: Asked how piers would be constructed and whether the current buffers would be sufficient to account for construction disturbance.
   Steve Nicaise: Piers will be installed in similar manner to those constructed for Louisville bridges. Contractor will build the pier cap inside a temporary form and use drilled shafts. Coffer dams would not be used.
6) Leroy Koch: The survey area should cover all of the disturbance footprint and the buffer size should be large enough to cover scour, hydraulic alteration, temporary piers, etc.
7) There was a discussion on pier alignment and the contractor's flexibility/constraints Dan Prevost explained that the placement of piers for the navigation span(s) will be relatively inflexible based on feedback from the US Coast Guard. The contractor will have very limited ability to modify. Because the bridge type has not been determined, the spacing of approach spans has not been determined. Therefore, with the exception of the area immediately behind the navigation span piers, the location of approach piers is not known and the entire area should be treated as potential area of impact.
8) Dan Prevost: It is assumed that removal of the existing bridge(s) would be accomplished via implosion, dropping the bridge into the river and then removing it.
9) Steve Nicaise: We would anticipate that the contractor would utilize existing barge facilities in the area rather than construct new. No causeways are anticipated.
10) Phil DeGarmo asked if buffer would be sufficient to cover the teardrop effect resulting from new flow patterns.
11) Leroy Koch: if the piers are placed in "unsuitable" habitat USFWS probably wouldn't require relocation.
12) Phil DeGarmo: it is important to remember that if contractor works outside of survey area it could require re-initiation of consultation.
13) Phil DeGarmo: USFWS is open to allowing survey crews to terminate survey if habitat in cells is clearly unsuitable.
    Leroy Koch: If high density beds are present (e.g., 10 – 12 species present), would like

to see extra survey effort.

14) Phil DeGarmo/Leroy Koch: Would like to see study plan amended to include 1) a detail for the piers and 2) an analysis of scour patterns.
Steve Nicaise: Detail to be provided. Will share scour analysis performed for Louisville bridges as it is directly applicable the I-69 bridges.
15) Phil DeGarmo concurred that what was proposed should be enough to make an effects determination.
16) Leroy Koch: in general, the methods proposed appeared to be sufficient.

ACTION ITEMS

- Parsons will provide USFWS additional information regarding pier construction methods. (Provided to USFWS via email on 7/20/18. See Attachment C.)
- Parsons will provide USFWS with the bridge scour analysis performed for Louisville bridges. (Provided to USFWS via email on 7/20/18. See Attachment D.)
- USFWS will provide comments on the proposed study plan.
- Stantec will revise study plan to incorporate 1) extra effort if high density beds detected, 2) flexibility to terminate survey in a cell if habitat is clearly unsuitable.
- Stantec will enlarge search areas in the vicinity of piers if the results of the scour analysis indicate current disturbance area is not adequate.

MEETING AGENDA

Date: **July 16, 2018**

Time: **2:00 PM EST**

Meeting: **I-69 ORX Mussel Survey Study Plan Meeting**

Location: **Kentucky Transportation Cabinet, 200 Mero Street, Frankfort, KY 40622**
Teleconference: 888-598-1409; 3180473#

---

1. Introductions

2. Proposed Study Plan
    - DEIS Update
        - Build alternatives
        - Schedule
    - Potential Effects to Mussels
    - Acoustic Side Scan Sonar Data
        - Acoustic class review
        - Acoustic class revision
        - Potentially "suitable" vs. "unsuitable" habitats
    - Proposed Methods Overview
        - Qualitative sampling (timed search)
        - Stratified by "suitable" vs. "unsuitable" habitats
    - Challenges
        - Commercial Traffic
        - Depth
        - Recreational Traffic
        - Flow

3. Discussion
    - Schedule
    - Potential Mitigation and Minimization

4. Action Items

MEETING SUMMAR

Date: August 7, 2018

Time: 12:00 PM CT

Meeting: Proposed Green River National Wildlife Refuge coordinatio meeting with U FWS

Location: Evansville Project Office

List of Attendees:

Name	Organization	Email
Lee Andrews	U.S. Fish and Wildlife Service	Lee_Andrews@fws.gov
Michael Johnson	U.S. Fish and Wildlife Service	Michael.Johnson@fws.gov
Tina Chouinard	U.S. Fish and Wildlife Service	Tina.Chouinard@fws.gov
Michelle Allen	FHWA-Indiana	Michelle.Allen@dot.gov
Eric Rothermal	FHWA-Kentucky	Eric.Rothermel@dot.gov
Janelle Lemon	INDOT	jlemon@indot.in.gov
Jim Poturalski	INDOT	jpoturalsk@indot.in.gov
Laura Hilden (by phone)	INDOT	lhilden@indot.IN.gov
Marshall Carrier	KYTC	marshall.carrier@ky.gov
Gary Valentine	KYTC	gvalentine@ky.gov
Danny Peake	KYTC	Danny.peake@ky.gov
Steve Nicaise	Parsons	Steven.Nicaise@parsons.com
Dan Prevost	Parsons	Daniel.Prevost@parsons.com

Attachments:

A Agenda
B Sign-In Sheet
C I-69 ORX Project Overview Presentation
D Map of Proposed Green River NWR from 2001 Environmental Assessment
E Map of Proposed Green River NWR and I-69 ORX DEIS Alternatives
F Pages from 1994 Patoka River National Wetlands Project FEIS (provided following meeting)
G Pages from 1994 Patoka River National Wetlands Project ROD (provided following meeting)
H 2018 Proposed Establishment of Green River National Wildlife Refuge General Information (provided following meeting)

SUMMARY

1) Dan Prevost provided an overview of the I-69 ORX project's history, alternatives and schedule (see Attachment C).
2) The group reviewed the map of the Green River National Wildlife Refuge (NWR) from the 2001 Environmental Assessment (EA; Attachment D) and a map showing the proposed refuge and the I-69 ORX DEIS Alternatives (Attachment E). A change has been proposed to the boundary of the refuge to include in the refuge plan the area north of the Ohio River, but south of Waterworks Road (excluding Ellis Park).
3) USFWS indicated that the Secretary of the Interior has issued orders that EAs, such as this one, shall be completed within 6 months from the date of their formal initiation. USFWS has some flexibility on when they will initiate the process, but it is likely to be within the next several months. The group discussed that knowing the ORX project's preferred alternative would help them streamline their document.
4) The group agreed that based on the federal legislation directing USFWS to designate the refuge, the goal is to avoid any actions that would create issues for the implementation of the I-69 ORX project. Specifically the group discussed Section 4(f), since wildlife refuges are covered under that regulation.
5) USFWS explained that they can only acquire property from willing sellers and are permitted to pay no more than appraised value for property. As a result, in order to obtain the 24,000 acres identified in the legislation, they will identify an area of approximately 50,000 acres in which to target acquisitions (called a Conservation Opportunity Area), knowing that some of the property within that area will be unsuitable or will not have willing sellers.
6) The group discussed how to ensure that the Green River NWR EA document will accommodate the I-69 corridor, since final right of way plans have not been prepared. Two approaches were discussed: (A) designate an area that is conservatively wide (e.g., 1,000 feet) to allow plenty of room for the highway and any utility relocation (there are gas transmission lines in the area that will need to be relocated), or (B) describe the project corridor in words only, stating that the refuge excludes the roadway right of way, whenever it is determined.
7) USFWS indicated that if a conservatively wide corridor (Option A above) is utilized, they have a *de minimis* rule that allows them to expand the boundaries of the project by up to 10% within minimal documentation required.
8) Janelle described her experience on I-69 at the Patoka River National Wildlife Refuge, which had provided a corridor for I-69 during its development. She indicated that she would obtain the relevant documents from that project and share with the group (see Attachments F and G). FHWA and USFWS agreed to talk to their respective

attorneys about whether Option B above is feasible.

9) The I-69 ORX DEIS will indicate that coordination is ongoing and a summary of this meeting will be included in the documentation. The two project teams will plan to meet again following publication of the I-69 ORX DEIS.
10) Parsons provided some general information about the anticipated impacts to wetlands, streams, and bat habitat for each of the DEIS alternatives. Each of these impacts will require mitigation, which could be directed to areas identified by USFWS for inclusion in the refuge.
11) USFWS indicated that they have developed an informational sheet to help educate the public about the proposed refuge. Following the meeting USFWS transmitted the document to the group (Attachment H).

ACTION ITEMS

- INDOT to provide documentation from I-69 and the Patoka River NWR (complete, see Attachments F and G).
- USFWS will provide a copy of their informational sheet to the group (complete, see Attachment H).
- USFWS and FHWA to discuss appropriate documentation of the I-69 corridor with their respective attorneys.

MEETING AGENDA

Date: August 7, 2018

Time: 12:00 PM CT

Meeting: I-69 ORX - Green River NWR Coordination Meeting

Location: Evansville Project Office, 320 Eagle Crest Drive, Suite C, Evansville, IN 47715

---

1) Introductions

2) I-69 ORX Project Briefing

3) Green River National Wildlife Area Environmental Analysis Timeline

4) Next Steps

5) Closing

I-69 Ohio River Crossing
I-69 ORX - Green River NWR Coordination Meeting
August 7, 2018
Sign-in Sheet

Name (please print)	~~Street Address~~ Agency	~~City, State~~ Phone
Steve Nicaise	Parsons	502-653-6622
Tina Chouinard FWS	606 Brownes Church Rd, Jackson TN	7318031753
DANNY PEAKE	200 MERO ST	502 782 5021
Eric Rothermel	330 W. Broadway	502-223-6742
Gary Valentine	~~200 Mero St~~ KYTC	502-766-7622
Janelle Lemon	INDOT jlemon@indot.in.gov	812-887-6215
Jim Poturalski	INDOT	317-234-0410
Michelle Allen	FHWA	317.226.7344
Michael Johnson	U.S. FWS	270 703 2964
Lee Andrews	US FWS	502-229-4412
Marshall Carrier	KYTC	502-545-8254
Dan Prevost	Parsons	513-552-7013
Laura Hilden (by phone)	INDOT	

PROJECT OVERVIEW

AUGUST 7, 2018

ORX 69 OHIO RIVER CROSSING

INDIANA DEPARTMENT OF TRANSPORTATION INDOT

KENTUCKY TRANSPORTATION CABINET

Project Team

U.S. Department of Transportation
Federal Highway Administration

- **Michelle Allen**, Indiana Division
- **Eric Rothermel**, Kentucky Division

- **Janelle Lemon**, Project Manager
- **Jim Poturalski**, Executive Advisor

KENTUCKY TRANSPORTATION CABINET

- **Marshall Carrier**, Project Manager
- **Gary Valentine**, KYTC Major Project Advisor

PARSONS

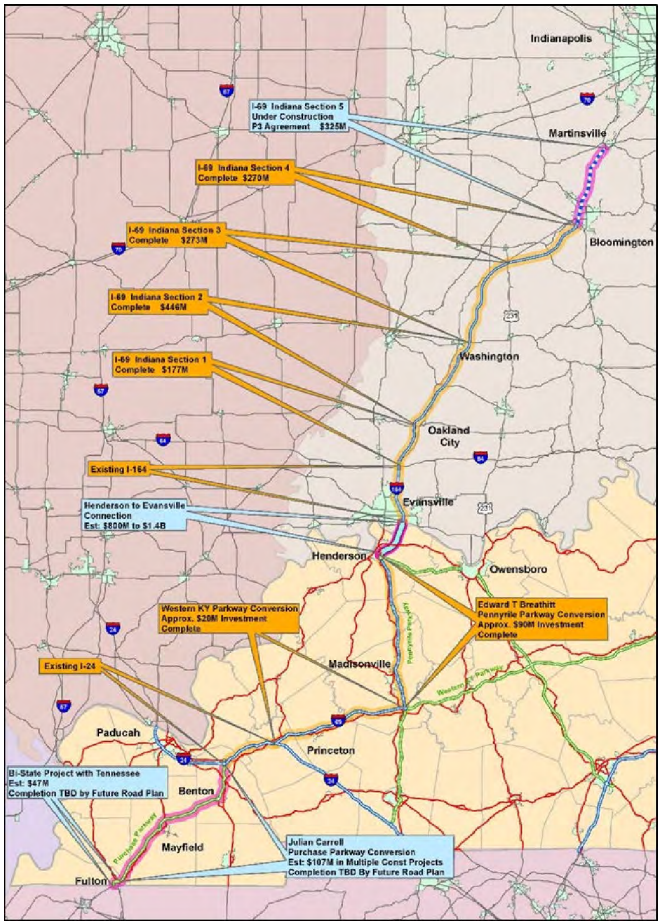
- **Steve Nicaise**, Consultant Project Manager
- **Dan Prevost**, Environmental Lead

REINITIATING THE PROJECT

Reinitiating the Project

I-69 Corridor Status – Indiana and Kentucky

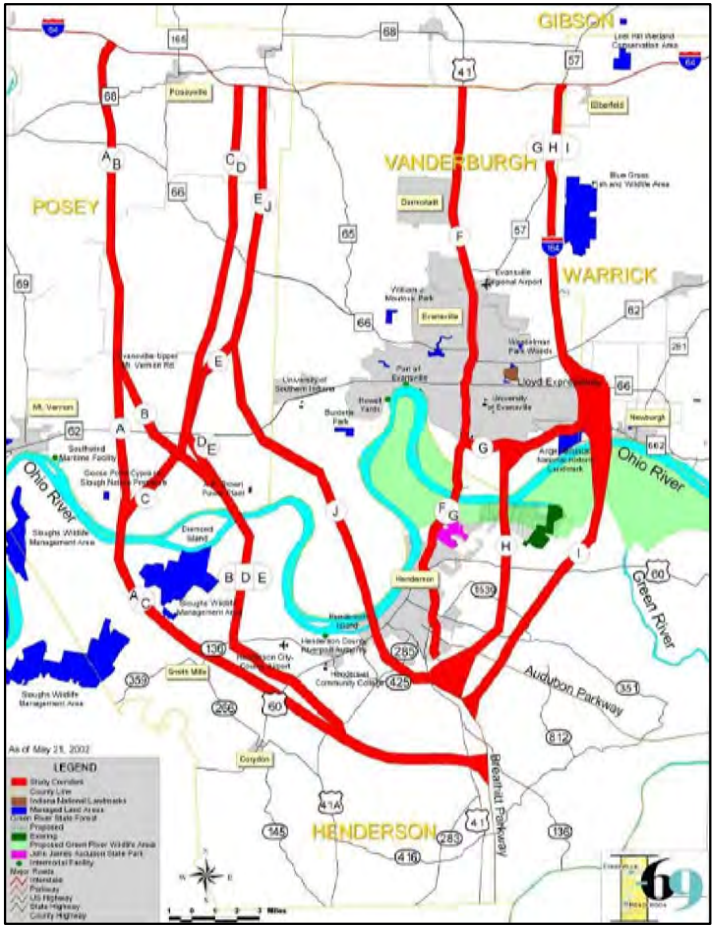
- Indiana
  - Sections 1-4: Complete (114 miles)
  - Section 5: Under Construction (21 miles)
  - Section 6: NEPA Phase
- Kentucky
  - Breathitt Parkway Conversion: Complete (42 miles)
  - Western Parkway Conversion: Complete (38 miles)
  - Signing Existing I-24 as I-69: Complete (16 miles)
  - Purchase Parkway Conversion:
    - Under Construction (32 miles)
    - NEPA Phase (20 miles)



Reinitiating the Project

2004 Draft EIS

- 2001 Notice of Intent
- Logical Termini
- Alternatives East and West of Evansville
- Alternative 2 identified as Preferred
- Project suspended in 2005



Reinitiating the Project

Additional Corridor Studies

- Technical Memorandum – Conceptual Financial Plan for I-69 Henderson, KY and Evansville, IN (2008) (KYTC)
  - Evaluated tolling and other potential funding sources
- I-69 Feasibility Study – SIU #4 (2014) (KYTC – Kentucky only)
  - Reexamined possibility of single new Ohio River bridge
  - Introduced modified version of 2004 DEIS Preferred Alternative, designated as Alternative 1

Reinitiating the Project

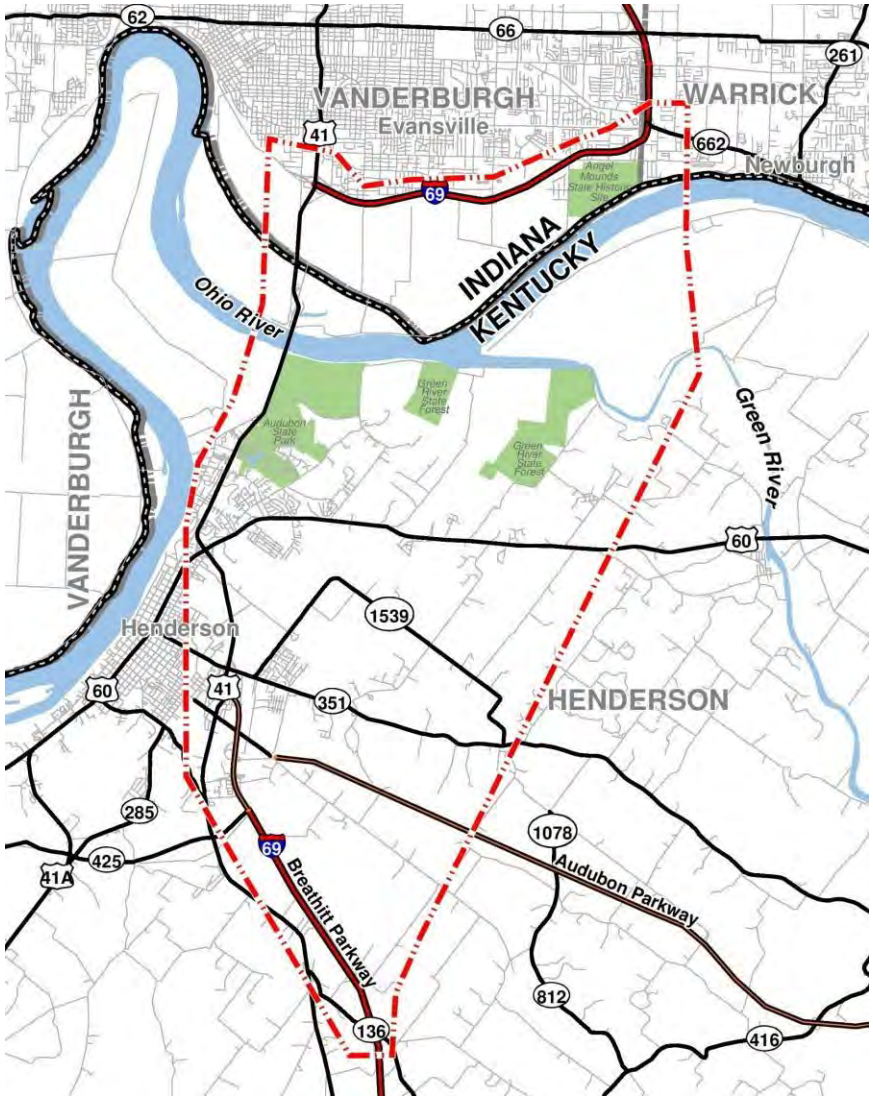
Recent Activities

June 30, 2016	Governors sign MOU
Nov 14, 2016	INDOT/KYTC select Parsons Team
Feb 13, 2017	I-69 Ohio River Crossing EIS Notice of Intent published in *Federal Register*

PROJECT UPDATE

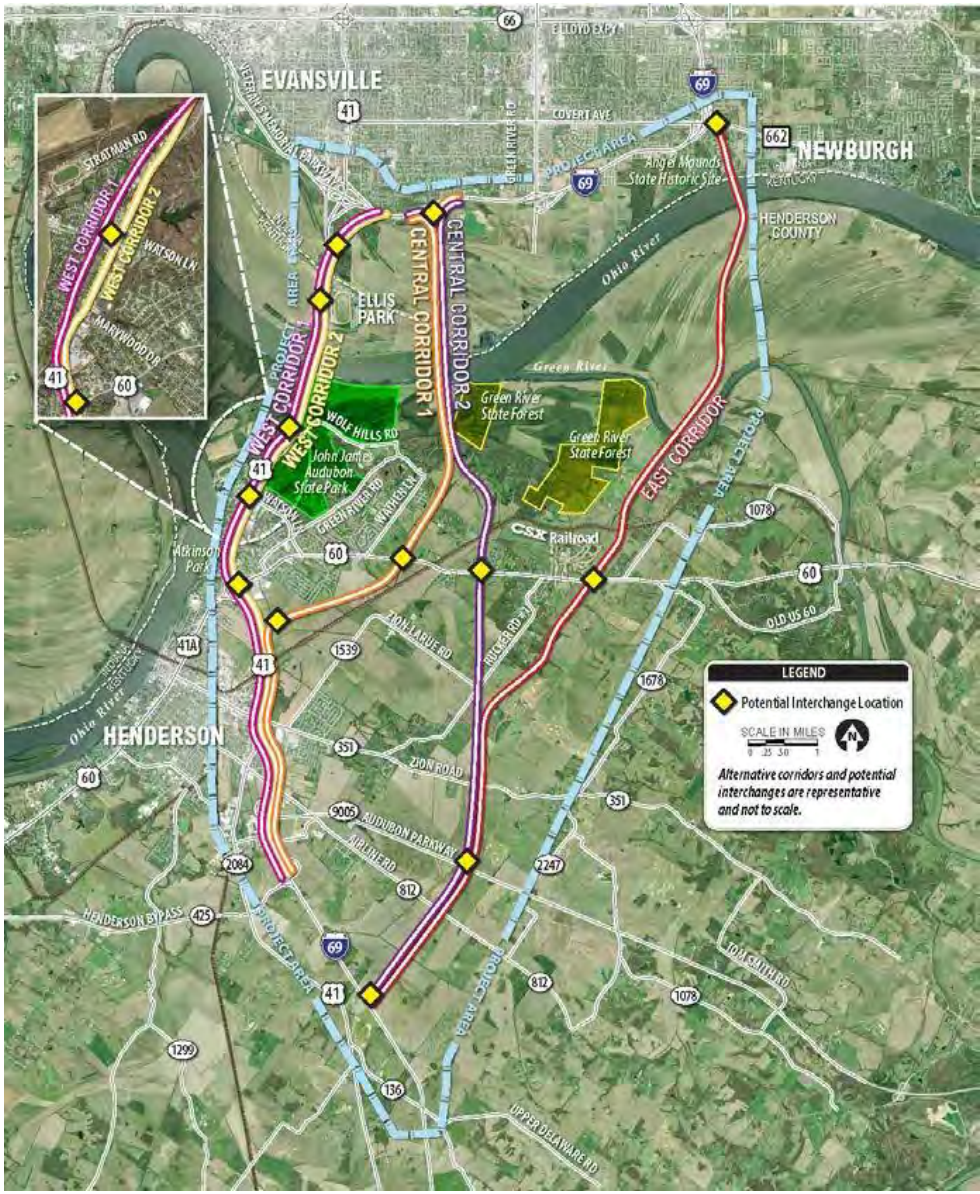
Purpose and Need

- Complete the I-69 connection between Indiana and Kentucky
- Develop a solution to address long-term cross-river mobility
- Provide a cross-river connection to reduce congestion and delay
- Improve safety for cross-river traffic



Broad Corridors
(presented April 2017)

- No Build Alternative
- West Corridor 1
- West Corridor 2
- Central Corridor 1
- Central Corridor 2 (2004 DEIS Preferred Alternative)
- East Corridor

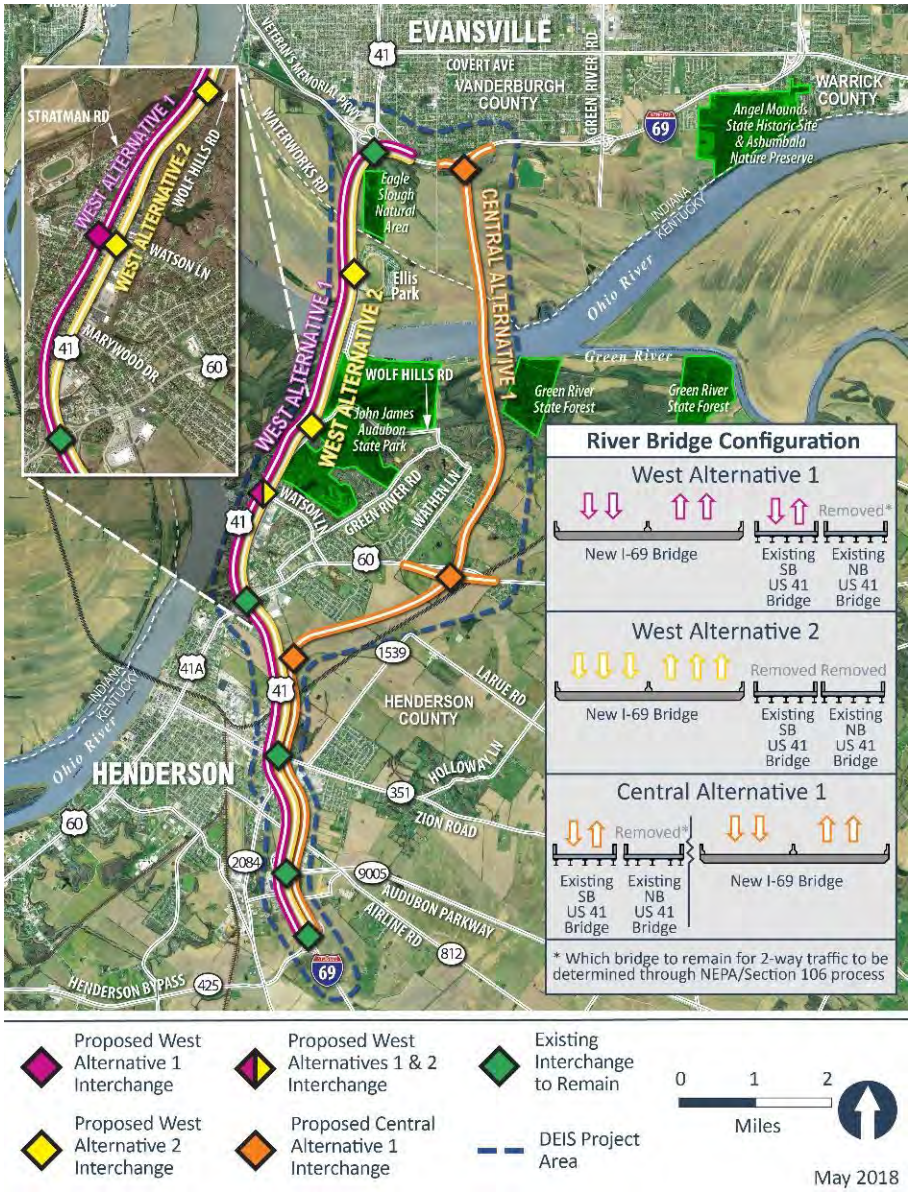


Corridors Carried Forward

- No Build
- West Corridor 1
- West Corridor 2
- Central Corridor 1

Preliminary Build Alternatives

- West Alternative 1
  - 4-lane I-69 bridge and one US 41 bridge for local traffic
- West Alternative 2
  - 6-lane I-69 bridge with both US 41 bridges removed from service
- Central Alternative 1
  - 4-lane I-69 bridge and one US 41 bridge for local traffic

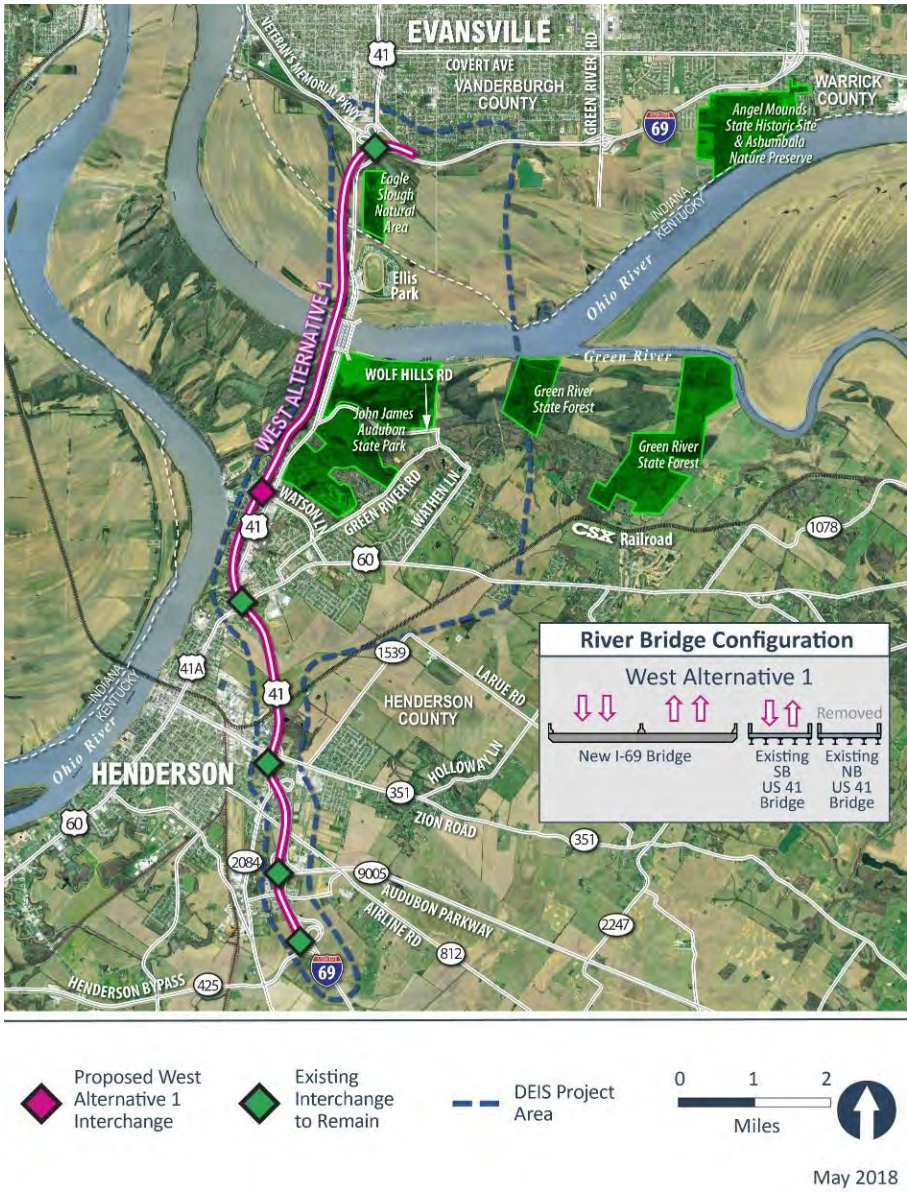


Appendix H-7, page 34

West Alternative 1

- Build a 4-lane I-69 bridge
- Retain one US 41 bridge for local traffic
- New interchange at Watson Lane
- Considering improvements to US 41 corridor
- Design updates

35-year Cost Estimate	
Design, Approvals, ROW, Mitigation, Other	$312 M
Construction	$1,245 M
Roadway/Bridge Operations & Maintenance	$252 M
Total YOE Cost	$1,810 M



Appendix H-7, page 35

West Alternative 2

- Build a 6-lane I-69 bridge
- Remove both US 41 bridges from service
- New interchanges at:
  - Nugent Drive
  - Wolf Hills Road/Stratman Road
  - Watson Lane
- Design updates

35-year Cost Estimate	
Design, Approvals, ROW, Mitigation, Other	$352 M
Construction	$1,221 M
Roadway/Bridge Operations & Maintenance	$107 M
Total YOE Cost	$1,680 M

Appendix H-7, page 36

Central Alternative 1

- Build a 4-lane I-69 bridge
- Retain one US 41 bridge for local traffic
- New interchange at US 60
- Considering improvements to US 41 corridor
- Design updates

35-year Cost Estimate	
Design, Approvals, ROW, Mitigation, Other	$200 M
Construction	$1,062 M
Roadway/Bridge Operations & Maintenance	$234 M
Total YOE Cost	$1,497 M

Appendix H-7, page 37

Project Timeline

Fall 2018:

- Preferred alternative identified
- DEIS published
- Public hearings held on both sides of the river

Fall 2019:

- Final Environmental Impact Statement and Record of Decision expected


ORX
69
OHIO RIVER
CROSSING
THANK YOU

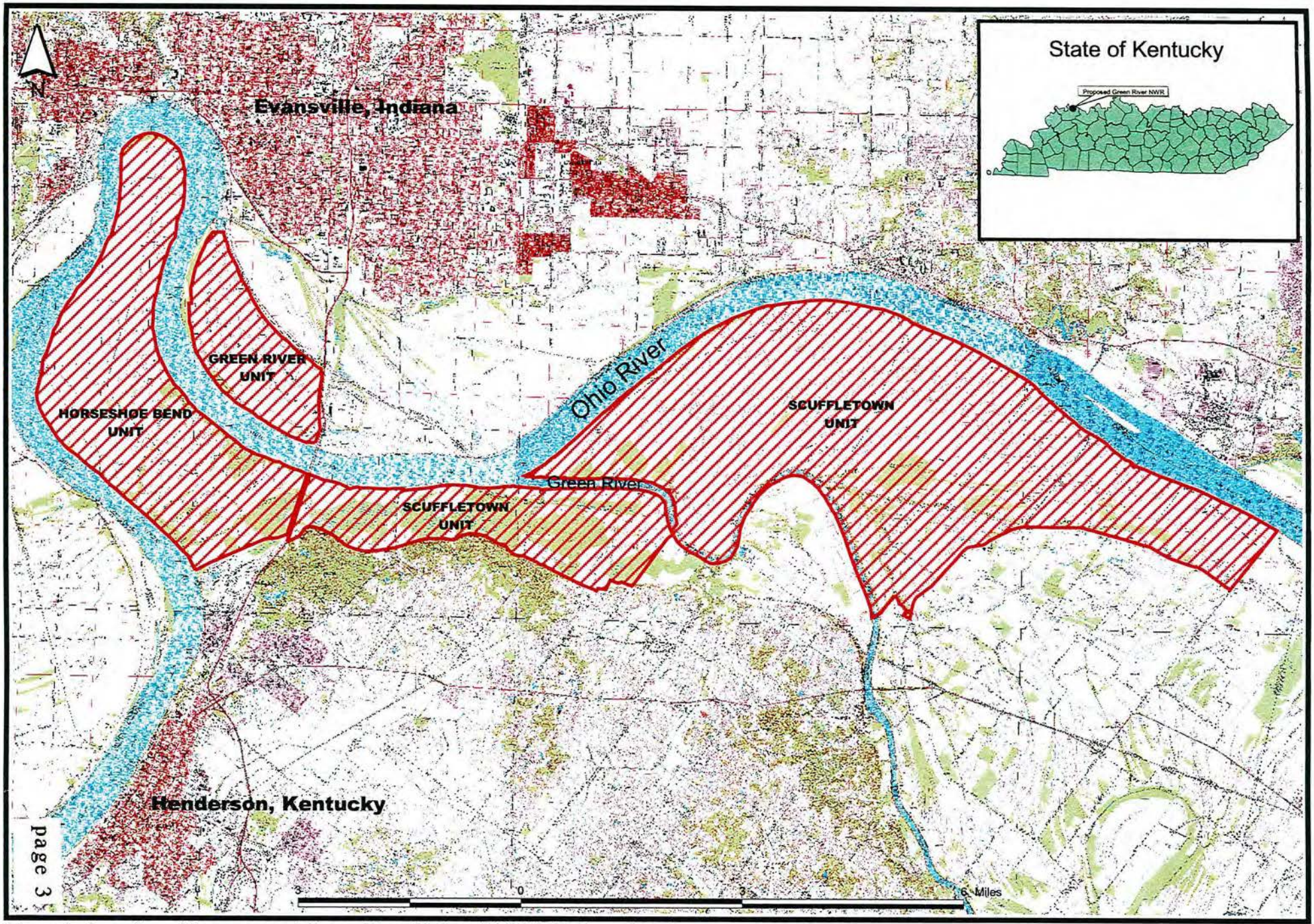
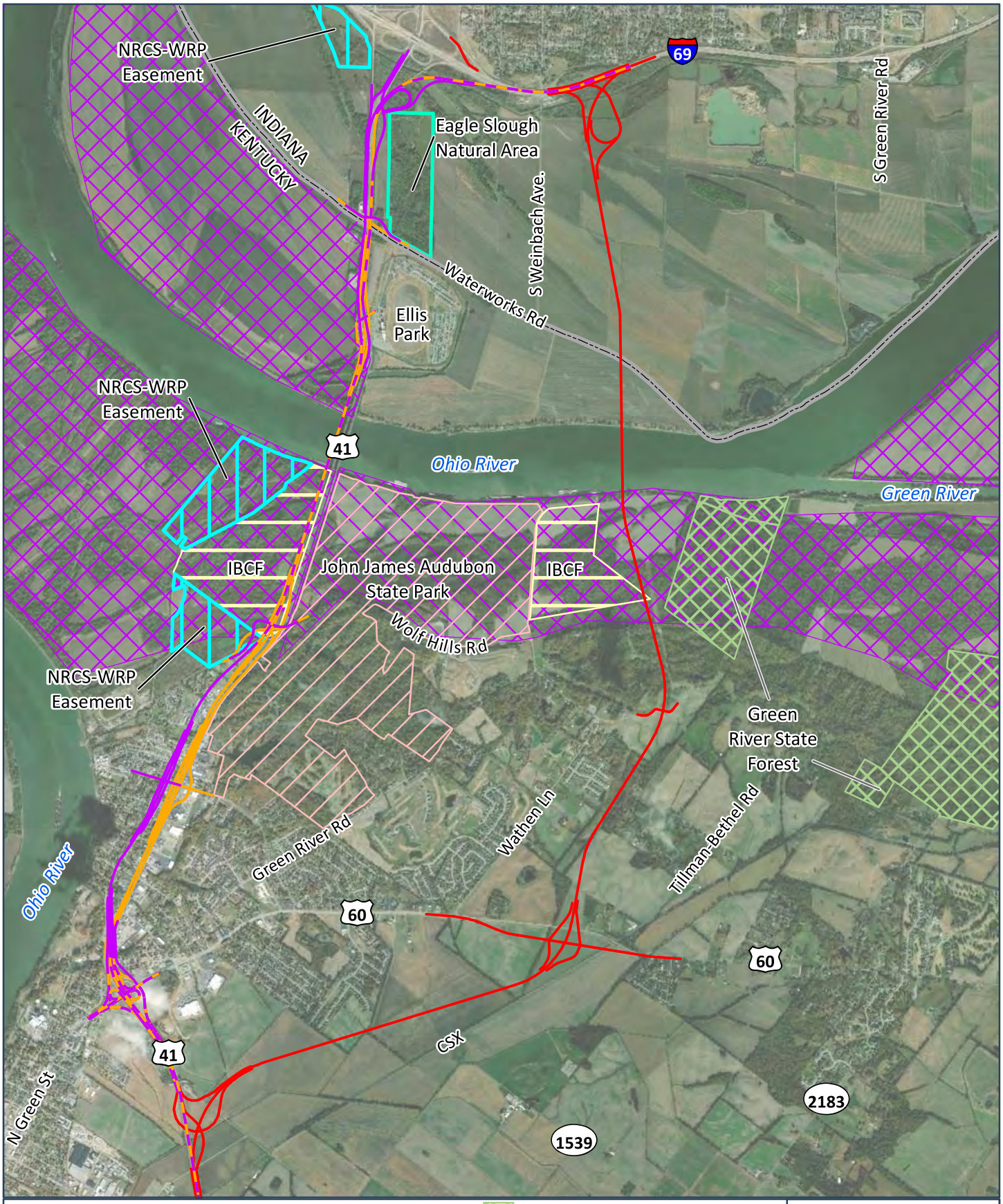
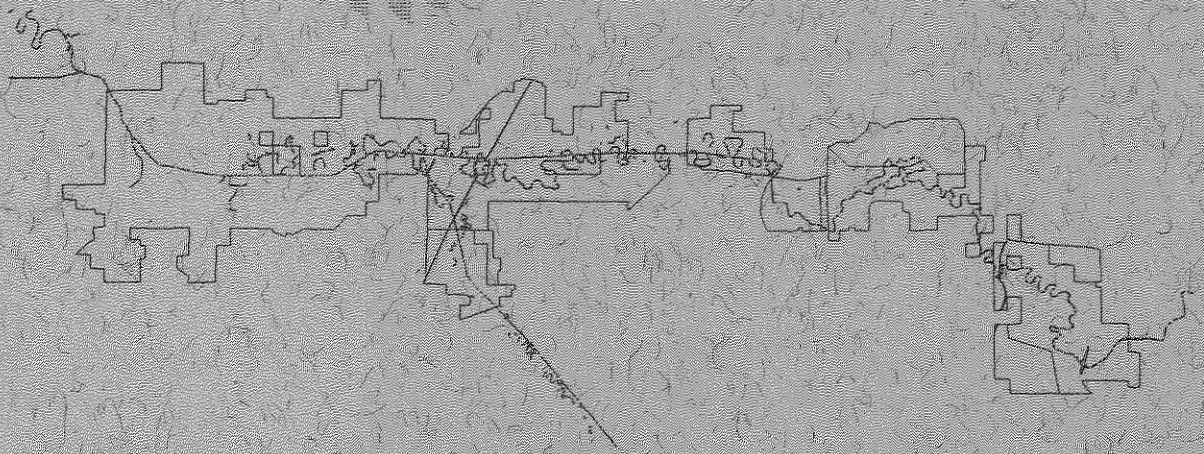


Figure1. Location of the proposed Green River National Wildlife Refuge, Henderson County, Kentucky


NRCS-WRP Easement
INDIANA
KENTUCKY
Eagle Slough Natural Area
69
S Green River Rd
S Weinbach Ave.
Waterworks Rd
Ellis Park
NRCS-WRP Easement
41
Ohio River
Green River
IBCF
John James Audubon State Park
IBCF
Wolf Hills Rd
NRCS-WRP Easement
Green River State Forest
Ohio River
Green River Rd
Wathen Ln
Tillman-Bethel Rd
60
60
41
CSX
N Green St
2183
1539
West Alternatives 1 and 2
West Alternatives 1 and 2, Central Alternative 1
West Alternative 1
West Alternative 2
Central Alternative 1
State Boundary
WRP
Eagle Slough Natural Area
IBCF
Green River State Forest
John James Audubon State Park
Proposed GRNWR
N
0
0.75
Miles
DEIS Alternatives and Proposed Green River National Wildlife Refuge
OHIO RIVER CROSSING

Patoka River National Wetlands Project



Final Environmental Impact Statement

July 1994

Revenue sharing payments on acquired federal lands are based on land value which is updated every five years by a certified appraiser. Actual appraised value of the land is an important determining factor of annual payments. If surface-minable coal value is recognized at the time the Service purchases a parcel, this value would continue to be factored into succeeding appraisals. Table 34 shows a comparison of the annual county revenues received from property taxes (based on 1992) and Revenue Sharing Payments which would be received by the county if the Project were implemented. The mined and reclaimed acreage figures shown in Table 34 are based on OSM's July 1993 Coal Study update and an analysis by the Service of surface-minable coal lands underlying regulated wetlands.

4.5.4. TRANSPORTATION AND UTILITY CORRIDORS

Alternative 1.

EXISTING INFRASTRUCTURE

Under the No Action alternative there would be no foreseeable change in the existing infrastructure of roadways, railways, and pipeline easements. Some county roads may be temporarily closed or relocated to facilitate surface coal mining. Water, natural gas and electricity distribution systems would gradually expand to meet the needs of county residents.

PROPOSED INTERSTATE 69

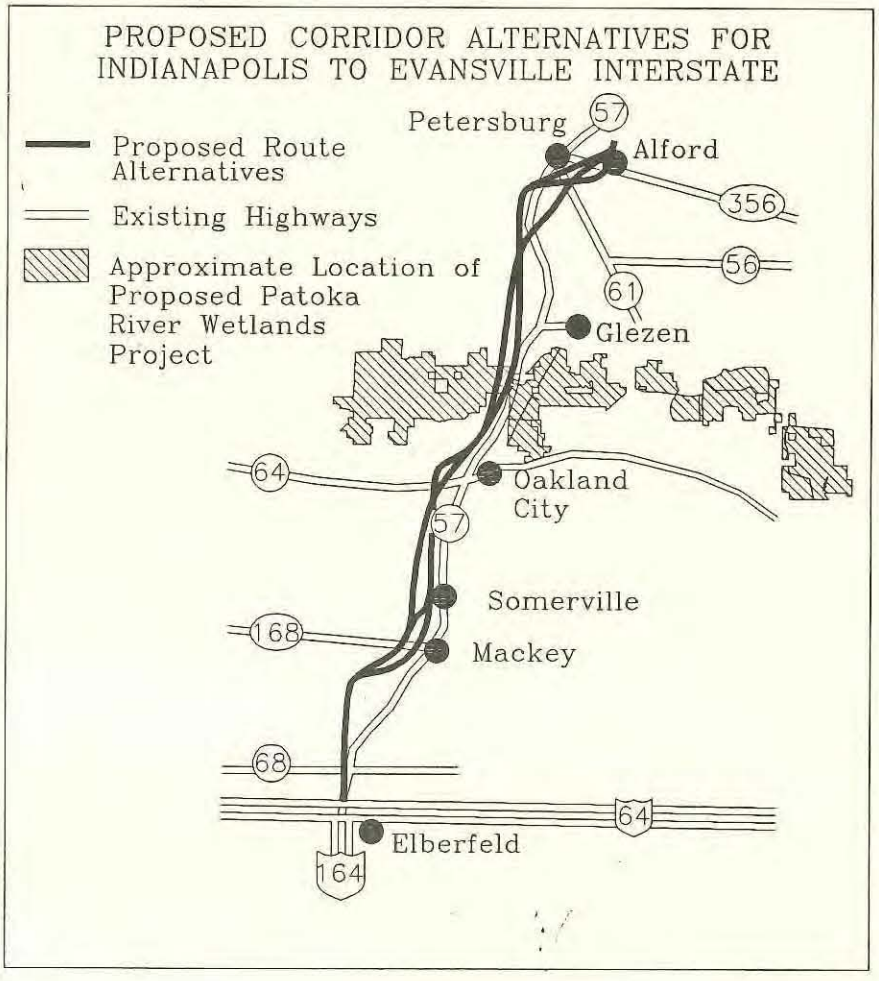
A major new north-south highway (I-69) has been proposed which would bisect the proposed Project near Oakland City (Figure 27). The southern section of the Evansville-to-Indianapolis route is currently being studied to determine the environmental impacts of the various alignments through the area, and the draft Environmental Impact Statement is expected to be released in 1994. Monies have been requested to begin engineering design work, and if appropriated, construction could begin in 1996. Planning for this project would be conducted to include measures necessary to minimize its impact on natural resources, including the Patoka River wetlands, as mandated by applicable environmental laws.

Alternatives 2,3,& 4.

EXISTING INFRASTRUCTURE

Development of the proposed Project with any of these alternatives would have no impact on the existing infrastructure of Pike or Gibson County. County governments would retain control of county roads, bridges, and right-of-ways, and no restrictions would be placed on maintenance activities. Although driveways,

Figure 27. Proposed Alternate Routes for I-69 in Relation to the Proposed Patoka River National Wetlands Project



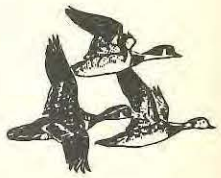
After: Balke Engineers, in Association with Burgess and Niple, LTD. (August 28, 1992). Revised 1994.

private roads, and trails are generally closed once a given parcel is acquired, the Service would not (could not) close any state, county or township roads without the concurrence of the government entity. Public access and police, fire, and emergency response routes would be unaffected.

PROPOSED INTERSTATE 69

The construction of the proposed Evansville-to-Indianapolis highway (I-69) would not be stopped by any of these alternatives. The Service is on record through the Environmental Assessment prepared for the Patoka River National Wildlife Refuge in May, 1989 as being a willing cooperator with the Indiana Department of Transportation (INDOT) to assist them (1) avoid important natural resources where feasible; (2) minimize any remaining, unavoidable impacts: and (3) mitigate for those resources that are destroyed. This system of ensuring that federally-funded projects do not significantly impact natural resources is required of INDOT by the National Environmental Policy Act and Section 404 (B)(1) of the Clean Water Act whether or not a National Wildlife Refuge or Wildlife Management Area is impacted by the highway project.

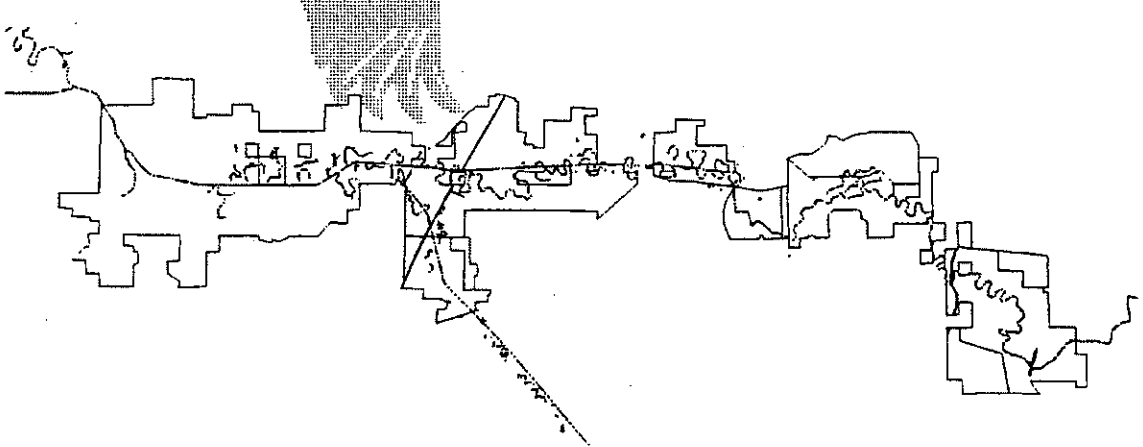
Furthermore, to facilitate the Federal Highway Administration's compliance with the requirements of Section 4(f) of the Department of Transportation Act, which establishes a national policy that encourages preservation of publicly owned wildlife and waterfowl refuges, the Service would attempt to avoid buying lands within the chosen alignment, thereby avoiding or minimizing the applicability of Section 4(f). Should this prove infeasible, the Service would work with INDOT to assist in the development of all possible measures to minimize harm to Project lands. This could include such measures as wildlife habitat and erosion control plantings and wetland restoration and enhancement projects to replace those resources unavoidably destroyed or degraded.



RECORD OF DECISION

FOR THE ESTABLISHMENT OF THE PATOKA RIVER NATIONAL WETLANDS PROJECT

GIBSON AND PIKE COUNTIES, INDIANA



SEPTEMBER 1994

Prepared by:
U.S. Fish and Wildlife Service
Great Lakes-Big Rivers Region
Bishop Henry Whipple Federal Building
1 Federal Drive
Fort Snelling, Minnesota 55111-4056

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Bishop Henry Whipple Federal Building
1 Federal Drive
Fort Snelling, MN 55111-4056

IN REPLY REFER TO:
FWS/ARW/RE-AP

SEP 7 1994

Dear Reader:

Enclosed is a copy of the Record of Decision (ROD) for the establishment of Patoka River National Wetlands Project (Project). This ROD has been developed by the U.S. Fish and Wildlife Service (Service) in compliance with agency decision-making requirements of the National Environmental Policy Act of 1969, as amended.

The purpose of this ROD is to document the decision of the Service following the completion of the July 1994 Final Environmental Impact Statement (FEIS) for the Project. Further, this ROD presents the basis for the decision regarding the selected alternative.

Based on a review of the alternatives and their environmental impacts as described in the FEIS for the Patoka River National Wetlands Project, the decision of the Service was to implement the Preferred Alternative (Alternative 4 in the FEIS). Plan implementation became effective today (September 7, 1994) when this ROD was signed.

For further information regarding the Project, please contact Mr. William McCoy at the local Project Office; address: 510½ West Morton Street, Box 217, Oakland City, Indiana 47660; phone: (812)749-3199.

Sincerely,

Sam Marler

Sam Marler
Regional Director

Enclosure

I. INTRODUCTION

This Record of Decision (ROD) has been developed by the U.S. Fish and Wildlife Service (Service) in compliance with agency decision-making requirements of the National Environmental Policy Act of 1969, as amended (NEPA). It documents the decision of the Service based on the information contained in the Final Environmental Impact Statement (FEIS) for the establishment of the Patoka River National Wetlands Project (Project) and the entire administrative record. The FEIS was filed with the Environmental Protection Agency on August 5, 1994. The Service has selected the preferred alternative as described in the FEIS as the best alternative for implementing the decision to establish the Project.

II. PROPOSED ACTION

With this ROD the U.S. Fish and Wildlife Service is approving land acquisition for the establishment of the Patoka River National Wetlands Project (Project). The Project is located along a 20 mile section of the Patoka River in Pike and Gibson counties of southwestern Indiana. The project involves acquisition of 22,083 acres of land from willing sellers to be managed as part of the National Wildlife Refuge System as a combination national wildlife refuge and management area. The Project area contains one of the few remaining expanses of bottomland hardwood forest wetlands in Indiana and the midwestern United States.

III. PURPOSE AND NEED FOR ACTION

The last 100 years have seen a dramatic decline in wetland habitat critical to maintaining migratory bird and other wildlife populations. Nationally, only 103 million acres (47 percent) of the estimated 221 million acres of wetlands that existed in the lower 48 states at the time of settlement remains. In the State of Indiana this trend of wetland loss is even more dramatic. Of the estimated 5,600,000 acres of wetlands that existed in Indiana at the time of settlement, only 813,000 acres (15 percent) remain. Historically, about 85 percent of this wetland loss has been for agricultural purposes with the remainder attributable to urban and industrial development.

Of all wetland types, the palustrine forested wetlands (bottomland hardwoods) have been identified in Indiana as the "state wetland priority type." This priority for protection is based on the historical pattern of wetland loss and alterations occurring in Indiana and the multiple value they have to fish, wildlife and plant resources. Only a small percentage of the wetlands remaining in Indiana support their original complement of plants and animals. Their biological diversity has been degraded as a result of impacts to water quality, alterations of water levels and upstream watersheds and other surface disturbances.

The Service's involvement in the Patoka River Valley stems primarily from two major national initiatives: the Emergency Wetlands Resources Act (Act) passed by Congress in 1986; and the North

American Waterfowl Management Plan (NAWMP) signed by the U.S. and Canada in 1986. Both the Act and the NAWMP led to identification of the Patoka River area as a nationally important wetland resource warranting protection, restoration, and management.

The proposed action addresses the current and long-term threats from present land uses and future development activities that can destroy the biological richness of bottomland hardwood forest habitat. This wetland type is one the richest habitats found in North America with regards to its diversity of plant and animal life forms.

Habitat management efforts will focus on restoration and enhancement of bottomland hardwood forests and wetland habitat to provide essential food, cover and resting areas for migratory birds, threatened and endangered species, and resident fish and wildlife. Such habitat restoration, along with protecting and preserving the remaining wetlands and bottomland forests, will contribute to objectives of the NAWMP and the Act.

Objectives of the Patoka River National Wetlands Project

1. Restore, protect, and manage a bottomland hardwood forest ecosystem for the many values associated with these wetlands.

2. Restore, protect, and manage uplands that complement and/or protect wetlands.

3. Restore, protect, and manage migratory bird habitat, with special emphasis on habitat for wood ducks.

4. Restore, protect, and manage habitat for endangered and threatened species of plants and animals.

5. Increase public opportunities for outdoor recreation and environmental education that are compatible with the primary resource objectives of the Project.

6. Provide wildlife extension services and restore wetland habitat in southwestern Indiana per landowner requests according to guidelines of the Service's Partners for Wildlife Program.

7. Improve water quality in the Patoka River watershed to reduce adverse impacts on human health and wildlife productivity, enhance the fishery resource, and increase the attractiveness of the water resources for wildlife-oriented public recreation.

IV. ALTERNATIVES CONSIDERED

Initially, eight alternatives were developed for consideration in this planning process and were described in the Environmental Impact Statement (EIS). After examination and review of these alternatives from

the standpoint of realistically achieving the stated objectives of the Project, the following four alternatives were eliminated from detailed analysis due to obvious shortcomings. A thorough explanation for this is contained in the EIS.

Alternative A: Water Bank/Wetland Reserve.

Alternative B: Expansion of Land Use and Zoning Regulations.

Alternative C: Private Lands Agreements.

Alternative D: Acquisition/Management by Others.

After elimination of the above four alternatives from further consideration, the following four alternatives and their consequences were described in detail and carried throughout the FEIS:

Alternative 1: No action.

Alternative 2: Service acquisition of 22,083 acres from willing sellers for the Patoka River National Wildlife Refuge.

Alternative 3: Service acquisition of lands from willing sellers as Wildlife Management Areas from within a 22,083-acre selection area.

Alternative 4: (Selected Alternative) Service acquisition of 6,800 acres for the Patoka River National Wildlife Refuge and acquisition of Wildlife Management Areas from within an adjacent 15,283-acre selection area from willing sellers.

Consequences of the Project alternatives in relation to achieving objectives and addressing substantive issues identified during the scoping process were presented in the text of the EIS. Conclusions reached were not absolute, but were based on a practical, reasoned review of information available coupled with assumptions based on facts and plausible scenarios.

Alternative 1, "No action", would maintain the status quo of the area in the short-term, if the current owners retain title to the property. Based on economic self-interest, demands for home sites, access roads, agricultural development, hardwood timber production and mineral development would lead to further habitat fragmentation and destruction of natural habitat values. Some protection of the proposed Project area would accrue from existing local, State and Federal controls which rely on legislation, regulations or statutes that pertain to wetlands or the Classified Lands Program.

Alternatives 2, 3 and 4 involve direct acquisition of interests in lands by the U.S. Fish and Wildlife Service from willing sellers. Although these three alternatives involve the same area, there are

important differences relating to legal interpretations of the Surface Mining Control and Reclamation Act of 1977, potential impacts to surface coal mining activities, project acquisition cost and how lands will be prioritized for acquisition. Objectives and management goals are essentially the same for all three Service alternatives. There would be a long term commitment in both funding and staff as part of the National Wildlife Refuge System in protecting, restoring and enhancing the habitat of the designated area and providing for compatible public use. The primary difference in these alternatives is the timing of acquisition in relation to other competing interests in the land such as surface coal mining. These other interests are short term whereas the wetland project objectives are long term or in perpetuity once the land is acquired.

The one distinguishing factor that separates the three action alternatives relates to potential impacts on surface coal mining which in turn could affect acquisition cost and economic impacts to the local community. Alternative 2 would result in placing all lands within the project boundary off-limits to surface coal mining, based on and subject to the provisions of the Surface Mining Control and Reclamation Act (SMCRA), [specifically Title V, Section 522(e)(1)]. Although this alternative would best meet Service objectives for support of the North American Waterfowl Management Plan and the National Wetlands Priority Conservation Plan, it has the potential for tremendous adverse economic impacts on the local communities, as well as creating a large financial burden on the federal government.

Alternative 3 would not result in any automatic prohibition of surface coal mining. As a result of this, some natural habitat could potentially be destroyed by surface mining activities prior to the acquisition of the land by the Service. Alternative 4 defines a designated refuge boundary of 6,800 acres in six separate units. These areas were selected on habitat values and in locations where surface-minable coal reserves were limited and highly unlikely to be mined. Surface coal mining activities would be prohibited within this refuge boundary subject to the provisions of SMCRA. The remaining 15,283-acre area is included within a selection area boundary where surface mining could occur prior to Service acquisition from willing sellers. While management objectives are the same on both areas, there are distinct advantages associated with the selected alternative. Designating a portion of the Patoka River National Wetlands Project as a National Wildlife Refuge will ensure that the nationally significant ecological values of the area are fully recognized by the American people. This recognition is important because it will place greater emphasis on protecting and managing the area for its rich biological diversity. It should also increase public interest in visiting the area. This in turn will bring greater economic benefits to the local community as businesses develop to provide visitor services. Further, it will increase the opportunity to inform a larger number of people about our natural heritage and the benefits of preserving and managing wetland resources.

Environmentally Preferable Alternative

Alternatives 2, 3, and 4 would be environmentally preferable to Alternative 1 (No Action) because the end result of Service acquisition from willing sellers is the eventual conservation and enhancement of natural habitat, benefitting both the Nation's wildlife and human populations. However, Alternative 2 represents the most environmentally preferable alternative, since surface coal mining would be

prohibited subject to the provisions of SMCRA and the large scale surface disturbances associated with mining operations would not occur within the Project boundaries.

V. DECISION

The Service has selected Alternative 4, as described in the FEIS as the best alternative for implementing the decision to establish the Project. That is, the acquisition of 6,800 acres for the Patoka River National Wildlife Refuge and acquisition of Wildlife Management Areas from within an adjacent 15,283-acre selection area by the Service from willing sellers in Pike and Gibson Counties, Indiana (see Figure 1). The most environmentally preferable alternative (Alternative 2) was not selected based on the potential of this alternative to have major adverse impacts on the local economy. Secondarily, Alternative 2 would have placed a large financial burden on the federal government which would have been required to purchase all surface-minable coal before it was allowed to be mined, subject to the provisions of SMCRA.

The overall rationale for choosing the selected alternative as the best alternative for implementation of this Project is based on the impact of this alternative on the issues and concerns that surfaced during the planning process for this Project (relative to all the other alternatives). These consequences are described in detail in the FEIS. All issues and concerns received in response to the Draft and Final EIS's were considered in this decision. Chapter eight of the FEIS reproduced all comments sent to the Service in response to the Draft EIS and addressed each statement of comment individually. No new issues were raised in the letters responding to the FEIS.

PUBLIC COMMENTS TO FEIS

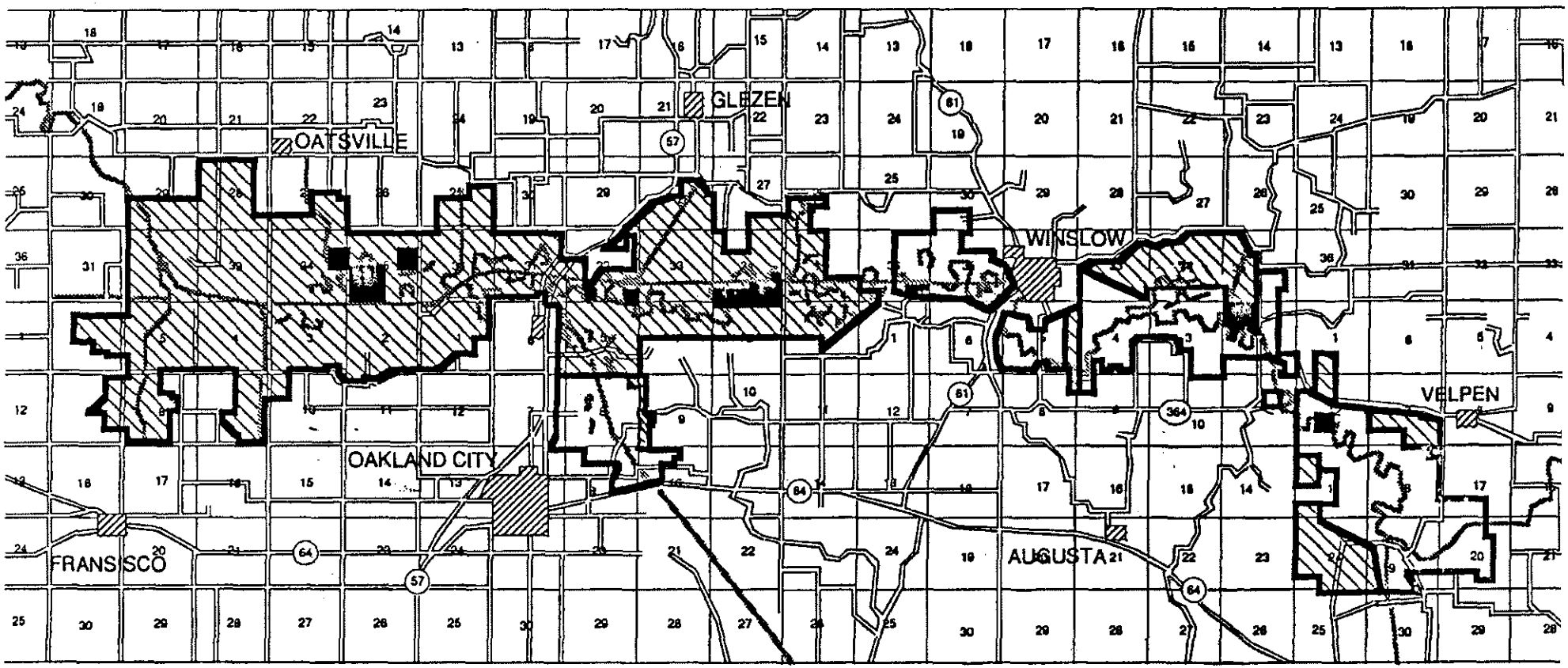
The U.S. Fish and Wildlife Service (Service) filed the Final Environmental Impact Statement (EIS) for the Patoka River National Wetlands Project (Project) with the U.S. Environmental Protection Agency (EPA) on August 5, 1994. In compliance with agency - decision making requirements of the National Environmental Policy Act of 1969 (NEPA), the Service is required to circulate the FEIS for 30 days after filing with the EPA before issuing a Record of Decision (ROD) on the project. During the 30-day circulation period which ended September 6, the Service received comments from the public on the FEIS.

There were 17 letters received in response to the Final Environmental Impact Statement. Of these, one (1) was received from a federal agency, two (2) from local agencies, two (2) from one local organization, one (1) from a national organization and eleven (11) from individuals.

Of these 17 written responses, six (6) favored establishment of the Project and eleven (11) favored no action or no refuge. In addition, 58 form letters and one petition with a total of 1204 signatures in favor of no action were also received.

Patoka River

WETLANDS PROJECT



LOCATION

LEGEND

- Proposed National Wildlife Refuge Boundary
- Proposed Wildlife Management Area
- State Owned Land
- Town
- State Highway (14)
- Open Water

NORTH

SCALE IN MILES

0 1 2 3 4 5

The responses are summarized by issues and concerns in the following table.

ISSUES AND CONCERNS

Below is a summary of the consequences of the selected alternative on the issues and concerns providing a complete account of the basis for this decision.

A. Natural Resource Impacts

(1). Bottomland forest and wetlands

The selected alternative will permanently protect and allow the management of about 9,850 acres of existing natural wetlands and open water in order to restore the bottomland, riverine ecosystem to more natural, historic conditions. In addition, approximately 5,108 acres of bottomland farmground would be restored to bottomland hardwood forest (4,108 acres) and managed wetlands (1,000 acres as moist-soil management units).

(2). Natural areas and biodiversity

The selected alternative will enhance natural areas and increase the biological diversity of the lands within and around the Project area. Acquisition of lands within the Project boundary and selection area from willing sellers will remove these lands from the pressures of future agricultural, residential or commercial development. These areas will become remnant natural areas for the benefit of wildlife and human populations. Management of the area by the Service for natural processes will also enhance the biological diversity, thereby enriching the natural areas.

(3). Migratory birds and resident wildlife

The restoration of Patoka River's bottomland riverine ecosystem with a wide array of high quality wetlands would benefit migratory birds and resident wildlife. At full development of the selected alternative, resident, migrating and wintering waterfowl populations would benefit from 1,000 acres of moist soil units with dependable shallow waters and high quality natural foods, 11,070 acres of mast-producing bottomland forest and nearly 3,000 acres of emergent, scrub-shrub and open water wetlands. The Project would benefit other wetland wildlife species as well, particularly wading birds, shorebirds, neotropical migrants, raptors, furbearers, and numerous reptiles and amphibians. Herons, egrets, gallinules and bitterns would find more dependable nesting and feeding sites. Moist soil units would provide a ready source of invertebrates for migrating shorebirds. An assortment of snakes, turtles, frogs, toads and salamanders would thrive in emergent marshes and the moist floors of forested wetlands. Wetland-associated furbearers should also thrive.

Table 1. Summary of Comments on the FEIS

RESPONSES	PRO	CON	ISSUES AND CONCERNS																									
			A.1	A.2	A.3	A.4	A.5	B.1	B.2	C.1	C.2	C.3	C.4	C.5	D.1	D.2	D.3	D.4	D.5	D.6	D.7	D.8	E.1	E.2	E.3	E.4	F
LETTERS																											
Federal Agencies and Elected Officials																											
• USEPA	X		X				X																				
State Agencies and Elected Officials																											
Local Agencies and Elected Officials																											
• LOWER PATOKA RIVER CONSERVANCY DISTRICT		X	X				X		X	X				X										X		X
• UPPER PATOKA RIVER CONSERVANCY DISTRICT		X												X													X
Private Organizations																											
• PATOKA VALLEY PRESERVATION SOCIETY (Barnett)		X	X				X	X		X	X		X	X	X	X	X		X					X			X
• PATOKA VALLEY PRESERVATION SOCIETY (Leffler)		X						X		X						X		X									X
• IZAAK WALTON LEAGUE	X		X	X	X		X																				
Individuals and Businesses																											
• Wallace		X						X	X	X							X					X				
• Lindy		X	X							X							X							X		
• Adams	X			X	X																						
• Kunkle		X			X																						
• Leathers		X															X		X								
• Drayna	X																				X						
• Shaw		X													X	X								X		X	
• McElroy		X								X							X										
• Wasson	X		X				X																	X			
• Wendholdt	X																							X			
• Turner		X	X	X	X							X		X	X	X											
• Form Letter (no issues) (n=58)		X																									
PETITIONS																											
• PATOKA VALLEY PRESERVATION SOCIETY (n=1204)		X														X			X								

Resident wildlife associated with this ecosystem would also benefit. Deer and wild turkey populations, as well as squirrels and small rodents would likely increase as a result of bottomland and upland reforestation. Small game species such as quail and rabbits, predatory canids and some migratory birds, most notably woodcock, would benefit in areas where agricultural fields or reclaimed surface mines are allowed to revegetate through natural succession, thus providing the transitional habitat favored by these animals.

(4). Threatened and Endangered Species

At full project development, the qualitative improvement of 13,166 acres of existing forest and wetland wildlife habitat, coupled with the reversion of 7,847 acres of agricultural land to grasslands, early successional fields, wildlife food plots, and additional forests and wetlands would benefit federal and state threatened and endangered species in the proposed Project area. Management of bottomland and riparian forests would recognize the habitat needs of two federally listed species (Indiana bat and bald eagle) and one proposed species (Northern copperbelly watersnake). Implementation of the selected alternative would also benefit several state-listed species of small fish, reptiles and amphibians, woodland raptors, colonial nesting wading birds, neotropical songbirds and some mammals.

Reforestation and habitat development of the proposed Project's uplands would decrease erosion and subsequent sedimentation in the Patoka River. Additional efforts to identify and correct other contaminant problems in the watershed, such as acid mine drainage, could improve the river's water quality to the point where some federal and/or state-listed mussels could re-colonize certain areas.

(5). Water Resources

The selected alternative will improve the water quality of the Patoka River. A notable impact is associated with the removal of approximately 7,600 acres from agricultural production. Although this would occur over a relatively long time (at least 20 years), the ultimate result would be a substantial reduction in sediments and farm chemicals entering area waterways. Restoring and developing over 5,100 acres of moist-soil and forested wetlands would increase the water filtration and ground water recharge capabilities within the Patoka River ecosystem. Stabilizing riverbanks would decrease the serious erosion problem occurring in certain stretches of the Patoka River within the proposed Project area.

B. Energy Resource Impacts

(1). Coal

The selected alternative avoids or minimizes the mandatory acquisition of coal. It also allows the option of acquiring coal rights on a negotiated basis, which would be desirable in situations where habitat with important natural value is likely to be impacted by proposed mining operations.

Surface coal mining will be prohibited on lands within the National Wildlife Refuge boundary subject to the provisions of SMCRA. However, the Refuge boundary was established based on the absence of technologically and economically-feasible surface-minable coal reserves. In the event that such deposits are later discovered, the Service would compensate the affected private landowner for these coal rights. Surface coal mining would be allowed to continue on lands within the Wildlife Management Area Selection Area boundary, prior to purchase by the Service, subject to present permitting constraints.

Underground minable coal rights could be retained by the landowners wishing to sell to the Service since underground mining is not prohibited under Service lands based on the Office of Surface Mining's latest interpretation of SMCRA in July 1991.

(2). Oil

Under the selected alternative, the owners of excepted or reserved oil and gas have the right to sell, lease, explore for and remove those resources subject to the terms of the instrument by which that interest was acquired or reserved and to State laws governing protection of the surface and the rights of the surface owners. The Service would work cooperatively with owners or developers of mineral estate interests to help mitigate potential loss and damage to wildlife resources.

C. Agricultural Impacts

(1). Loss of farmland

Total tillable acreage within the selected alternative is 7,847 acres with 4,319 acres in Gibson County and 3,528 acres in Pike County. This accounts for two percent of the total farmland in Gibson County and four percent of the total farmland in Pike County. All but 500 acres of these lands would be restored to natural habitats over the course of many years. Acquisition and land use changes would take place over an extended period of time, depending on willing sellers and the availability or funds for acquisition and management. As Project acquisition occurs, agricultural production would continue on designated areas through cooperative farming agreements until the Service acquired enough land to implement management. As management is implemented the farming would be phased out.

Pursuant to sections 1539-1548 of the Farmland Protection Policy Act (FPPA or the Act) 7 U.S.C. 4201-4209, the Service submitted Form AD-1006, Farmland Conversion Impact Rating Form to the

U.S. Department of Agriculture, Soil Conservation Service (SCS). Based on the criteria set forth by this Act, with a score of 125, it was determined that no additional sites needed to be evaluated to meet the siting requirements of the proposed Project.

(2). Animal depredation

With land acquisition and wildlife habitat management under the selected alternative, depredation would likely decrease for several reasons:

- Cooperative farming programs, development of food plots and habitat management should provide necessary food and cover to encourage wildlife to remain on Service lands.

- Most lands acquired by the Service would be open to hunting for upland game species including white-tailed deer, which currently accounts for most crop damage complaints in the Project area. Public ownership would result in improved deer herd control than is now possible under private land ownership due to improved access. If severe problems should persist, damage control permits could still be issued by the Indiana Department of Natural Resources to adjacent private property owners.

- Increased public access for hunting and trapping would also make it unlikely that populations of furbearing animals, such as raccoons and coyotes, would reach higher nuisance levels than already experienced.

- Where beaver build dams on Project lands and impound water on adjacent private lands, Project staff would cooperate with land owners to remove problem animals.

- Crop depredation by waterfowl is not likely to occur in the Project area due to the availability of adequate food on Project lands. Although there would likely be some closure of Project lands to duck hunting, such closed areas would provide additional food and cover, thereby reducing the likelihood of crop depredations on private lands. Management for forested wetlands would not favor development of large flocks of Canada geese.

(3). Noxious weeds

Lands purchased and not left in farming would be converted to woodlands or grasslands. This limits the establishment of noxious agricultural weeds. Mowing or other management practices such as spot spraying would be used to control specific problem areas. The purchase of non-agricultural lands would represent no change to surrounding landowners and should not require any special weed-control practices.

(4). Avian diseases

The selected alternative does not significantly increase the risk of transmitting avian disease from wild birds using the Project area to domestic poultry for several reasons. These are outlined below:

1) the findings of an independent Avian Disease Task force support this fact.

2) the development of the proposed Project provides opportunities for water control and other management options that would improve the environmental quality for migratory birds. Planned habitat improvement reduces the potential for disease outbreaks to take place, and enhances the ability to combat disease problems that might occur in migratory bird populations using the proposed project area.

3) it is Service policy to prevent and control wildlife diseases on management areas wherever practical or possible.

4) the Project will provide increased surveillance of the wild populations in the area resulting in early detection of disease outbreaks. These measures decrease the present risk of disease spreading undetected to other wildfowl or domestic poultry operations with inadequate biosecurity management programs.

5) the Project will develop a site specific Migratory Bird Disease Contingency Plan, allowing for rapid containment of any disease problems that may arise.

6) the Service will sponsor a baseline disease survey of wetland birds when funding becomes available. To be meaningful, a similar, concurrent effort would be needed on the part of the poultry industry to monitor domestic birds for disease organisms.

It is important to note that a management program to effectively limit or control any disease problem always requires diligent use of biosecurity practices on the part of individual poultry producers. The goal is to keep disease organisms from ever entering the confines of a poultry operation.

(5). Drainage and Flooding

Development of the selected alternative would have little or no impact on existing drainage systems or area flooding. Protection, restoration, and management activities could not legally contribute to flooding or impede drainage, so as to impact private property. The Service would not cause any artificial increase of the natural level, width, or flow of waters without ensuring that the impact would be limited to lands in which it has acquired an appropriate interest from a willing seller.

The Service would attempt to establish Cooperative Agreements or a similar vehicle with Conservancy Districts and County Drainage Boards as it acquires lands within the proposed Project to assure activities of each agency would not adversely impact the objectives and responsibilities of the others.

Following the release of the FEIS, additional concerns were raised relative to the effect of Service management activities on water table levels on private land. The suggestion was made that prior to acquisition, the Service should fund a baseline water table study for interested farmers within the Project. The Service does not believe a study of this magnitude is warranted at this time. However, as stated numerous times in the FEIS, hydrologic and engineering studies, including water table analysis, will be conducted at the specific sites eventually selected for wetland (moist soil units) development. Constraints analysis of local soil and local water table will be conducted to determine if site conditions are conducive to seepage from the wetland. If seepage appears likely, a more detailed study of site geohydrology will be conducted, including the use of piezometer to gather data on the water table. Study results may indicate the need for mitigative measures such as additional drains, additional pumps, or perimeter collection ditches or tile. Should it become apparent that the proposed wetland unit cannot be built without impacting the water table level on private property, the activity would be delayed until the Service Could acquire the affected lands or the site would be dropped from further consideration as a wetland development. The Service does intend to conduct a baseline study of the Patoka River and some of its tributaries/ditches within the Project area in order to establish pre-Project outlet elevations, gradients, cross-sectional dimensions and waterway capacities. This information will be useful in assuring that future activities do not alter the existing drainage infrastructure of the area.

D. Socioeconomic Impacts

(1). Community

Under the selected alternative the Service could acquire approximately 22,083 acres of land from 262 landowners in the Project area. Project acquisition would cause no appreciable difference from present population trends. 64 percent of the landowners are presently residents of Gibson and Pike Counties and own 51 percent of the total acres within the Project boundaries. Only 33 occupied residences exist within the Project boundaries. The proposed Project is projected to employ a staff of up to 15 full-time and several part-time employees. Some of these and their families would be newcomers to the area.

The character of the community as a rural setting would not be changed by the selected alternative because the emphasis is on development of the natural resources of the area. As development increases on surrounding areas, this Project would assure the preservation of natural lands within its boundaries, maintaining the open character of the present rural setting. No residential, commercial, or industrial development would be accomplished as a part of this Project. There is potential for some commercial development as an indirect result of the Project, however. This development would be concentrated on recreation-related activities and services to visitors that would be attracted to the area.

(2). Business, employment and local economy

Based on a comprehensive economic analysis of all alternatives, the selected alternative shows positive net increases in economic activity and job growth, even after taking into account the maximum effect scenarios of complete agriculture and timber production losses. Impacts would occur over a long period of time and the transition or adjustment within the local community would be gradual. The new economic activity would facilitate needed business diversification and creation of new jobs.

Economic effects at Project completion are estimated to result in a net **direct** annual gain ranging from $2,748,300 to $3,235,400. When the economic "ripple effect" is considered, the **total** annual economic gain approaches between $5.25 million and $6.0 million at Project completion. This is accompanied by a corresponding net increase of employment, ranging from 227 to 246 new jobs. Visitor spending is the primary catalyst for the economic gains expected in the Project area. These increases overshadow all estimated income losses and also, all other income gains by large margins throughout Project development.

(3). County tax base

The purchase of lands by the Service under the selected alternative would remove the lands from the local tax rolls. However, the Service makes revenue sharing payments to counties for lands under its administration. These monies help offset the tax losses associated with federal ownership. Since 1964 the annual Refuge Revenue Sharing payment has averaged 86 percent of full entitlement. The selected alternative (assuming total acquisition in today's dollars) will result in revenue sharing payments ranging from $81,601 to $188,213 per year at full entitlement; or $69,361 to $159,981 at 85 percent entitlement. This range of values depends on the actual cost to ultimately acquire Project lands, based on current market conditions and the amount of coal rights purchased. This should result in an overall net increase in payments to the affected counties.

(4). Eminent domain

It is the policy of the Service to acquire lands for wildlife from willing sellers at market value as determined by a current appraisal. This increases the potential for some harm to come to wildlife, fisheries, plant, archeological, and water resources of the area on private lands prior to acquisition by the Service due to independent decisions of private landowners. However, this policy benefits the landowners and the Service in other ways. The individual freedom of the landowners within the boundary is retained. It would be the decision of the landowners within the boundary if they wish to sell their land or interests therein. In addition, this policy maintains a positive image in the area and develops good neighbor relationships over time.

(5). Landowner rights within established project

The selected alternative does not impact private landowner rights unless the Service has acquired real estate interest in a particular tract. As the Service acquires land parcels they become part of the National Wildlife Refuge System, and are, at that time, under the control of the Service. Any landowners within the proposed Project's boundary, even though land surrounding them may have been purchased by the Service, retain all the rights, privileges, and responsibilities of private land ownership. This includes, but is not limited to, the right to access, timbering, hunting, farming, vehicle use, control of trespass, right to sell to any party, and taxes.

(6). Transportation and Utility corridors

Development of the selected alternative would have no impact on the existing infrastructure of Pike or Gibson County. County governments would retain control of county roads, bridges, and right-of-ways, and no restrictions would be placed on maintenance activities. When the Service acquires lands, it is subject to all preexisting easements and right-of-ways. Should circumstances require infrastructure expansion across Service-owned land, right-of-way permits could be issued for this purpose. Public access and police, fire, and emergency response routes would be unaffected.

Where access to private lands is affected by Service acquisition and no formal right-of-way is in existence, the landowner could negotiate a mutually acceptable right-of-way permit to allow essential ingress and egress.

The construction of the proposed Evansville-to-Indianapolis highway (I-69) will not be stopped by the selected alternative. The Service is on record as being a willing cooperator with the Indiana Department of Transportation (INDOT) to assist them (1) avoid important natural resources where feasible; (2) minimize any remaining, unavoidable impacts: and (3) mitigate for those resources that are destroyed.

(7). Cultural resources

Development of the selected alternative will increase the protection of prehistoric or historic archeological resources from unconsidered destruction because of several Federal laws that apply to property owned and administered by the Federal government.

The Project Manager will, with the assistance of the Regional Historic Preservation Officer, develop a program for conducting inventory surveys for cultural resources, and resolve any other historic preservation and cultural resource issues on the proposed Project area in accordance with applicable laws, regulations, and Service policy.

(8). Health concerns - Mosquitoes

The selected alternative will not significantly impact populations of disease carrying mosquitoes. Service biologists will work cooperatively with the State Department of Health and County Health Departments to assist in administering a monitoring program in the area, especially where Service lands may be involved. The monitoring program is the only way to maintain an awareness of potential problems and provide the data necessary to formulate feasible control measures.

E. Public Use Impacts

(1). Access to Project Lands

Lands acquired from willing sellers under the selected alternative will become part of the National Wildlife Refuge System. As such, these lands may be closed to public entry and use until a management plan is completed with public input. In the long-term, this will greatly increase the opportunities for outdoor recreation, education, and interpretation. Access to the Patoka River will be improved with the addition of these public lands in Pike and Gibson Counties.

Project lands will be available for public use in accordance with local, State, and federal regulations. Once established the Project lands would be open for public use, on a daily basis. State and county roads that traverse the Project area will remain open to public traffic. The needs of all people, including physically challenged persons will be considered while planning any public use activity. Public facilities and public use opportunities would be accessible to all people.

(2). Project planning and development

Detailed hydrologic, engineering, and environmental data would be required before development of wetland management facilities could occur within the Project's acquisition boundary under the selected alternative. Such detailed planning was beyond the scope of this decision document which addresses the impacts of land acquisition from willing sellers.

Project planning would be accomplished in cooperation with the public and a Project Advisory Committee. Public meetings would be held to encourage participation in the creation and planning of specific management programs. As land is acquired, the Service would develop appropriate management plans and facilities in consideration of Project objectives and public input.

(3). Recreational Use

Increased populations of bald eagles, waterfowl, other wetland species, and forest and upland wildlife associated with a 22,083-acre bottomland forest ecosystem developed and protected under the selected alternative will enhance public opportunities for wildlife observation, environmental education and

interpretation, and hunting/fishing opportunities. The selected alternative will triple the acreage of public lands in the two-county area. This increased availability of public land would allow a major increase in visitor use. The use of project lands for research studies and environmental learning activities would also be encouraged.

(4). Visitor impacts on adjacent private lands

The Project will lead to additional people using the area, especially for non-consumptive uses such as birdwatching, canoeing, photography, and wildlife viewing. This increased use, and thus traffic, may be noticeable and disturbing to some landowners.

Project visitation is estimated to reach approximately 220,000 persons per year when acquisition is complete. This figure was based on the average annual visitation to the local state fish and wildlife area, and national wildlife refuges located in similar locales and containing similar habitats. This visitation is expected to be optimized through implementation of the selected alternative rather than an alternative without a designated national wildlife refuge boundary. As Project planning proceeds visitor patterns would be considered and managed to minimize any disturbance to landowners adjacent to acquired lands. Impacts to private landowners from visitors is expected to be minimal based on experience at other federal wildlife lands operated by the Service in Indiana and other states. The Project staff would be available to coordinate with local law enforcement authorities for any special problems that arise. Project boundaries would be posted and maps with use regulations would be made available at access points and Project headquarters.

F. Claims of Bias and Lack of Objectivity

It is recognized that not everyone agrees with all of the impact descriptions and conclusions contained in the FEIS. The Service has made every effort to evaluate and describe the expected environmental impacts in a thorough, objective and professional manner, and is confident that the entire planning effort for this Project has been performed in compliance with the National Environmental Policy Act.

VI. MITIGATION AND MONITORING

The selected alternative was chosen to ameliorate the overall negative impact of this Project on the natural, socioeconomic, and cultural resources of the area. While overall there will be a net gain in the local economy, certain activities such as farming and timbering will be curtailed in the Project area. Negative impacts to these segments of the local economy will be mitigated by the gradual nature of the loss due to the Service acquisition process and the use of other mitigation measures. For example, cooperative farming agreements and timber stand improvement contracts will be used on lands after Service acquisition to slowly phase out farming and timber operations.

In those rare instances where economically-feasible, permitable surface coal mining operations are negatively impacted by the designation of the national wildlife refuge boundary, mitigation will take the form of monetary compensation. Negative environmental impacts associated with surface coal mining in the wildlife management selection area will be mitigated by providing assistance to mining companies and regulatory agencies to maximize natural habitat in required reclamation plans, ensuring long-term protection of this area's resources for the benefit of human and wildlife populations.

The purchase of lands by the Service under the selected alternative would remove the lands from the local tax rolls. This would be mitigated by the payment of revenue sharing payments to counties for lands under its administration. The selected alternative (assuming total acquisition) should result in an overall net increase in payments to the affected counties.

Mitigation measures for future management actions that pose a threat of adverse impacts to the human environment will be addressed through future planning specific to these actions in accordance with NEPA.

VII. CONCLUSION

Based on a thorough review of the Administrative Record for this Project, and careful consideration of the full range of impacts from this Project on all aspects of the human environment, including the social, economic, cultural and natural resources of the area, I have decided to implement the Patoka River National Wetlands Project following Alternative 4 as described in the FEIS (July 1994).

Sam Marler — 7 Sept 1994

Sam Marler
Regional Director
Great Lakes-Big Rivers Region
U.S. Fish and Wildlife Service

Date

Proposed Establishment of Green River National Wildlife Refuge
General Information

The report accompanying the Fiscal Year (FY) 2018 Consolidated Appropriations Act (Act) includes a directive to establish the Green River National Wildlife Refuge (Refuge) near Henderson, Kentucky:

"Green River National Wildlife Refuge. - The agreement directs the Service to approve the establishment of the Green River National Wildlife Refuge in the Green River Bottoms area near the confluence of the Green River and Ohio River in Henderson County, Kentucky. The refuge should consist of approximately 24,000 acres - to be acquired from willing landowners. The Service should partner with other stakeholders on establishment of the refuge and look for opportunities related to environmental mitigation for interstate bridge construction projects in the area. The Service is directed to wait to establish final boundaries of the refuge until the new 1-69 interstate bridge corridor is selected. Within 120 days of the date of enactment of this Act, the Service is directed to report to the Committees on its progress toward establishment of the refuge."

The U.S. Senate report accompanying the FY 2019 Interior-Environment appropriations bill includes additional direction on Green River. The directive includes much of the text from the omnibus report but adds:

"The Committee directs the Service to forgo the development of the preliminary Land Protection Strategy and go directly to the full Land Protection Plan in order to expedite its establishment of the Green River National Wildlife Refuge…The Committee is aware that the I–69 interstate bridge corridor selection process is ongoing. While the Service should consider the bridge corridor selection process, the Committee does not support delaying the establishment of the refuge."

In light of this new direction and conversations with Sen. McConnell's office, the Service is moving forward with the land protection process and detailed planning.

The U.S. Fish and Wildlife Service (Service) will work with the Commonwealth of Kentucky, local officials, and public and private partners to establish Green River National Wildlife Refuge.

The Service's goals of this proposal are to:

- Establish a second National Wildlife Refuge in Kentucky in support of the conservation of Kentucky's habitat for waterfowl, nongame birds, fish, and wildlife;
- Provide high-quality hunting and sportfishing opportunities;
- Provide opportunities for public use and environmental education and interpretation;
- Enhance the ecological function of the project area by working with partners to achieve mutual conservation priorities; and
- Ensure healthy wildlife populations for the benefit of the community, state, and nation.

Draft Proposed Schedule:

June 2018 – August 2018: Preliminary information gathering and sharing; meetings with government agencies, public officials, and key partners within the proposed establishment area;

Fall 2018: Public scoping period. This will include news release, website, partner meetings, notification to affected landowners, tribes, and other stakeholders;

Fall – Winter 2018: Develop a Draft Land Protection Plan and associated NEPA documentation for public review and comment;

Fall – Winter 2018: Public comment period, including public meetings;

Winter 2018 – Spring 2019: Develop the final Land Protection Plan and associated NEPA documents and brief Service and Departmental officials; and

Summer 2019: Approval by the Director of the Fish and Wildlife Service.

Basic facts about the proposal:

The site has been identified as a priority since 1958 due to its potential for waterfowl and migratory bird management. In 2001 and 2010, the Service submitted proposals to establish the Refuge, but these proposals were ultimately unsuccessful due to higher priorities and limited funding. Establishment of the Refuge is supported by a variety of partners, citizens, and local officials and would complement conservation, public access, and environmental education efforts at Audubon State Park and the Green River State Forest.

The Service will work closely with Federal Highway Administration to minimize any potential conflicts with the proposed I-69 Ohio River crossing project.

Recent refuge establishments have incorporated a "conservation opportunity area" approach to identify where potential refuge lands will be acquired. This approach is also being recommended for this Refuge. A total Service ownership of 24,000 acres will remain as the acquisition cap with all acquisitions from ***willing sellers only***; however, the conservation opportunity area may be up to 50,000 acres.

What is the timeline for achieving the proposal?

This is a long-term effort that will take many years to complete. The number of willing sellers and availability of funding will determine the timeline, and the amount of acreage that is required. The Service will buy land from ***willing sellers only***. Conservation easements will also be considered if desired by a landowner.

How would local tax revenue be impacted?

The Federal Government does not pay property tax. However, the Service annually reimburses counties to compensate for lost revenue, based on a formula that's the greater of: 75 cents per acre; three-fourths of one percent of the fair market value; or 25 percent of the net receipts collected from operation and management of the refuge. Use of these funds must first be approved by Congress. Congress may also appropriate additional funds to compensate local governments.

Other economic benefits typically associated with refuge lands include tourism, improved property values adjacent to the refuges, and access to federal grants to name a few.

How can taxpayers afford this land in a time of tight budgets?

If approved, the Service will draw funding for land acquisition primarily from the Migratory Bird Conservation Fund and the Land and Water Conservation Fund. These funding sources are not derived from traditional tax revenues, but are collected from the sale of Federal Duck Stamps, entrance fees from certain national wildlife refuges, import duties on arms and ammunition (Migratory Bird Conservation Fund), and from the sale of offshore oil leases (Land and Water Conservation Fund). Funding from these sources is intended to support conservation of land across the nation.

MEETING SUMMARY

Date: December 17, 2018

Time: 10:00 AM ET

Meeting: I-69 ORX Mussel Survey Results

Location: Kentucky Transportation Cabinet; 200 Mero Street, Frankfort, KY 40622

List of Attendees:

Name	Organization	Email
Leroy Koch	U.S. Fish and Wildlife Service	Leroy_Koch@fws.gov
Eric Rothermal	FHWA	Eric.Rothermel@dot.gov
Tim Foreman	KYTC	Tim.Foreman@ky.gov
Dave Harmon	KYTC	Dave.Harmon@ky.gov
Nathan Click	KYTC	nathan.click@ky.gov
Anthony Norman	KYTC	Anthony.norman@ky.gov
James Kiser	Stantec	James.Kiser@stantec.com
Cody Fleece	Stantec	Cody.Fleece@stantec.com
Dan Prevost	Parsons	Daniel.Prevost@parsons.com

SUMMARY

1) Dan Prevost provided an overview of the project status. The DEIS was published on December 14 and the comment period will extend through February 8, 2019. The DEIS identifies two preferred alternatives – Central Alternative 1A and 1B. The two alternatives are physically identical; the only difference is the tolling scenario. Dan also explained the coordination completed to date with the US Coast Guard to identify two navigation span arrangements for the new bridge.
2) Cody Fleece provided an overview of the mussel survey area and survey methods. Both were based on prior coordination with USFWS and included areas associated with the new crossing as well as the existing US 41 bridges, one of which would be demolished under the preferred alternatives.
3) Some areas in the center of the river could not be surveyed due to river velocity. One of these areas in the Central Alternative alignment may have suitable substrates for

mussels. It is possible, based on the substrates present and the mussels identified that further survey could identify additional species.

4) Leroy Koch agreed with the teams assessment of the survey and findings. While the team would ideally complete the full survey, the schedule and unpredictable river conditions may not allow. Leroy felt that USFWS could make a determination based on the data available.
5) The group discussed several mitigation options in concept, but Leroy indicated that discussion should involve Phil DeGarmo, who was unable to attend this meeting.
6) The team agreed to try to set up a meeting with Phil DeGarmo later in the week (see December 19, 2018 meeting summary).
7) The group discussed that Stantec should coordinate with Phil DeGarmo regarding the content and format of the Biological Assessment.

MEETING SUMMARY

Date: December 19, 2018

Time: 10:00 AM ET

Meeting: USFWS Coordination Meeting

Location: United States Fish & Wildlife Service, 330 West Broadway, Frankfort, KY

List of Attendees:

Name	Organization	Email
Lee Andrews	U.S. Fish and Wildlife Service	Lee_Andrews@fws.gov
Phil DeGarmo	U.S. Fish and Wildlife Service	Phil_DeGarmo@fws.gov
Leroy Koch	U.S. Fish and Wildlife Service	Leroy_Koch@fws.gov
Nathan Click	KYTC	nathan.click@ky.gov
James Kiser	Stantec	James.Kiser@stantec.com
Cody Fleece	Stantec	Cody.Fleece@stantec.com

SUMMARY

1) The purpose of this meeting is to continue coordination between the I-69 ORX Project Team and US Fish and Wildife Service. The specific topic of discussion is the results from the mussel surveys performed through the fall.
2) Discussion of Mussel Surveys (Fleece and Kiser):
   - The I-69 ORX project is currently evaluating alternatives for the construction of an Ohio River crossing to connect Evansville, IN and Henderson, KY.
   - A mussel survey was undertaken to assess the presence or probable absence of special status freshwater mussel species in two corridors that are under consideration for the construction of a new bridge.
   - Ohio River bed topography was surveyed in 2017 using side-scan sonar to map distribution of substrate types within the Project Area to assist with this effort.
   - The Survey Area was divided into search cells and consisted of the Survey Area plus upstream and downstream buffers. Searches were scheduled in 100 percent of "suitable" substrates and 50 percent of "unsuitable" substrates.
   - Abnormally high rainfall in September and October resulted in river conditions

that were unsuitable for surveying for extended periods.

- Approximately 47 percent (108/231) of all scheduled search cells were sampled, but 74 percent of cells that were deemed suitable habitat based on the side-scan sonar findings were surveyed.
- In the Central Corridor, approximately 52 percent (44/85) of all cells were completed, with an additional seven (7) cell searches resulting in failed or incomplete attempts as unsafe river currents prevented divers from completing surveys.
- In the West Corridor, surveys were completed in approximately 44 percent (64/146) of the scheduled search cells.
- Live mussels were present in the majority of cells identified as suitable substrate (50 of 92 survey cells); mussels were only present in four of the 17 sampled unsuitable habitat cells.
- No live, federally listed species were found during survey efforts.

3) Discussion:
   - Based on information provided, USFWS concluded formal consultation is not warranted.
   - A determination of "may affect, not likely to adversely affect" is warranted.
   - Given the absence of federally listed taxa in the surveys, no relocation is necessary.
   - USFWS is interested in conservation measures to be discussed in the Biological Assessment (BA).
   - Conservation measures will be coordinated with the KYTC and other agencies.
4) The I-69 ORX Project Team will continue to coordinate with USFWS through the development of the BA.

MEETING SUMMARY

Date: March 8, 2019

Time: 9:00 AM ET / 8:00 AM CT

Meeting: Proposed Green River National Wildlife Refuge coordination meeting with USFWS and review of I-69 ORX DEIS comments

Location: By Phone/WebEx

List of Attendees:

Name	Organization	Email
Michael Johnson	U.S. Fish and Wildlife Service	Michael_Johnson@fws.gov
Tina Chouinard	U.S. Fish and Wildlife Service	Tina_Chouinard@fws.gov
Lee Andrews	U.S. Fish and Wildlife Service	Lee_Andrews@fws.gov
Michelle Allen	FHWA-Indiana	Michelle.Allen@dot.gov
Eric Rothermel	FHWA-Kentucky	Eric.Rothermel@dot.gov
Laura Hilden	INDOT	lhilden@indot.IN.gov
Marshall Carrier	KYTC	marshall.carrier@ky.gov
Gary Valentine	KYTC	gvalentine@ky.gov
Danny Peake	KYTC	Danny.peake@ky.gov
Tim Foreman	KYTC	Tim.Foreman@ky.gov
Dan Prevost	Parsons	Daniel.Prevost@parsons.com
Cory Grayburn	Parsons	Cory.Grayburn@parsons.com
Dan Miller	Parsons	Daniel.J.Miller@parsons.com

SUMMARY

1) USFWS provided an update on the Environmental Assessment (EA) for the Green River NWR:
    - The EA and Land Protection Plan (LPP) will begin internal review next week, which will take approximately 30 days.
    - USFWS anticipates publishing the Draft EA and LPP in mid/late-April.
    - In the next week or two, a project website will go live and letters will be sent to approximately 700 property owners to make them aware of the proposed project and explain the process.

- There will be a 30-day comment period following publication of the EA. A public meeting will be held during the comment period and USFWS would like the project team to attend to represent the I-69 ORX project.
- USFWS would like to incorporate the I-69 ORX Preferred Alternative into the Draft EA.
- The Final EA should be completed by late summer.

2) The group had previously discussed the approach to ensuring the preservation of a corridor for I-69 within the proposed refuge boundary. The I-69 ORX project team provided 2,000-foot buffers around each of the alternatives for use by USFWS. USFWS has developed preliminary language for the description of these buffer areas for use in their EA and will provide to the ORX project team to review prior to publication.

3) USFWS provided a summary of the comments that they provided to their management on the DEIS. Those comments will be reviewed and combined with comments from other Department of Interior agencies for transmittal to the team.

- USFWS agrees with the recommended preferred alternatives.
- USFWS would like to minimize impacts of I-69 on the proposed GRNWR caused by loss or fragmentation of habitat. They made some recommendations for the design and placement of culverts and the provision of safe passage for wildlife during flood events.
- USFWS made recommendations regarding the use of bridges/culverts in wetland areas to minimize hydraulic impacts.
- USFWS provided recommendations regarding access to GRNWR, both for pedestrians and vehicles.
- USFWS provided recommendations regarding the use of barges and/or causeways in the Ohio River during construction.
- USFWS encouraged support for establishment of the refuge through project mitigation efforts.
- USFWS asked if the project will impact Green River Road. Parsons stated that all existing roads will be maintained.

The group discussed making a field visit to the project area to review specific areas for impact avoidance and access opportunities. All agreed this would be a good idea.

In response to a question, USFWS indicated that the Draft EA would not identify specific facilities or trailhead areas because they will not know the specific properties to be acquired. The EA will, however, identify the ***type***s of facilities that USFWS would intend to provide.

ACTION ITEMS

- USFWS will provide the ORX project team with draft language to review regarding the buffer around the alternative prior to publication of the EA.
- Schedule a joint field visit this spring/summer as design plans are being developed further

MEETING SUMMARY

Date: **March 5, 2020**

Time: **1:00 PM ET**

Meeting: **I-69 ORX Biological Assessment Comment Review**

Location: **KYTC Central Office**

NAME	ORGANIZATION	EMAIL	PHONE	ATTEND
Phil DeGarmo	USFWS	phil_degarmo@fws.gov	502-695-0468	X
Eric Rothermel	FHWA-Kentucky	eric.rothermel@dot.gov	502-223-6742	X (by phone)
Gary Valentine	KYTC	gvalentine@ky.gov	502-782-4965	X
Marshall Carrier	KYTC	Marshall.Carrier@ky.gov	502-545-8254	X
Danny Peake	KYTC	Danny.Peake@ky.gov	502-782-5027	X
Tim Foreman	KYTC	Tim.Foreman@ky.gov	502-782-5015	X
Nathan Click	KYTC	Nathan.Click@ky.gov	502-782-5009	X
Dan Corbin	INDOT	DCorbin@indot.in.gov	317-233-2050	X (by phone)
Laura Hilden	INDOT	LHilden@indot.in.gov	317-232-5018	X (by phone)
Dan Prevost	Parsons	Daniel.Prevost@parsons.com	513-552-7013	X
James Kiser	Stantec	James.Kiser@stantec.com	502-396-3199	X
Joshua Adams	Stantec	Joshua.Adams@stantec.com	502-718-9512	X

The purpose of the meeting was to review comments by the USFWS on the project's Draft Biological Assessment. Phil DeGarmo verbally provided comments from both the Kentucky and Indiana field offices. Copies of his comments were not provided to meeting attendees. Once the report is revised, USFWS will review changes with Stantec to confirm they are incorporated appropriately. The final report should be submitted to USFWS through FHWA.

Global Comments:

- Based on changes to federal regulations, the document should refer to "consequences" of the project, rather than direct, indirect, and cumulative impacts.
- Rather than "assuming" species presence or absence, the document should state that it is "reasonably certain the species is present [or absent]".
- Indirect impacts, such as tree clearing, should be described as "adverse effects that occur later in time".
- Instead of describing impacts as "insignificant", use "discountable" (see, for example, Least Tern discussion).

- The document should not include an effects analysis for bat species that are covered by a programmatic agreement.
- The Northern Long-Eared Bat is no longer covered by a programmatic agreement; it should be discussed under Section 4(d) of the ESA.
- Impacts to bat habitat should be broken out by state.
- For species that are being considered for listing, no consideration is required at this time; reconsultation will be required if the species is listed.
- Update the title of the 2015 Interim Programmatic Agreement for Forest Dwelling Bats, when the new agreement becomes available (approximately 2 weeks).
- Monetary conservation measures should be described as a Section 7(a)(1) conservation measure. The discussion should not discuss a specific recipient for the funding, nor a specific dollar amount.
- Remove sections 5.8, 5.9 & 5.10 because no Federally listed mussels were found during the survey efforts for the project. Incorporate text such as "Agency approved surveys were completed within the project corridor and found no Federally listed mussels, if present listed mussels occur in such low numbers they are undetectable and effects to them are discountable."

Specific Comments:

Page 1-2:

Conservation Fund (IBCF) could be used for the entire I-69 ORX project corridor. However, the typical tree clearing restrictions in Indiana (no clearing of trees > 3 inches diameter at breast height (DBH) is allowed from April 1 to September 30) will be required. Mitigation rates for IBCF were discussed. It was determined that no additional bat surveys were needed since the Northern Long-Eared Bat and Indiana Bat were known to occur within project corridor. In Kentucky, KYTC and USFWS require a search of mines, sinkholes, and bridges for roosting Gray Bats, and assumes they are present on the landscape. They also require installation of specific erosion and sediment control measures to reduce impacts. The USFWS determined that current river conditions within the project corridor do not necessitate a Least Tern nest survey, but if river conditions change to be more conducive (the presence of bars, sandy banks, and/or islands), then a survey would be needed. Mussel surveys and timing of these operations were discussed.

PD **Prevost, Daniel** Thursday
Change to recommended – or provided guidance – USFWS cannot "require"
Reply Resolve

Page 2-9

The construction of a new bridge and demolition of one of the existing bridges will primarily affect agricultural row crops, wetland scrub-shrub (riverbank), and a section of the river, while the remaining roadway construction will affect various acreages of all the remaining habitat types as shown in Table 2-1. Direct and indirect environmental effects to all of these habitat types are expected during project construction. Project-related environmental effects include habitat destruction and/or alteration/conversion, erosion, siltation, sedimentation, scour, earth disturbance, and temporary and permanent hydrologic alteration.

PD **Prevost, Daniel** Thursday
Revise to "potential demolition" due to uncertainty. If we decide to keep both bridges – add note to file as to why it doesn't require re-consultation.
Reply Resolve

Page 4-3

Threehorn Wartyback	*Obliquaria reflexa*	16	-	3	4	23
Pink Heelsplitter	*Potamilus alatus*	8	-	5	6	19
Fat Pocketbook	*Potamilus capax*1,3,6	-	-	1	-	1
Ohio Pigtoe	*Pleurobema cordatum*4	2	-	2	-	4
Round Pigtoe	*Pleurobema rubrum*1,3,5	-	-	-	2	2

PD **Prevost, Daniel** Thursday
Make sure this matches the language in the text.
Reply Resolve

Page 5-1

Each bridge pier will have a disturbance footprint up to 15,000 ft² (three piers at 5,000 ft² each). Excavation of the drilled shafts will be accomplished using an auger, drilling bucket, rock auger,

PD **Prevost, Daniel** Thursday
Check the math/language.
Reply Resolve

Page 5-6

but these are expected to be non-measurable and insignificant because of the large amount of similar river habitat available adjacent to the project corridor. The project is not expected to have any adverse effects on the Least Tern.

5.8 DIRECT EFFECTS – MUSSELS

5.8.1 CRUSHING MUSSELS

Mussel shells can be directly affected by the project actions as a result of being physically crushed when still alive. The crushing of mussel shells can be related to natural weathering or predation, but also caused by placement of fill or heavy machinery associated with construction activities (Badra 2011). Mussels could be crushed during construction activities, including the dropping of the US 41 bridge into the Ohio River, removal of the superstructure from the river, the installation of causeway bridge supports, spudding of barges, barges nosing onto shore to anchor, and the installation of new piers for the I-69 bridge. A mussel survey was conducted in 2018, revealing no live federally endangered species within the project area. USFWS was satisfied with survey results and determined that with incorporation of conservation measures into the project that adverse effects to mussels are unlikely from the project.

PD **Prevost, Daniel**
If we're assuming absence – we don't need to talk through the possible stressors.
Need to focus more on the results of the survey and why that leads to conclusion that they're not there.

PD **Prevost, Daniel**
New intro paragraph to Section 5.8: Here are all the stressors that could result from the project. We will implement conservation measures to minimize potential effects of these stressors. Reference species survey and conclusion that it occurs in such low numbers that it is undetectable (insignificant). [No further analysis needed.]

PD **Prevost, Daniel**
Delete – talk about that data – USFWS concurrence comes from letter response to BA.

Page 6-2

6.1.2 OTHER POTENTIAL BAT HABITAT (HIGHWAY STRUCTURES)

Bridges and overpasses within the I-69 ORX project corridor were surveyed for bat use, and no listed bats were found. However, to reduce potential for future take of roosting Indiana, Northern Long-Eared, and Gray Bats using highway structures (bridges and overpasses), all of the structures within the project corridor will be checked again, preferably within 10 days of construction starting.

PD **Prevost, Daniel**
FHWA Rangewide says that a survey is good for 2 survey seasons.

Page 6-3

6.3.2 MULCHING PLAN

Contractors will be responsible for mulching any exposed surface areas where no work will be conducted for a period of 7 consecutive days.

PD **Prevost, Daniel**
FHWA will ensure that contractors…

MEETING SUMMARY

Date: **April 8, 2020**

Time: **2:00 PM ET**

Meeting: **I-69 ORX Biological Assessment Approach Discussion**

Location: **By Phone/WebEx**

NAME	ORGANIZATION	EMAIL	PHONE	ATTEND
Phil DeGarmo	USFWS	phil_degarmo@fws.gov	502-695-0468	X
Nathan Click	KYTC	Nathan.Click@ky.gov	502-782-5009	X
Dan Prevost	Parsons	Daniel.Prevost@parsons.com	513-552-7013	X
James Kiser	Stantec	James.Kiser@stantec.com	502-396-3199	X
Joshua Adams	Stantec	Joshua.Adams@stantec.com	502-718-9512	X

The purpose of the meeting was to discuss the revised approach to the project's Section 7 review/approval.

The original draft Biological Assessment, submitted to USFWS in May 2019, recommended a finding of May Affect, Not Likely to Adversely Affect. However, based on the comments received from USFWS at the March 5, 2020 meeting and subsequent discussions with KYTC, the Project Team will resubmit the Biological Assessment with a recommended finding of May Affect, Likely to Adversely Affect for two mussels, the sheepnose (*Plethobasus cyphyus*) and fat pocketbook (*Potamilus capax*), and requesting formal consultation and a Biological Opinion. The Project Team will also submit an analysis of potential impacts to the Longsolid mussel (*Fusconaia subrotunda*), which is anticipated to be proposed for the Endangered Species List soon, requesting a Conference Opinion from USFWS for that species.

Recommendations regarding BA:

- Must be clear about the species for which formal consultation is being requested. The species covered in the document should be organized in three groups:
    - No Effect & May Affect, Not Likely to Adversely Affect
    - May Affect, Likely to Adversely Affect (Formal Consultation/Biological Opinion)
    - Proposed-for-listing species (Conference Opinion)
- Use term "reasonably certain" regarding presence of species. Discussion should be thorough as to why specific species are believed to be present.
- Stantec will review survey results, as well as other nearby surveys and provide an analysis of number of individuals of listed (and soon to be listed) species in the project area.
- Analysis should follow stressor-exposure-response format. Recent documents have followed this format including US 60 Bridge (prepared by Nathan Click) and Bridging Kentucky BA (prepared byanother consultant). Nathan will provide copies of each to Stantec.
    - This information was in the text of the original draft BA, but should be converted to a table format as per samples

    - Only one stressor needs to have an adverse effect for the species to get a "May Affect, Likely to Adversely Affect" finding. Other stressors can be evaluated and dismissed.
- The BA should provide environmental baseline data for each species. This will facilitate completion of the BO.
- The monetary contribution conservation measure should be retained, but the recipient info should be removed. Instead it should state that "FHWA and KYTC are committed to making a monetary contribution to support the recovery of these species."

Regarding the process for the Conference Opinion:

- As noted above, the discussion of the Longsolid mussel should be in a separate section/chapter from other species.
- The BA, with the Conference Opinion request, can only be submitted once the species has been formally proposed for listing. Currently that is anticipated in June 2020. Stantec will prepare the BA such that the section/chapter on the Longsolid can be pulled out if it appears that there may be a delay in the proposal for listing of the Longsolid.
- A submittal of the Longsolid data and request for Conference Opinion triggers its own 135-day clock. So if it is believed that the proposed listing is imminent, the Project Team should wait to submit the BA. As June 1 approaches, the Project Team or Phil can reach out to the group responsible for the proposed listing to get an update on their schedule.

Regarding the discussion of bats in the BA:

- The new bat programmatic agreement (PA) should be signed this week and would become available for use within 30 days.
- The PA covers bats on bridges, Indiana bat roosting habitat (trees), and foraging areas for gray bats (everything except gray bat roosting habitat (caves) and Indiana bat winter hibernacula (caves).
- The BA should apply the 4D rule for Northern long eared bats. KYTC can provide the appropriate language to use.

U.S. Department of Transportation
Federal Highway Administration

Kentucky Division

330 West Broadway
Frankfort, KY 40601
PH (502) 223-6720
FAX (502) 223 6735
http://www.fhwa.dot.gov/kydiv

August 5, 2020

In Reply Refer To:
HDA-KY

Mr. Lee Andrews
Field Supervisor
Kentucky Field Station
U.S. Fish and Wildlife Service
330 West Broadway
Frankfort, Kentucky 40601

Subject: Request for Formal Consultation
Biological Assessment for
Proposed I-69 Ohio River Crossing
Henderson, Kentucky to Evansville, Indiana

Dear Mr. Andrews

Please find the enclosed Biological Assessment (BA) for I-69 ORX (KYTC Item #2-1088). The purpose of the project is to provide cross-river system linkage and connectivity between I-69 in Indiana and I-69 in Kentucky that is compatible with the National I-69 Corridor; develop a solution to address long-term cross-river mobility; provide a cross-river connection that reduces traffic congestion and safety; and, improve safety for cross- river traffic. Potential adverse effects for certain listed species are anticipated. All impacts are addressed with appropriate minimization and mitigation measures outlined in the BA.

The BA addresses 14 mussel species, Gray bat, Northern Long-eared bat, Indiana bat, and the Interior Least tern. The below table outlines the effect determination for the species listed in the project area.

SPECIES	SCIENTIFIC NAME	FEDERAL STATUS[1]	EFFECT DETERMINATION
Indiana Bat	*Myotis sodalis*	Endangered	May affect, is likely to adversely affect
Gray Bat	*Myotis grisescens*	Endangered	May affect, not likely to adversely affect
Northern Long-Eared Bat	*Myotis septentrionalis*	Threatened	May affect, is likely to adversely affect
Least Tern	*Sternula antillarum*	Endangered	May affect not likely to adversely affect
Clubshell	*Pleurobema clava*	Endangered	May affect, not likely to adversely affect
Fanshell	*Cyprogenia stegaria*	Endangered	May affect, not likely to adversely affect
Fat Pocketbook	***Potamilus capax***	**Endangered**	**May affect, is likely to adversely affect**
Northern Riffleshell	*Epioblasma rangiana*	Endangered	May affect, not likely to adversely affect
Orangefoot Pimpleback	*Plethobasus cooperianus*	Endangered	May affect, not likely to adversely affect
Pink Mucket	*Lampsilis abrupta*	Endangered	May affect, not likely to adversely affect
Catspaw	*Epioblasma obliquata*	Endangered	May affect, not likely to adversely affect
Ring Pink	*Obovaria retusa*	Endangered	May affect, not likely to adversely affect
Rough Pigtoe	*Pleurobema plenum*	Endangered	May affect, not likely to adversely affect
Spectaclecase	*Margaritifera monodonta*	Endangered	May affect, not likely to adversely affect
Sheepnose	***Plethobasus cyphyus***	**Endangered**	**May affect, is likely to adversely affect**
Rabbitsfoot	*Theliderma cylindrica*	Threatened	May affect, not likely to adversely affect
Snuffbox	*Epioblasma triquetra*	Endangered	May affect, not likely to adversely affect

We request Formal Consultation with the US Fish and Wildlife Service for the Sheepnose and Fat Pocketbook Mussel based on the above species impacts. The Indiana bat will be addressed through the latest Statewide Bat Programmatic Agreement and Northern Long-eared bats will be addressed through the 4(d) Rule. We feel the BA adequately addresses the affect determinations. Please contact Eric Rothermel at 502-223-6742 or at Eric.Rothermel@dot.gov if you have any questions.

Sincerely,

JOHN D BALLANTYNE Digitally signed by JOHN D BALLANTYNE
Date: 2020.08.05 11:56:48 -04'00'

John D. Ballantyne
System Performance Team Leader

Enclosure: Biological Assessment

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
330 West Broadway, Suite 265
Frankfort, Kentucky 40601
(502) 695-0468

September 3, 2020

Mr. John Ballantyne
Federal Highway Administration
330 West Broadway
Frankfort, Kentucky 40601

Re: FWS 2017-B-0218; Federal Highway Administration; Proposed I-69 Ohio River Crossing from Henderson, Henderson County, Kentucky and Evansville, Vanderburgh County, Indiana

Dear Mr. Ballantyne:

This letter acknowledges the U.S. Fish and Wildlife Service's (Service) August 5, 2020, receipt of your August 5, 2020, letter and Biological Assessment (BA) requesting initiation of formal section 7 consultation and formal conference under the Endangered Species Act (ESA). Your correspondence indicates that implementation of the Kentucky Transportation Cabinet's and Indiana Department of Transportation's proposal to construct the I-69 Ohio River crossing may affect, and is likely to adversely affect the federally protected fat pocketbook mussel, sheepnose mussel, Indiana bat, and northern long-eared bat (NLEB). In addition, the Federal Highway Administration (FHWA) has determined that the proposed action is likely to have adverse effects on the longsolid mussel, which is a species of concern, and has provided a conference analysis for this species.

The FHWA has determined that the proposed action may affect, but is not likely to adversely affect the gray bat, interior least tern, and 11 mussel species. Our comments regarding these determinations are provided below.

Gray Bats *(Myotis grisescens)*
No caves or karst features suitable for summer or winter gray bat roosting would be affected by the proposed project. Additionally, field assessments of nine bridges and overpasses within the project area did not identify any federally listed bats roosting under the existing structures. Three of these structures were found to support the big brown bat, which is not federally protected. Due to the potential for quick colonization of bridges by bats, these structures will be rechecked prior to construction since construction has not begun within two years from the initial survey date (August 12, 2018). Should federally listed bats be identified during the recheck, the HFWA has committed to reinitiate consultation. Based on this information, the proposed project is not likely to impact gray bat hibernacula or roosting habitat.

Streams in the project area may provide potential foraging and commuting habitat for the gray bat. Due to the temporary nature of the disturbance that may occur during construction and the implementation of minimization measures discussed in the BA to limit effects to streams, we believe that impacts to gray bat foraging habitat and resources would be insignificant. For these reasons, we concur with the determination that the proposed action may affect, but is not likely to adversely affect the gray bat.

Interior Least Tern (*Sternula antillarum)*

The proposed project is within the species range; however, it is unlikely the least tern uses areas in the project corridor based on the lack of suitable habitat (un-vegetated and seldom-flooded sandbars). Some sand and gravel bar habitats exist along the Ohio River within the corridor, but are often flooded. Based on our review of the information provided, the Service concurs with the effects determination that the proposed action may affect, but is not likely to adversely affect the interior least tern.

11 Select Federally Listed Mussels

Presence/probable absence surveys for federally listed mussel species were conducted on October 9-15 and 27-31, 2018. No live individuals or relic shells of the clubshell (*Pleurobema clava*), fanshell (*Cyprogenia stegaria*), northern riffleshell (*Epioblasma rangiana*), orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupta*), catspaw (*Epioblasma obliquata*), ring pink (*Obovaria retusa*), rough pigtoe (*Pleurobema plenum*), spectaclecase (*Margaritifera monodonta*), rabbitsfoot (*Theliderma cylindrica*), and snuffbox (*Epioblasma triquetra*) were encountered, indicating that these species are likely absent from the action area. Based on our review of the information provided, the Service concurs with the effects determination that the proposed action may affect, but is not likely to adversely affect these aforementioned mussel species.

Indiana bat (*Myotis sodalis*)

The proposed action would result in the removal of approximately 33.6 acres and 12.2 acres of suitable forested habitat for the Indiana bat in Kentucky and Indiana, respectively. Based on the information provided in the BA, no impacts to suitable winter habitat for this species is likely to occur. FHWA believes that this species is reasonably certain to utilize forested habitat within the project area, and has determined that the action "may affect, is likely to adversely affect" the Indiana bat. In order to minimize these effects, trees having a diameter at breast height greater than three inches will not be removed from the Indiana portion of the project between April 1 and September 20. Tree removal will be restricted on the Kentucky portion of the project to a time period outside of when juvenile bats are unable to fly, which is approximately from June 1 – July 31.

FHWA proposes to account for potential adverse effects to the Indiana bat and its habitat through the processes identified in the FHWA Kentucky Division's 2020 Programmatic Consultation and accompanying biological opinion on the effects of transportation projects on the Indiana bat. Additional coordination with the Service's Indiana Field Office is required to determine the appropriate amount and/or type of conservation to offset the effects of incidental take. The Service concurs with FHWA's effects determination for the Indiana bat and agrees with the

proposed ESA compliance process.

Northern long-eared bat (*Myotis septentrionalis*)

Based on the information available to us, the proposed project may affect the NLEB, but with no effects beyond those previously evaluated in the Service's programmatic biological opinion for the NLEB final 4(d) rule dated January 5, 2016 (FWS Log# 03E00000-2016-F-0001). Any taking that may occur incidental to this project is not prohibited under the final 4(d) rule (50 CFR §17.40(o)). Therefore, FHWA may fulfill its responsibilities under ESA section 7(a)(2) relative to the NLEB for this project by requesting reliance on the Service's programmatic biological opinion for the 4(d) rule. FHWA must report to this office any departures from the plans of any surveys conducted, or any dead, injured, or sick NLEBs that are found.

Fat Pocketbook (*Potamilus capax*) and Sheepnose (*Plethobasus cyphyus*)

All information required of the FHWA to initiate consultation on the fat pocketbook and sheepnose was included in the BA or is otherwise available for our consideration and reference. Based on this information, we concur that the proposed action may affect and is likely to adversely affect the fat pocketbook and sheepnose, and that initiation of formal consultation is appropriate. We have assigned log number FWS# 2020-F-1733 to this consultation. Please refer to that number in future correspondence on this consultation.

Section 7 of the ESA allows the Service up to 90 calendar days to conclude formal consultation with your agency and an additional 45 calendar days to prepare our biological opinion (unless we mutually agree to an extension). Therefore, we expect to conclude formal consultation and provide the FHWA with a final biological opinion on the proposed action no later than December 18, 2020.

As a reminder, the ESA requires that after initiation of formal consultation, the federal action agency may not make any irreversible or irretrievable commitment of resources that limits future options. This practice insures agency actions do not preclude the formulation or implementation of reasonable and prudent alternatives that avoid jeopardizing the continued existence of endangered or threatened species or destroying or modifying their critical habitats.

Longsolid (*Fusconaia subrotunda*)

All information required of the FHWA to initiate conference on the longsolid was included in the BA or is otherwise available for our consideration and reference. Based on this information, the Service agrees that the proposed action may affect and is likely to adversely affect the longsolid, and that initiation of formal conference is appropriate. Our conference opinion will accompany the aforementioned biological opinion.

In the case of this project, if federal listing of this species is finalized prior to or during the construction of this project, we recommend that FHWA re-initiate in order to covert this formal conference to a biological opinion in accordance with the ESA.

If you have any questions or concerns about this consultation or the consultation process in general, please feel free to contact Phil DeGarmo of this office at 502-695-0468 x 46110 or via email at Phil_DeGarmo@fws.gov.

Sincerely,

JENNIFER GARLAND Digitally signed by JENNIFER GARLAND Date: 2020.09.03 15:59:37 -04'00'

for Virgil Lee Andrews, Jr.
Field Supervisor

cc: Mr. Danny Peake, KYTC, Frankfort (electronic)
Mr. Dave Harmon, KYTC, Frankfort (electronic)
Mr. Andrew Logsdon, KYTC, Frankfort (electronic)
Mr. Eric Rothermel, FWHA, Frankfort (electronic)
Ms. Robin McWilliams Munson, USFWS, Bloomington (electronic)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
330 West Broadway, Suite 265
Frankfort, Kentucky 40601
(502) 695-0468

December 17, 2020

Mr. John Ballantyne
Federal Highway Administration
330 West Broadway
Frankfort, Kentucky 40601

Subject: FWS #: 2020-F-1733; Federal Highway Administration's I-69 Ohio River Crossing Project; Biological Opinion on the Fat Pocketbook (*Potamilus capax*) and Sheepnose (*Plethobasus cyphyus*) and Conference Opinion on the Longsolid (*Fusconaia subrotunda*)

Dear Mr. Ballantyne:

The attached final biological opinion (BO) and conference opinion (CO) is based on our review of the Federal Highway Administration's (FHWA) I-69 Ohio River Crossing Project and the effects of the proposed action on the Fat Pocketbook, Sheepnose, and Longsolid under section 7(a)(2) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq*.).

The attached BO and CO is based on information provided by the FHWA, available literature, personal communications with species experts, and other sources of information available to us and/or in our files. A complete administrative record of this consultation is on file at the Service's Kentucky Field Office in Frankfort, Kentucky (see address above).

If you have any questions on the BO or the information contained in it, please contact this office. The Service appreciates the high level of coordination and cooperation that you and your staff provided during the consultation process.

For further coordination on this BO, please contact Carrie Allison at the address shown at the top of this letter, via email at Carrie_Allison@fws.gov, or via phone at 502-695-0468 x46103.

Sincerely,

VIRGIL ANDREWS

Digitally signed by VIRGIL ANDREWS
Date: 2020.12.17 11:42:25 -05'00'

Virgil Lee Andrews, Jr.
Field Supervisor

U.S. Department of Transportation
Federal Highway Administration

Kentucky Division

330 West Broadway
Frankfort, KY 40601
PH (502) 223-6720
FAX (502) 223 6735
http://www.fhwa.gov/kydiv

June 10, 2021

In Reply Refer To:
HDA-KY

Mr. Lee Andrews
Field Supervisor
Kentucky Field Office
US Fish and Wildlife Service
330 West Broadway Street
Frankfort, KY 40601

Subject: Notification of Design Changes
I-69 Ohio River Crossing FWS# 2020-F-1733
KYTC Item #2-1088 and INDOT Des. No. 1601700
Henderson County, Kentucky and Vanderburgh County, Indiana

Dear Mr. Andrews:

Our office received the Biological Opinion (BO) for the I-69 Ohio River Crossing on December 17, 2020 (FWS#: 2020-F-1733). The BO addressed two mussel species (fat pocketbook and sheepnose) and provided a conference opinion for the longsolid mussel. Since that time there have been design modifications for the project. The design modifications are within the action area that was previously identified in the biological assessment (BA). The design modifications will have no impacts to the species consulted on in the BO. The design modifications increased the forested habitat tree clearing by approximately 6 acres (see enclosed map). No other listed species will be further impacted by these modifications. We intend to use the 2020 Programmatic Biological Opinion for Indiana Bats to address the loss of potential roosting, foraging and commuting habitat and the 4(d) Rule for Northern Long-eared bat.

The BO outlines when re-initiation is required by FHWA for this BO. The BO states re-initiation is required if:

a) the amount or extent of incidental take is exceeded;
b) new information reveals that the Action may affect listed species or designated critical habitat in a manner or to an extent not considered in this BO;
c) the Action is modified in a manner that causes effects to listed species or designated critical habitat not considered in this BO; or
d) a new species is listed, or critical habitat is designated that the Action may affect.

At this time, the project does not require re-initiation. Should future changes to the project necessitate re-initiation, we will coordinate with your office. If you have any questions or concerns regarding these design changes, please contact Eric Rothermel at 502-223-6742 or at eric.rothermel@dot.gov.

Sincerely,

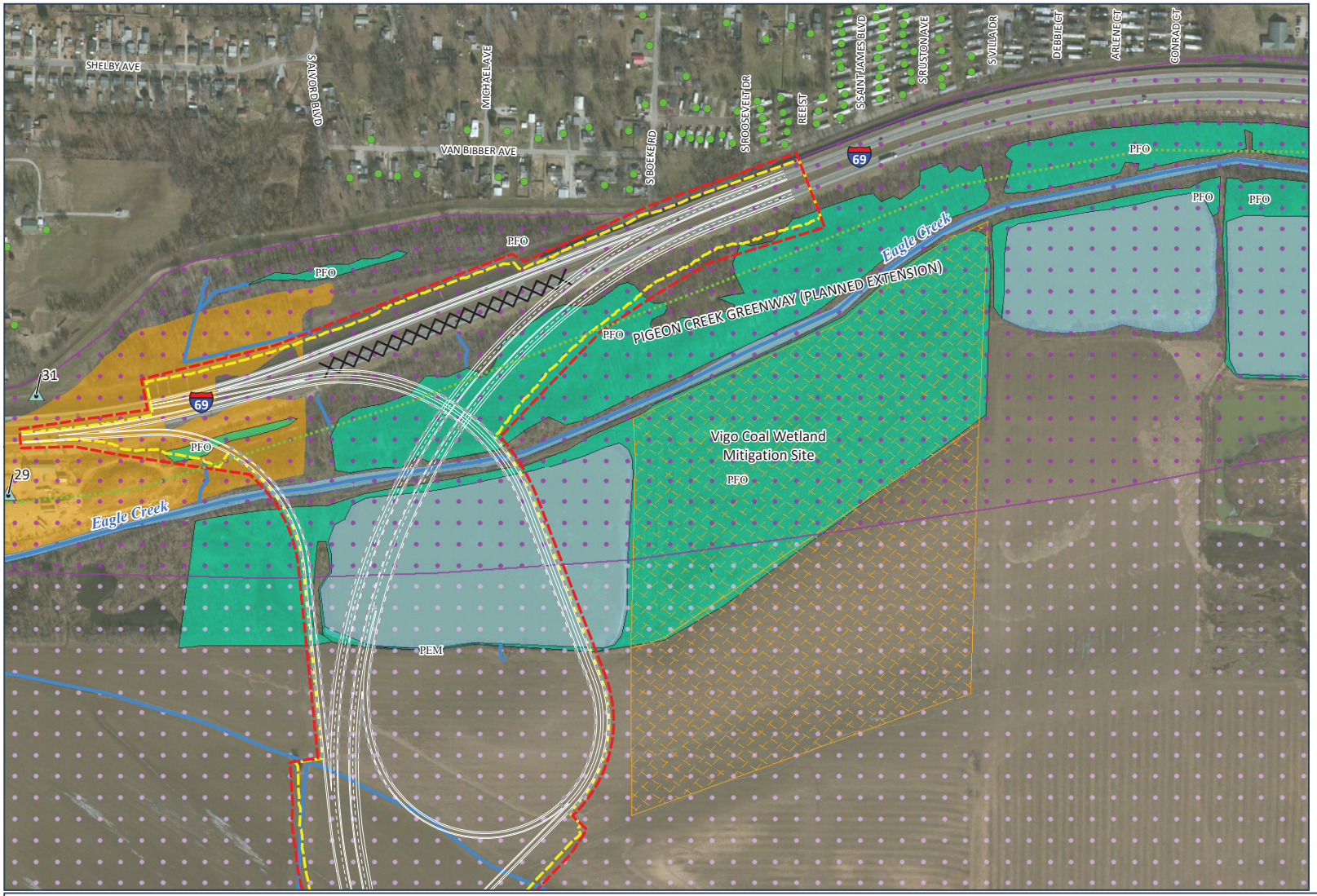
JOHN D BALLANTYNE

Digitally signed by JOHN D BALLANTYNE
Date: 2021.06.10 14:55:26 -04'00'

John Ballantyne
System Performance Team Leader

By email (kentuckyes@fws.gov)

Enclosure



Environmental Features
Central Alternative 1A/1B
(Preferred)

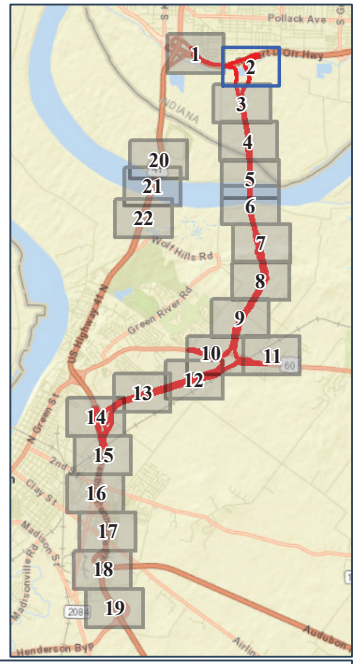
Appendix A-3 – Sheet 2 of 22

OHIO RIVER CROSSING

Final Environmental Impact Statement

0 400 800 Feet

1 Inch = 400 Feet



- Construction Limits
- Preliminary Right-of-Way
- Bridge Deck
- Planned Subdivisions
- Removed Roads
- Historic Properties
- Section 6(f) Property
- Recreational Section 4(f) Property

Pedestrian/Bike Facilities

Planned
- Shared-Use Path
- On-Street Bike Facility

Existing
- Shared-Use Path
- On-Street Bike Facility
- Recreation Trails

Relocations
- Residential
- Place of Worship

Community Resources
- Library
- Place of Worship
- School

- Wetland Reserve Program
- Imperiled Bat Conservation Fund
- Green River National Wildlife Refuge
- Green River National Wildlife Refuge Conservation Partnership Areas
- Green River State Forest
- Existing Wetland Mitigation Sites
- Delineated Streams
- Open Water

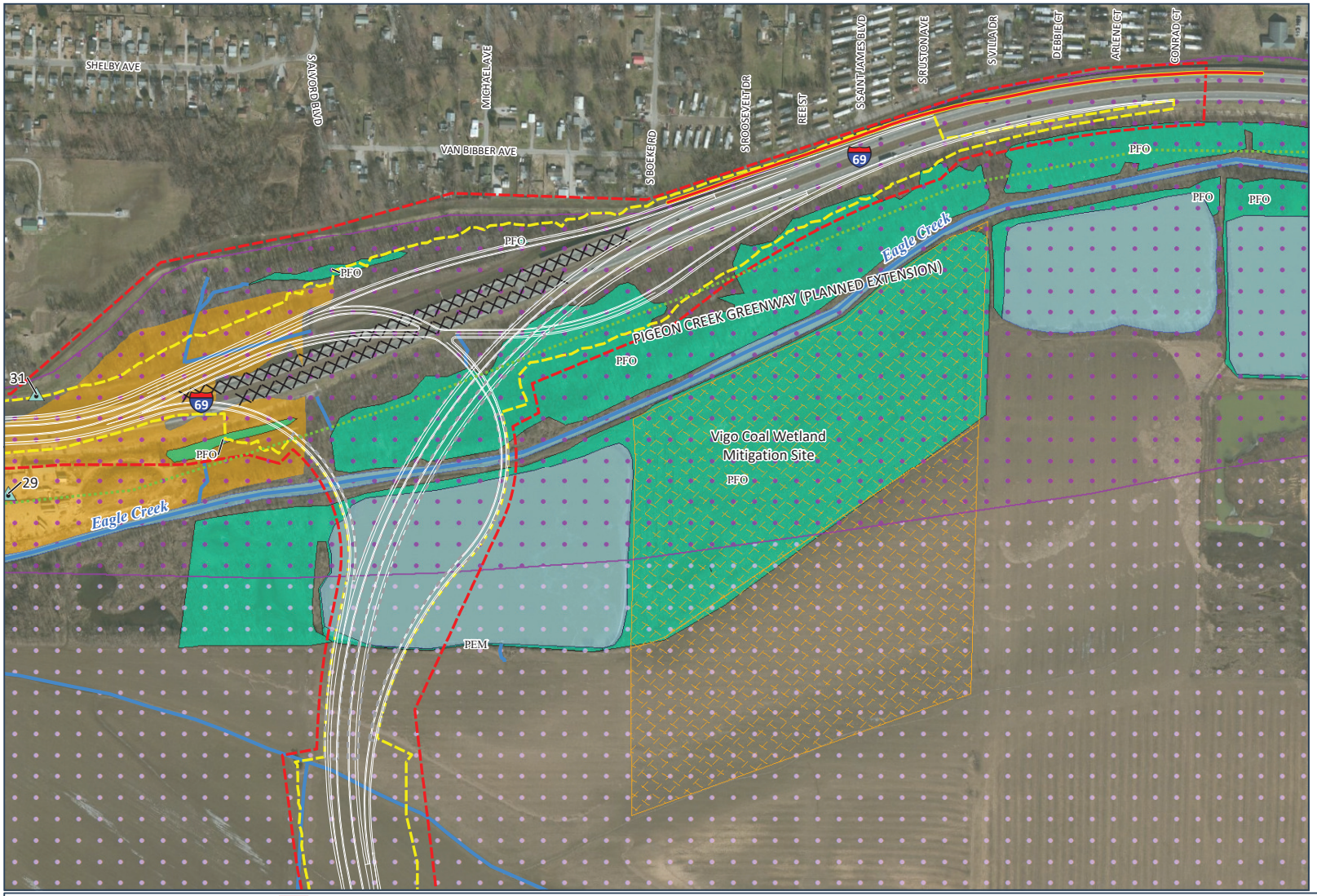
- Delineated Wetlands

Wetland Types

PEM = Palustrine Emergent
PSS = Palustrine Scrub-Shrub
PFO = Palustrine Forested

- Floodway
- 100- Year Floodplain
- Noise Impacts
- Likely Noise Barrier

- Landfills
- Recognized Environmental Conditions Sites
- Petroleum Wells
- State Boundary Line



Environmental Features
Central Alternative 1B Modified (Selected)

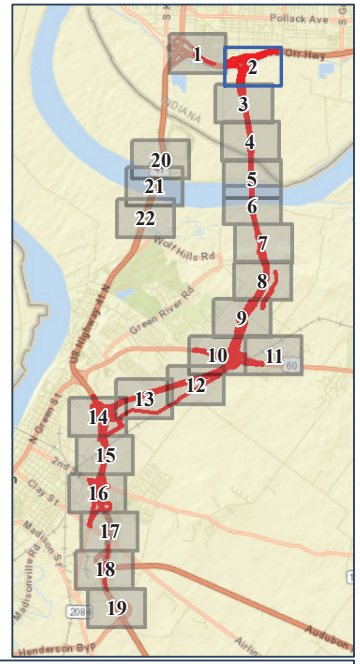
Appendix A-4 – Sheet 2 of 22

OHIO RIVER CROSSING

Final Environmental Impact Statement

0 390 780 Feet

1 Inch = 400 Feet



- Construction Limits
- Preliminary Right-of-Way
- Preliminary Permanent Easement
- Preliminary Temporary Easement
- Stormwater Detention Basin
- Bridge Deck
- Planned Subdivisions
- Removed Roads
- Historic Properties
- Recreational Section 4(f) Property
- Section 6(f) Property
- Green River State Forest
- Wetland Reserve Program
- Imperiled Bat Conservation Fund
- Green River National Wildlife Refuge
- Green River National Wildlife Refuge Conservation Partnership Areas
- Existing Wetland Mitigation Sites

Pedestrian/Bike Facilities

Planned
- Shared-Use Path
- On-Street Bike Facility

Existing
- Shared-Use Path
- On-Street Bike Facility
- Recreation Trails
- Noise Impacts
- Likely Noise Barrier

Relocations
- Residential
- Place of Worship

Community Resources
- Library
- Place of Worship
- School
- Delineated Streams
- Open Water
- Floodway
- 100- Year Floodplain
- Delineated Wetlands

Wetland Types

PEM = Palustrine Emergent
PSS = Palustrine Scrub-Shrub
PFO = Palustrine Forested

- Landfills
- State Boundary Line
- Recognized Environmental Conditions Sites
- Petroleum Wells