



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Alabama Ecological Services Field Office
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Phone: (251) 441-5181 Fax: (251) 441-6222

In Reply Refer To:
Consultation Code: 04EA1000-2019-SLI-0053
Event Code: 04EA1000-2019-E-00105
Project Name: Valley Creek Feasibility Study

October 11, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. Please note that new information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Note that due to the volume of emails received by our office, we cannot accept project consultation requests by email.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Also note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the process and consultation under the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs

for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/pdf/management/usfwscommunicationtowerguidance.pdf>

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

We can be reached at:

US Fish and Wildlife Service

1208 Main Street

Daphne, AL 36526

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Alabama Ecological Services Field Office

1208 B Main Street

Daphne, AL 36526-4419

(251) 441-5181

Project Summary

Consultation Code: 04EA1000-2019-SLI-0053

Event Code: 04EA1000-2019-E-00105

Project Name: Valley Creek Feasibility Study

Project Type: LAND - FLOODING

Project Description: General investigation study looking at potential measures for flood damage reduction along Valley Creek.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.41695594787598N86.96065182759972W>



Counties: Jefferson, AL

Endangered Species Act Species

There is a total of 21 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: http://www.fws.gov/endangered/species_profiles/species_profile.cfm?species=16300	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: http://www.fws.gov/endangered/species_profiles/species_profile.cfm?species=15040	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: http://www.fws.gov/endangered/species_profiles/species_profile.cfm?species=10045	Threatened

Reptiles

NAME	STATUS
Flattened Musk Turtle <i>Sternotherus depressus</i> Population: Black Warrior R. system upstream from Bankhead Dam No critical habitat has been designated for this species. Species profile: http://www.fws.gov/endangered/species_profiles/species_profile.cfm?species=10061	Threatened

Amphibians

NAME	STATUS
<p>Black Warrior (=sipsey Fork) Waterdog <i>Necturus alabamensis</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: Alabama Fish and Wildlife Commission - 15436</p>	Endangered

Fishes

NAME	STATUS
<p>Cahaba Shiner <i>Notropis cahabae</i></p> <p>There is proposed critical habitat for this species. The location of the critical habitat is not available.</p> <p>Species profile: Alabama Fish and Wildlife Commission - 1650</p>	Endangered
<p>Goldline Darter <i>Percina aurolineata</i></p> <p>There is proposed critical habitat for this species. The location of the critical habitat is not available.</p> <p>Species profile: Alabama Fish and Wildlife Commission - 17005</p>	Threatened
<p>Rush Darter <i>Etheostoma phytophilum</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: Alabama Fish and Wildlife Commission - 1770</p>	Endangered
<p>Watercress Darter <i>Etheostoma nuchale</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: Alabama Fish and Wildlife Commission - 1820</p>	Endangered

Clams

NAME	STATUS
Alabama Moccasinshell <i>Medionidus acutissimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Alabama Moccasinshell (15387)	Threatened
Finelined Pocketbook <i>Lampsilis altilis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Finelined Pocketbook (15393)	Threatened
Orangenacre Mucket <i>Lampsilis perovalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Orangenacre Mucket (15390)	Threatened
Ovate Clubshell <i>Pleurobema perovatum</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Ovate Clubshell (15420)	Endangered
Southern Clubshell <i>Pleurobema decisum</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Southern Clubshell (16112)	Endangered
Triangular Kidneyshell <i>Ptychobranhus greenii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Triangular Kidneyshell (1206)	Endangered
Upland Combshell <i>Epioblasma metastriata</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: Upland Combshell (1017)	Endangered

Snails

NAME	STATUS
Round Rocksnail <i>Leptoxis ampla</i> No critical habitat has been designated for this species. Species profile: Round Rocksnail (1470)	Threatened

Flowering Plants

NAME	STATUS
Gentian Pinkroot <i>Spigelia gentianoides</i> No critical habitat has been designated for this species. Species profile " " " " " "	Endangered
Georgia Rockcress <i>Arabis georgiana</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile " " " " " "	Threatened
Mohr's Barbara's Buttons <i>Marshallia mohrii</i> No critical habitat has been designated for this species. Species profile: Marshallia georgiana/7610	Threatened
Tennessee Yellow-eyed Grass <i>Xyris tennesseensis</i> No critical habitat has been designated for this species. Species profile " " " " " "	Endangered

Critical habitats

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



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, KANSAS CITY DISTRICT
635 FEDERAL BUILDING
601 E. 12TH STREET
KANSAS CITY, MISSOURI 64106-2824

Planning Branch

DEC - 4 2018

William J. Pearson
Field Supervisor
Alabama Ecological Services Field Office
U.S. Fish and Wildlife Service
1208-B Main Street
Daphne, Alabama 36526

Dear Mr. Pearson:

The U.S. Army Corps of Engineers (USACE), Kansas City District, and the City of Bessemer, Alabama are partnering on a feasibility study to evaluate flood risk management measures in the Valley Creek basin. The Valley Creek drainage area lies entirely within Jefferson County, which is located in north central Alabama. The creek is a major tributary to the Black Warrior River. Valley Creek emerges from headwater springs and then passes through an underground system of storm drains to enter an open channel from a double box culvert in central Birmingham near Fifth Avenue and Seventh Street. The study area includes what is typically referred to as "upper" Valley Creek (see attached study area map). The drainage area of upper Valley Creek is approximately 96 square miles. It is an urban watershed with land use ranging from 60 to 95 percent developed including residential, commercial, and industrial areas. Valley Creek has a history of producing damaging floods. The study area is within USACE Mobile District's Area of Responsibility, but the study is being led by the Kansas City District.

USACE and the City of Bessemer hosted a planning workshop on November 6-7, 2018. During that workshop, an initial list of measures was identified for consideration in development of plan alternatives. Non-structural measures that will be considered include flood-proofing (i.e. modifying structures), buy-outs/relocations, and a flood warning system. Structural measures that will be considered include channel modification, levees/floodwalls, bridge removal or modification, construction of diversion channels, off-channel detention basins, and in-stream storage reservoir(s). Channel modification may include channel widening, deepening, and/or vegetation removal. Environmental enhancements such as constructed riffle-pool complexes or wetland/floodplain benches are typically incorporated into channel modification projects where feasible. Off-channel detention measures within the study area would also offer an opportunity to incorporate wetland features. Plan alternatives will likely include a combination of measures.

USACE obtained an Information for Planning and Conservation (IPaC) report for the study area on October 11, 2018, (Consultation Code: 04EA1000-2019-SLI-0053). The IPaC species list included 21 threatened, endangered, or candidate species that should

be considered in an effects analysis for the project. No critical habitat was reported to be present. USACE has completed an initial review of the potential for flood risk management measures under consideration in upper Valley Creek to affect those species on the IPaC list. At this time, USACE is requesting concurrence from the USFWS on our determination of the list of species that should be evaluated for potential effects during development of the feasibility study. Information on the existing environmental condition of upper Valley Creek relevant to the determinations for each species follows. Table 1 summarizes the USACE conclusions.

Environmental Overview of the Study Area

Upper Valley Creek drains a major metropolitan area and has typical urban stream characteristics such as poor habitat, degraded water quality, and stressed biological communities (Alabama Department of Environmental Management [ADEM] 2001). A Use Attainability Analysis to support upgrading Valley Creek's use classification from "Agricultural and Industrial Water Supply" to "Limited Warmwater Fishery" (LWF) was completed in 2001. That analysis attributed the degraded condition of upper Valley Creek to the extensive industrial and commercial land use within its watershed. The urbanized landscape creates dynamic flow events, reduced riparian zones, increased siltation, and other conditions that destroy habitat and impair water quality, thus making it difficult to sustain a healthy aquatic community (ADEM 2001). Upper Valley Creek was characterized by poor dissolved oxygen levels, high pathogen levels, and elevated biochemical oxygen demand (BOD) and nutrient concentrations (ADEM 2001). A U.S. Geological Survey (USGS 2002) investigation of water quality and aquatic community structure in Valley Creek arrived at a similar conclusion stating:

The water quality and aquatic-community structure in Village and Valley Creeks are degraded in comparison to streams flowing through less-urbanized areas. Low community richness and increased density of certain species within the fish and benthic invertebrate communities indicate that degradation has occurred during an extended period of time. Decreased diversity in the aquatic communities and elevated concentrations of trace elements and organic contaminants in the water column, bed sediment, and fish tissues at Village and Valley Creeks are indicative of the effects of urbanization. The degree of degradation may be related to point and nonpoint sources of contamination originating within the basins. Industrial land use, in particular, was significantly correlated to elevated contaminant levels in the water column, in bed sediment, in fish tissue, and to the declining health of the benthic-invertebrate communities.

A 0.9 mile segment of Valley Creek was placed on the Clean Water Act §303(d) list of impaired waters in 2004 for only partially meeting its LWF use classification due to mercury levels from atmospheric deposition (subsequently removed from the list in 2014). An ADEM habitat assessment for upper Valley Creek rated it as in sub-optimal

condition (ADEM 2007). Water quality results indicated elevated levels of arsenic, mercury, total dissolved solids, specific conductance, hardness, and alkalinity, which are potential causes of the very poor macroinvertebrate community condition (ADEM 2007). In-stream aquatic habitat consisted primarily of run habitat (58-85%) with pool habitat comprising less than 10 percent (USGS 2002, ADEM 2007). In 2018, remediation work removed 34,000 cubic yards of tar-like material from Valley Creek between Opossum Creek confluence and 13th Street as part of corrective implementation measures for past contamination. Tar-like substances were identified as a key factor limiting aquatic life in Valley Creek for decades (ADEM 2001).

Mammals

The IPaC list included three bat species: gray bat, Indiana bat, and northern long-eared bat. The upper Valley Creek study area is within the current range of all three bat species. The study area includes forested riparian areas, including forested wetland of both the oak/hickory and willow/sycamore types. Channel modification measures would potentially require tree removal, which may have potential to affect bat species. USACE will evaluate the potential effects to these species from plan alternatives. USACE requests that the U.S. Fish and Wildlife Service (USFWS) provide any relevant information regarding locations of known maternity roost trees or hibernacula that would have a bearing on the effects analysis for these bat species in the study area.

Reptiles

Flattened musk turtle was identified on the IPaC list for the study area. The USFWS sampling protocol states that optimal habitat is "permanent oligotrophic streams from one to five feet deep containing abundant rocky ledges, slabs, logs, debris, and pools". USFWS (2014) states that preferred habitat includes clear and shallow water, rocky bottom substrates with rock crevices, alternating shallows, deeper pools, pools with some current, low silt, minimal nutrients and pollution, and a moderate temperature. As stated previously, upper Valley Creek has been characterized by poor dissolved oxygen levels and minimal pool habitat (i.e. <10%) (ADEM 2001, 2007; USGS 2002). The macroinvertebrate community was scored as "very poor" due to low numbers of pollution intolerant organisms and high numbers of pollution tolerant organisms (ADEM 2007). In addition, the median temperature and median concentration of total dissolved solids, specific conductance, hardness, alkalinity, nitrate + nitrite nitrogen, dissolved reactive phosphorus, chlorides, and fecal coliform were higher than expected when compared to verified data of reference reaches in the same ecoregion (ADEM 2007). Based on the degraded condition of the aquatic habitat within upper Valley Creek, suitable habitat for the species is not present and the species would not be affected by measures under consideration for the study.

Amphibians

Black Warrior waterdog was identified on the IPaC list for the study area. USFWS (2018a) states that the species is very sensitive to declines in water quality due to their highly permeable skin and external gills. Although the species is only found in streams within the Black Warrior River Basin, no individual populations have been documented in Jefferson County (USFWS 2018a). USFWS (2018a) states that Black Warrior waterdogs are associated with stream depths of 1 to 4 meters (m) (3.3 to 13.1 feet [ft]), reduced sedimentation, and large leaf packs (leaves that fall into streams accumulate in packs usually behind branches, rocks, and other obstructions) supporting mayfly (Ephemeroptera spp.) and caddisfly (Trichoptera spp.) larvae. Stream depths in upper Valley Creek ranged from 0.8 feet in riffles to 2 feet in pools (ADEM 2007) and mean water depth was reported as less than 1 foot (USGS 2002). Valley Creek within the study area was rated as “marginal” for sediment deposition. Taxa richness for Ephemeroptera and Trichoptera genera were both rated “poor” (ADEM 2007). As described previously, water quality is degraded in upper Valley Creek. As a result, no effects to the species are anticipated because upper Valley Creek does not appear to contain suitable habitat for the Black Warrior waterdog.

Fishes

The IPaC list included four fish species: Cahaba shiner, goldline darter, rush darter, and watercress darter. Fish sampling by USFWS (1985) and USGS (2002) documented few fish species in Valley Creek: western mosquitofish, largescale stoneroller, longear sunfish, green sunfish, bluegill, blackbanded darter, blacktail shiner, and creek chub. Species were primarily pollution tolerant fishes. Mosquitofish and minnows had the highest relative abundance (USGS 2002). The Geological Survey of Alabama indicated the only sensitive fish species in proximity to the study area is the watercress darter (Stuart McGregor, personal communication).

The Cahaba River shiner is restricted to the upper mainstem of the Cahaba River and immediate lower reach with Shades Creek (USFWS 2016). As a result, measures under consideration for the study would have no effect on this species because it is not present in the study area.

The current range of the goldline darter in Alabama includes portions of the mid-Cahaba River and Shades Creek, along with most of the Little Cahaba River (USFWS 2015). As a result, measures under consideration for the study would have no effect on this species because it is not present in the study area.

The current range of the rush darter does not include the Valley Creek watershed (USFWS 2011, USFWS 2018b). As a result, measures under consideration for the study would have no effect on this species because it is not present in the study area.

The watercress darter is found within the study area. Available information states that naturally occurring populations of the species are known from four locations. Three of these locations (Glenn, Thomas, and Seven Springs) are located on tributaries to Valley Creek (USFWS 2018c). Watercress darter habitat includes deeper, slow-moving backwaters of springs that are choked with aquatic vegetation such as watercress (USFWS 1993). The mainstem of Valley Creek does not include such suitable habitat. Flood risk management measures discussed to date have not included actions in the vicinity of watercress darter sites. Watercress darters would not be anticipated to be affected by the project assuming measures are restricted to the mainstem of Valley Creek and its floodplain. However, USACE will evaluate the potential effects of plan alternatives on this species. To assist with this evaluation, USACE requests USFWS provide any relevant information that should be considered in the effects analysis in particular if USFWS believes there is any potential for it to occur in Valley Creek.

Clams

The IPaC list included seven clam species: Alabama moccasinshell, finelined pocketbook, orangenacre mucket, ovate clubshell, southern clubshell, triangular kidneyshell, and upland combshell. The Valley Creek basin is included in the current range maps for all except Alabama moccasinshell and orangenacre mucket based on ECOS species profiles. Habitat for all seven species includes sand/gravel/cobble substrates (USFWS 2000). Although appropriate substrate material is present, upper Valley Creek has been impacted by all of the primary causes of decline that USFWS (2000) identified for these species including habitat modification, sedimentation, eutrophication, and water quality degradation. Only one study has been found to date that included sampling for mussels within the study area. The results of that sampling only documented *Corbicula* sp. (USGS 2002). The previously described degradation of water quality and the aquatic community within upper Valley Creek would preclude suitable habitat for these species. As a result, flood risk management measures being considered in this study would have no impact to these species due to lack of suitable habitat.

Snails

Round rocksnail was identified on the IPaC list for the study area. Review of the ECOS species profile and USFWS (2006) indicates the species is currently known only from the Cahaba River basin. As a result, measures under consideration for the study would have no effect on this species because it is not present in the study area.

Flowering Plants

The IPaC list included four flowering plant species: Gentian pinkroot, Georgia rockcress, Mohr's Barbara's Buttons, Tennessee yellow-eyed grass. Based on ECOS

species profiles, upper Valley Creek does not fall within the current range for any of these species. As a result, measures under consideration for the study would have no effect on these species because they are not present in the study area.

Fish and Wildlife Coordination Act

Section 1 of the Fish and Wildlife Coordination Act, as amended, (FWCA), (16 U.S.C. §§ 661 et seq.), states the general policy that fish and wildlife conservation shall receive equal consideration with other project purposes and will be coordinated with other features of water resources development projects. To accomplish this, section 2(a) of the FWCA establishes that preconstruction planning on project development shall be coordinated with the USFWS. Section 2(b) of the FWCA authorizes the USFWS to conduct surveys and investigations to determine the possible damage of proposed developments on wildlife resources; to make recommendations for preventing their loss or damage; and to offer measures for developing and improving them. Section 2(e) of the FWCA authorizes construction agencies to transfer funds to the USFWS to conduct investigations and prepare the reports necessary to carry out the purposes of the Act.

USACE requests that the USFWS provide a point of contact (POC) for development of a statement of work (SOW) for completion of FWCA activities in support of the Valley Creek Feasibility Study. It is our understanding, that for similar studies initiated by the USACE Mobile District, your office has indicated that field office staff are not currently available to support FWCA activities. If that is also the case for this study, USACE Kansas City District would like to pursue an alternate contracting source as laid out in the 2003 *Agreement between the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers for Conducting Fish and Wildlife Coordination Act Activities*.

To summarize, USACE is requesting USFWS assistance in finalizing a species list for analysis of effects associated with flood risk management measures under consideration for the Valley Creek basin. USACE also requests a POC to coordinate FWCA activities. If you have any questions regarding this request, please contact Mr. Michael Snyder, Environmental Resources Specialist, at (816) 389-3141, or michael.v.snyder@usace.army.mil.



Jason W. Farmer
Chief, Environmental Resources Section

Table 1. USACE conclusions on IPaC species list

Common Name	Scientific Name	USACE Determination
Gray bat	<i>Myotis grisescens</i>	Potential to affect – range includes study area.
Indiana bat	<i>Myotis sodalis</i>	Potential to affect – range includes study area.
Northern long-eared bat	<i>Myotis septentrionalis</i>	Potential to affect – range includes study area.
Flattened musk turtle	<i>Sternotherus depressus</i>	No effect – suitable habitat not present in study area.
Black Warrior waterdog	<i>Necturus alabamensis</i>	No effect – suitable habitat not present in study area.
Cahaba shiner	<i>Notropis cahabae</i>	No effect – does not occur in study area.
Goldline darter	<i>Percina aurolineata</i>	No effect – does not occur in study area.
Rush darter	<i>Etheostoma phytophilum</i>	No effect – does not occur in study area.
Watercress darter	<i>Etheostoma muchale</i>	Potential to affect due to proximity to study area
Alabama moccasinshell	<i>Medionidus acutissimus</i>	No effect – suitable habitat not present in study area.
Finelined pocketbook	<i>Lampsilis altilis</i>	No effect – suitable habitat not present in study area.
Orangenacre mucket	<i>Lampsilis perovalis</i>	No effect – suitable habitat not present in study area.
Ovate clubshell	<i>Pleurobema perovatum</i>	No effect – suitable habitat not present in study area.
Southern clubshell	<i>Pleurobema decisum</i>	No effect – suitable habitat not present in study area.
Triangular kidneyshell	<i>Ptychobranthus greenii</i>	No effect – suitable habitat not present in study area.
Upland combshell	<i>Epioblasma metastriata</i>	No effect – suitable habitat not present in study area.
Round rocksnail	<i>Leptoxis ampla</i>	No effect – does not occur in study area.
Gentian pinkroot	<i>Spigelia gentianoides</i>	No effect – does not occur in study area.
Georgia rockcress	<i>Arabis georgiana</i>	No effect – does not occur in study area.

Mohr's Barbara's Buttons	<i>Marshallia mohrii</i>	No effect – does not occur in study area.
Tennessee yellow-eyed grass	<i>Xyris tennesseensis</i>	No effect – does not occur in study area.

References Cited

- ADEM. 2001. Use Attainability Analysis: Valley Creek.
https://www.epa.gov/sites/production/files/2014-11/documents/support_valley_creek.pdf
- ADEM. 2007. 2007 Monitoring Summary. Rivers and Streams Monitoring Program.
- USFWS. No Date. Flattened Musk Turtle. US Fish and Wildlife Service Recommended Sampling Protocol. Accessed 26 November 2018 at
<https://www.fws.gov/daphne/es/Flattened%20musk%20turtle%20sample%20protocol.pdf>
- USFWS. 1985. Resource Inventory, Valley Creek, Birmingham, Alabama. Report submitted to U.S. Army Corps of Engineers Mobile District.
- USFWS. 1993. Recovery Plan: watercress darter (*Etheostoma nuchale*).
- USFWS. 2000. Recovery Plan for Mobile River Basin Aquatic Ecosystem.
- USFWS. 2006. Six Mobile River Basin Aquatic Snails 5-year reviews: summary and evaluation.
- USFWS. 2011. Final rule: Endangered and threatened wildlife and plants; endangered status for the Cumberland darter, rush darter, yellowcheek darter, chunky madtom, and laurel dace. Federal Register 76:48722-48741.
- USFWS. 2014. Flattened Musk Turtle (*Sternotherus depressus*) 5-year review: summary and evaluation.
- USFWS. 2015. Goldline darter (*Percina aurolineata*) 5-year review: summary and evaluation.
- USFWS. 2016. Cahaba Shiner (*Notropis cahabae*) 5-year review: summary and evaluation.

USFWS. 2018a. Final rule: endangered and threatened wildlife and plants; endangered species status for Black Warrior waterdog and designation of critical habitat. Federal Register 83:257-284.

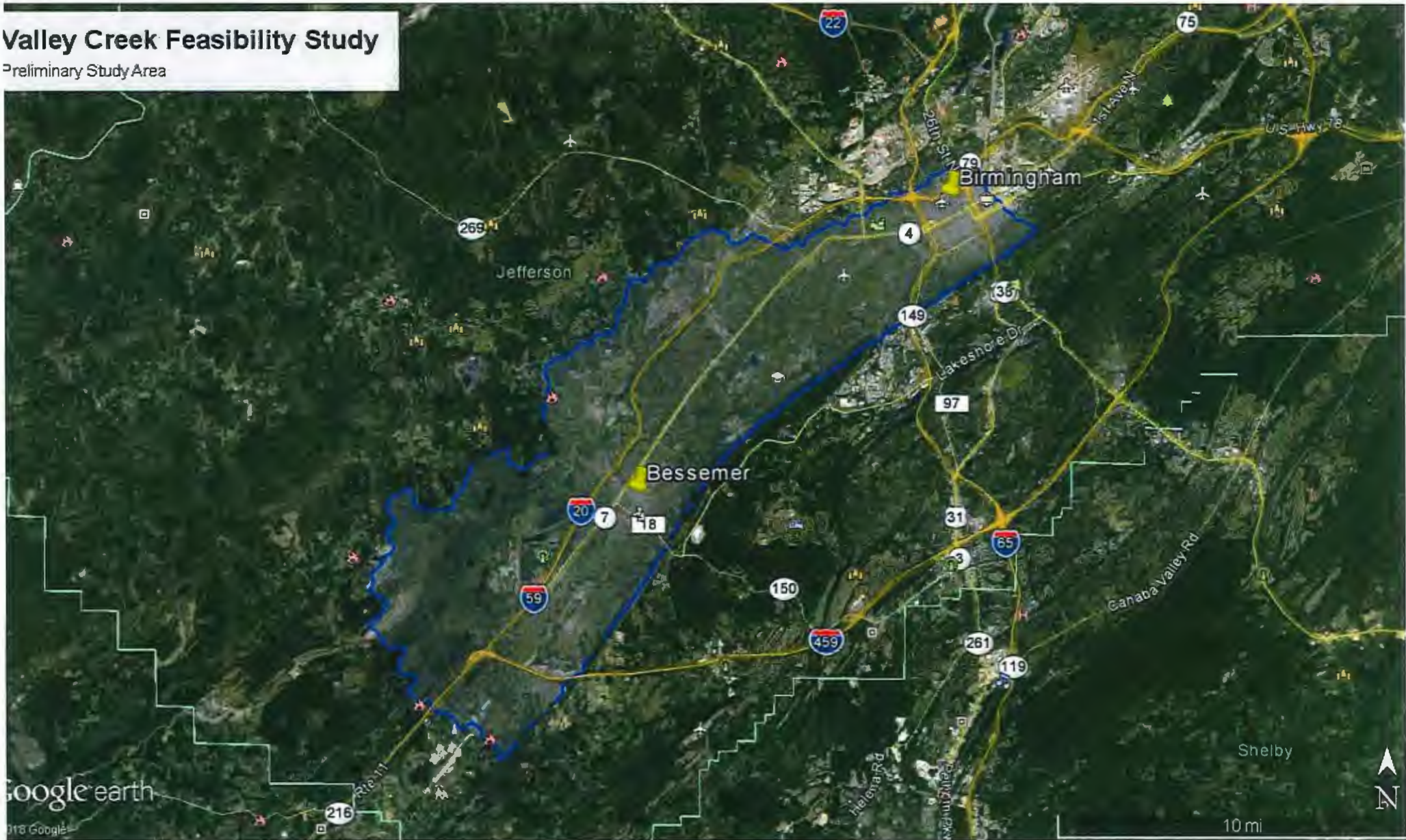
USFWS. 2018b. Environmental Conservation Online System: Species profile for Rush Darter (*Etheostoma phytophilum*). Accessed November 2018 at <https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2779>.

USFWS 2018c. Watercress darter (*Etheostoma nuchale*) 5-year review: summary and evaluation.

USGS. 2002. Investigation of water quality and aquatic-community structure in Village and Valley Creeks, City of Birmingham, Jefferson County, Alabama, 2000-01. U.S. Geological Survey Water Resources Investigations Report 02-4182.

Valley Creek Feasibility Study

Preliminary Study Area





United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

IN REPLY REFER TO:
2019-CPA-0161

MAY 02 2019

Jason W. Farmer
Chief, Environmental Resources Section
Department of the Army
Kansas City District, Corps of Engineers
635 Federal Building
601 E. 12th Street
Kansas City, MO 64106-2824

Dear Mr. Farmer:

Thank you for your letter of December 4, 2018, which was received on March 26, 2019, requesting information on federally listed species associated with the U.S. Army Corps of Engineers (USACE) Valley Creek Feasibility Study Area. We understand that a variety of flood control measures within Valley Creek are being considered by USACE. These include channel modification, levees, bridge removal, and other measures where appropriate. Environmental enhancements for wetland/floodplain benches, and construction of riffle-pool complexes are also being considered where feasible. The project is located in the City of Bessemer, Jefferson County, Alabama. Our comments are provided in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

After reviewing the information provided in your letter, and a review of our records, we agree with your assessment that the following species could be affected by this proposal:

Northern Long-Eared Bat (*Myotis septentrionalis*) – Threatened
Indiana bat (*Myotis sodalis*) – Endangered
Gray bat (*Myotis grisescens*) – Endangered
Watercress darter (*Etheostoma nuchale*) – Endangered, CH

Suitable summer habitat for the Indiana bat and northern long-eared bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 5 inches dbh for the Indiana bat and ≥ 3 inches dbh for the northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure.

Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat.

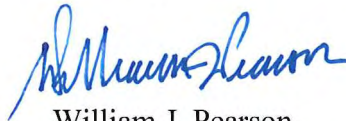
To avoid impacts to spring/summer roosting and maternity colonies of the Indiana bat and northern long-eared bat, we recommend that tree clearing occur from October 15 to March 31. If the all tree removal for this project occurs between October 15 and March 31, no further consultation will be necessary for the northern long-eared bat, Indiana bat, or gray bat. If this timing is not achievable and no other measures to avoid adverse effects are possible, then we recommend that the project proponent proceed to detailed habitat surveys or acoustic and/or mist-netting surveys to determine if potential habitat exists on site or to determine presence or probable absence of Indiana bats and northern long-eared bats in accordance with the 2018 Range-wide Indiana Bat Summer Survey Guidelines:

(<https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>).

As you state in your letter, the watercress darter is known to occur within the springs adjacent to Valley Creek, but not within Valley Creek itself. We recommend that USACE consider avoiding construction near these adjacent streams once site specific projects are finalized. If any project is anticipated to directly or indirectly affect suitable habitat for the watercress darter, then surveys and/or additional consultation may be required.

Thank you for the opportunity to comment on your project. For further discussion, please contact Mr. Josh Rowell of my staff at (251) 441-5836. Please refer to the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,



William J. Pearson
Field Supervisor
Alabama Ecological Services Field Office



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, KANSAS CITY DISTRICT
635 FEDERAL BUILDING
601 E. 12TH STREET
KANSAS CITY, MISSOURI 64106-2824

CENWK-PMP-R

JUN 11 2019

Taconya Goar
Environmental Affairs Supervisor
Alabama Department of Conservation and Natural Resources
64 N. Union Street, Suite 551
Montgomery, Alabama 36104

Dear Ms. Goar:

The U.S. Army Corps of Engineers (Corps) has partnered with the City of Bessemer to analyze alternatives for reducing flood risk within the upper Valley Creek watershed. The study will identify and evaluate reasonable alternatives including non-structural measures, channel and bridge modifications, levees and floodwalls, and in-stream and off-channel detention areas in Bessemer, Birmingham, and other communities in Jefferson County. The drainage area of upper Valley Creek is approximately 96 square miles. It is an urban watershed with land use ranging from 60 to 95 percent developed including residential, commercial, and industrial areas. Valley Creek has a history of producing damaging floods. The study area is within USACE Mobile District's Area of Responsibility, but the study is being led by the Kansas City District.

Since we first communicated with your agency regarding the planning charrette meeting in November 2018 and the inter-agency webinar held in January 2019, the Corps has been completing preliminary evaluation of the initial measures identified for consideration. The attached figures illustrate the location of potential channel modification, off-channel detention areas, and levees that are under consideration as structural measures to improve flood risk within the study area. Several bridge modifications are also being evaluated. Non-structural measures, such as buy-outs and relocations, are also under consideration. The Corps is hosting a public meeting to inform the public on the scope of the study and seek public, agency, and local input regarding the study. The public meeting will be held on Wednesday, June 19, 2019 at 5:00 PM at the Bessemer Civic Center, East Meeting Room, 1130 9th Ave SW, Bessemer, AL 35022.

The Corps would welcome any input at this time that your agency may have on resources within the study area or the scope of evaluation and measures under consideration. The Corps has been coordinating with the USFWS regarding any potential effects to Federally listed species that may occur in the study area. Any additional information your agency may have regarding important state resources in the study area would be appreciated. We look forward to working with you throughout the study process. We respectfully request your comments be submitted by July 19, 2019 in order to be given full consideration in the alternatives formulation and evaluation process.

If you have any questions regarding this request, please contact Mr. Michael Snyder, Environmental Resources Specialist, at (816) 389-3141, or michael.v.snyder@usace.army.mil.

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Jason Farmer
Chief
Environmental Resources Section



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, KANSAS CITY DISTRICT
635 FEDERAL BUILDING
601 E. 12TH STREET
KANSAS CITY, MISSOURI 64106-2824

CENWK-PMP-R

JUN 11 2019

Paul Rogers
Chief, Birmingham Branch, Field Operations Division
Alabama Department of Environmental Management
110 Vulcan Road
Birmingham, Alabama 35209

Dear Mr. Rogers:

The U.S. Army Corps of Engineers (Corps) has partnered with the City of Bessemer to analyze alternatives for reducing flood risk within the upper Valley Creek watershed. The study will identify and evaluate reasonable alternatives including non-structural measures, channel and bridge modifications, levees and floodwalls, and in-stream and off-channel detention areas in Bessemer, Birmingham, and other communities in Jefferson County. The drainage area of upper Valley Creek is approximately 96 square miles. It is an urban watershed with land use ranging from 60 to 95 percent developed including residential, commercial, and industrial areas. Valley Creek has a history of producing damaging floods. The study area is within USACE Mobile District's Area of Responsibility, but the study is being led by the Kansas City District.

Since we first communicated with your agency regarding the planning charrette meeting in November 2018 and the inter-agency webinar held in January 2019, the Corps has been completing preliminary evaluation of the initial measures identified for consideration. The attached figures illustrate the location of potential channel modification, off-channel detention areas, and levees that are under consideration as structural measures to improve flood risk within the study area. Several bridge modifications are also being evaluated. Non-structural measures, such as buy-outs and relocations, are also under consideration. The Corps is hosting a public meeting to inform the public on the scope of the study and seek public, agency, and local input regarding the study. The public meeting will be held on Wednesday, June 19, 2019 at 5:00 PM at the Bessemer Civic Center, East Meeting Room, 1130 9th Ave SW, Bessemer, AL 35022.

The Corps would welcome any input at this time that your agency may have on resources within the study area or the scope of evaluation and measures under consideration. Any information your agency may have regarding important state resources in the study area would be appreciated. We look forward to working with you throughout the study process. We respectfully request your comments be submitted by July 19, 2019 in order to be given full consideration in the alternatives formulation and evaluation process.

If you have any questions regarding this request, please contact Mr. Michael Snyder, Environmental Resources Specialist, at (816) 389-3141, or michael.v.snyder@usace.army.mil.

A handwritten signature in blue ink, appearing to read 'J. Farmer', is positioned above the printed name.

Jason Farmer
Chief
Environmental Resources Section



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601 E. 12TH STREET
KANSAS CITY, MISSOURI 64106-2824

CENWK-PMP-R

JUN 11 2019

Ntale Kajumba
U.S. Environmental Protection Agency – Region 4
61 Forsyth Street South West
Atlanta, GA 30303

Dear Ms. Kajumba:

The U.S. Army Corps of Engineers (Corps) has partnered with the City of Bessemer to analyze alternatives for reducing flood risk within the upper Valley Creek watershed. The study will identify and evaluate reasonable alternatives including non-structural measures, channel and bridge modifications, levees and floodwalls, and in-stream and off-channel detention areas in Bessemer, Birmingham, and other communities in Jefferson County. The drainage area of upper Valley Creek is approximately 96 square miles. It is an urban watershed with land use ranging from 60 to 95 percent developed including residential, commercial, and industrial areas. Valley Creek has a history of producing damaging floods. The study area is within USACE Mobile District's Area of Responsibility, but the study is being led by the Kansas City District.

Since we first communicated with your agency regarding the planning charrette meeting in November 2018 and the inter-agency webinar held in January 2019, the Corps has been completing preliminary evaluation of the initial measures identified for consideration. The attached figures illustrate the location of potential channel modification, off-channel detention areas, and levees that are under consideration as structural measures to improve flood risk within the study area. Several bridge modifications are also being evaluated. Non-structural measures, such as buy-outs and relocations, are also under consideration. The Corps is hosting a public meeting to inform the public on the scope of the study and seek public, agency, and local input regarding the study. The public meeting will be held on Wednesday, June 19, 2019 at 5:00 PM at the Bessemer Civic Center, East Meeting Room, 1130 9th Ave SW, Bessemer, AL 35022.

The Corps would welcome any input that the EPA may have at this time on resources within the study area or the scope of evaluation and measures under consideration. We look forward to working with you throughout the study process. We respectfully request your comments be submitted by July 19, 2019 in order to be given full consideration in the alternatives formulation and evaluation process.

If you have any questions regarding this request, please contact Mr. Michael Snyder, Environmental Resources Specialist, at (816) 389-3141, or michael.v.snyder@usace.army.mil.

A handwritten signature in blue ink, consisting of a large, stylized 'J' followed by a series of loops and a horizontal line at the end.

Jason Farmer
Chief
Environmental Resources Section