

Mountain Valley Pipeline Project

Docket No. CP21- -000

Appendix G

U.S. Fish and Wildlife Service File Memo

Date: 9/3/2020
 To: Mountain Valley Pipeline (MVP) Project Files
 From: Cindy Schulz, VAES Field Office Supervisor, Gloucester, VA
 Subject: Updated Section 7 Determinations for MVP Project

By letter dated July 9, 2020, the U.S. Fish and Wildlife Service (Service or USFWS) concurred with FERC's ESA Section 7 determinations related to the MVP project. Below is more detailed info.

Species	FWS Comments
Indiana bat	Agree with LAA determination. Species included in Opinion.
Northern long-eared bat	Agree with LAA determination. Species included in Opinion.
Gray bat	Agree with NLAA determination. Per Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA), "No known gray bat habitat occurs within the Action Area in West Virginia (A. Silvis, pers. comm. April 23, 2020). Recent coordination with VDGIF confirmed no new or currently known gray bat habitat occurs within the Action Area in Virginia (Rick Reynolds pers. comm. December 10, 2019)." The Service agrees that the analysis in the SBA reflects the best available scientific data.
Virginia big-eared bat	Agree with NLAA determination. Per Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA), "On April 23, 2020, WVDNR confirmed that there are no new captures and no known habitat for the Virginia big-eared bat within seven miles of the Project Area in West Virginia (Alex Silvis, pers. comm. April 2020). Likewise, VDGIF confirmed that there are no new records of Virginia big-eared bat captures or habitat in the Action Area in Virginia (Rick Reynolds pers. comm. December 10, 2019). The Sky Dusky cave system in Bland County is approximately 18.5 miles from the Project and is the closest cave feature in Virginia with known occurrences of Virginia big-eared bats." The Service agrees that the analysis in the SBA reflects the best available scientific data.
Roanoke logperch	Agree with LAA determination. Species included in Opinion.
Candy darter	LAA due to sediment effects. Species included in Opinion
Candy darter proposed critical habitat	LAA due to sediment effects. Proposed critical habitat occurs within the action area. Formal conference on proposed critical habitat included in Opinion.
James spiny mussel	Agree with NLAA determination. Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA) provided information to support that impacts due to in-stream crossing and sedimentation/turbidity from construction activities in the upland areas are not likely in areas of Craig Creek where James spiny mussel is assumed to occur. As stated in that Supplement "Project-specific mussel surveys completed in 2015 and 2019 covering 1.274 kilometers of the Impact Area were negative for any mussel species, including James spiny mussel. The Project's mussel surveyors identified no natural nor anthropogenic stream characteristics present in the unsurveyed portion of Impact Area that would suggest a positive change (i.e., improvement in mussel habitat quality) between the terminus of mussel survey area and the unsurveyed portion of Impact Area. The nearest known occurrence of James spiny mussel in Craig Creek is approximately 25.4 stream kilometers downstream of the ROW crossing near the confluence of Trout Creek (i.e., tributary to Craig Creek) (http://www.dgif.virginia.gov/gis/werms.asp , Accessed April 3, 2020). That occurrence is based on identification of a single live James spiny mussel individual in 1987. The nearest known occurrence in Craig Creek of live mussels of any species was approximately 20.3 stream kilometers downstream of the ROW

crossing (<http://www.dgif.virginia.gov/gis/werms.asp>, Accessed April 3, 2020). That occurrence was recorded in 1991 in Craig County, and included only non-listed mussel species (e.g., *Villosa constricta*, *Strophitus undulatus*, *Elliptio complanata*). Eighteen mussel survey efforts, both those related and unrelated to the Project, have been completed between the headwaters of Craig Creek and the nearest downstream James spiny mussel occurrence (i.e., inclusive of the Project crossings). Of these, 12 were completed between the headwaters of Craig Creek and nearest downstream non-listed mussel species occurrence. All were negative for James spiny mussel (<http://www.dgif.virginia.gov/gis/werms.asp>, Accessed April 3, 2020). The headwaters of Craig Creek, where the Impact Area occurs, experience natural flow regimes (i.e., prone to drought and flash flooding events). In contrast, James spiny mussel populations have been reported from headwater streams such as Little Oregon and Johns Creeks where stream flow regimes are modulated due to small reservoirs located upstream of James spiny mussel populations. Small, headwater reservoirs, such as those in Little Oregon and Johns Creeks, provide hydrologic retention and may reduce dramatic stream flow surges during storm events. Furthermore, sunlight exposed to impounded surface water in the system increases primary productivity and decreases nutrient loss through a slow, regulated water release; thereby increasing unionid food availability (Hoch 2012). Based on discussions with VDGIF and USFWS, the headwater impoundments in Johns and Little Oregon Creeks are imperative to local James spiny mussel populations by stabilizing the environment. Such stable regulated flows, water temperatures, and trophic productivity do not exist in the headwaters of Craig Creek. As a result, the Impact Area in Craig Creek is not expected to contain James spiny mussel." The Service agrees that the analysis in the SBA reflects the best available scientific data. However, we did not take into consideration the results of the eDNA analysis for the mussels because the methodology was not tested on sites with known occurrences.

At the Service's request, Mountain Valley further assessed and identified mixing zones in any waterbody, in addition to the streams of interest (P. Moore, Beveridge & Diamond, emails to J. Stanhope, Service, August 14, 2020 and August 18, 2020). These additional mixing zones are also considered part of the aquatic action area. The Service reviewed the additional mixing zones in the action area and verified that they do not change our determination because there are no mixing zones identified in streams with James spiny mussel.

Clubshell

Agree with NLAA determination. Surveys were conducted at all waterbody crossing locations within streams known to provide suitable habitat for this species. No individuals were found during these survey efforts. As for sedimentation, no adverse effects to this species are expected downstream of the crossing locations or from sedimentation/turbidity from construction activities in upland areas because clubshell are not likely to occur in these areas. See Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA) regarding Elk River and Meathouse Fork. See also WVDNR email dated May 29, 2020, Janet Clayton: "Yes, the LK [Little Kanawha River] above Burnsville Lake is a Group 2 Stream. While there is potential for Clubshell and Snuffbox to occur there I believe the likelihood is low. I do not feel comfortable in delisting as a Group 2 stream for the simple fact that we do not have enough surveys within that reach. I do not agree with the assumptions for clubshell presence. Given the number of surveys downstream of the dam with Clubshell only found way downstream (Creston area downstream), I would not expect to find it upstream of the dam. Snuffbox is a different story and has been found extensively throughout the LK downstream of the dam. It would be the most likely ES to be observed above the dam. The mainstem crossing of the LK is approximately 9km downstream of the uppermost Group 2 designation point. Based on stream size and no Snuffbox found at the crossing, I would not expect Snuffbox to be present within this stream reach. For the Elk River the

	<p>reverse is true. Clubshell is just below Sutton Dam and the Snuffbox occurs much further downstream. Elk River above the dam is a Group 1 stream, ES [endangered species] not expected. While sedimentation is a real threat to FW mussels, the crossings are some distance up into the watershed (mainstem and tribs [tributaries]) and are quite some distance from where ES would likely be expected."</p> <p>The Service agrees that the analysis in the SBA provided for the Elk River and Meathouse Fork, and information from WVDNR related to the Little Kanawha and Elk River, reflect the best available scientific data. However, we did not take into consideration the results of the eDNA analysis for the mussels because the methodology was not tested on sites with known occurrences.</p> <p>At the Service's request, Mountain Valley further assessed and identified mixing zones in any waterbody, in addition to the streams of interest (P. Moore, Beveridge & Diamond, emails to J. Stanhope, Service, August 14, 2020, August 18, 2020, and August 24, 2020). These additional mixing zones are also considered part of the aquatic action area. The Service reviewed the additional mixing zones in the action area and verified that they do not change our determination because either 1) the mixing zones do not occur where the species occur or 2) for mixing zones on streams where the species may occur, project-related TSS concentrations in any of the tributaries when they enter the mixing zones are anticipated/predicted to have suspended sediment concentrations that are not likely to adversely affect the species.</p>
Snuffbox	<p>Agree with NLAA determination. Surveys were conducted at all waterbody crossing locations within streams known to provide suitable habitat for this species. No individuals were found during these survey efforts. As for sedimentation, no adverse effects to this species are expected downstream of the crossing locations or from sedimentation/turbidity from construction activities in upland areas because snuffbox are not likely to occur in these areas. See Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA) regarding Elk River, Meathouse Fork, and Leading Creek. See also WVDNR email dated May 29, 2020, Janet Clayton, quoted above. The Service agrees that the analysis in the SBA provided for the Elk River, Meathouse Fork, and Leading Creek and information from WVDNR related to the Little Kanawha and Elk River, reflect the best available scientific data. However, we did not take into consideration the results of the eDNA analysis for the mussels because the methodology was not tested on sites with known occurrences.</p> <p>At the Service's request, Mountain Valley further assessed and identified mixing zones in any waterbody, in addition to the streams of interest (P. Moore, Beveridge & Diamond, emails to J. Stanhope, Service, August 14, 2020, August 18, 2020, and August 24, 2020). These additional mixing zones are also considered part of the aquatic action area. The Service reviewed the additional mixing zones in the action area and verified that they do not change our determination because either 1) the mixing zones do not occur where the species occur or 2) for mixing zones on streams where the species may occur, project-related TSS concentrations in any of the tributaries when they enter the mixing zones are anticipated/predicted to have suspended sediment concentrations that are not likely to adversely affect the species.</p>
Rusty patched bumble bee	<p>Although we reached a "may affect, not likely to adversely affect" determination for the rusty patched bumble bee in 2017, we agree with FERC's NE determination based on the updated survey data and other information contained in Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA) and in Appendix F to the SBA. As stated in the SBA, "The nearest known extant populations of the rusty patched bumblebee do not occur within</p>

10 km of MVP (see Figures 4 and 5 for survey locations), and the most recent recorded occurrence of rusty patched bumblebees within a county crossed by MVP occurred in Montgomery County in 1997. In addition, evaluation of habitat characteristics and the distribution of potential habitat for the rusty patched bumblebee indicates that MVP's action area does not overlap with areas where the species is expected to occur. Following USFWS guidance (USFWS 2019b, USFWS 2019c), the action area is located entirely outside of High Potential Zones for the species (and furthermore the MVP centerline is more than 20 miles from the nearest Primary Dispersal Zone within a Low Potential Zone and more than 120 miles from the closest Uncertain Zone). Thus, according to USFWS guidance, Section 7 consultation is not needed for the rusty patched bumblebee. Each of these evaluations consistently supports the conclusion that MVP will have no effect on the species because the Project is outside of the current range of the rusty patched bumble bee." The Service agrees that the analysis in the SBA reflects the best available scientific data.

The Service reviewed the 9/1/2020 RPBB survey for MVP report. Mountain Valley conducted a survey for RPBB throughout the MVP project limits of disturbance, including the ROW and ancillary feature areas (i.e., access roads, laydown yards, and other areas that were cleared for project infrastructure or construction). The survey was completed following the USFWS Rapid Survey Protocol, as described in the Survey Protocols for the Rusty Patched Bumble Bee (*Bombus affinis*), Version 2.2 (USFWS 2019a) and incorporated metrics that are more stringent than necessary under the Service protocols, and were therefore more conservative. The USFWS's Rusty Patched Bumble Bee (*Bombus affinis*) Endangered Species Act Section 7(a)(2) Voluntary Implementation Guidance, Version 2.1 (USFWS 2019b) and the Rusty Patched Bumble Bee Guidance for Project Proponents (USFWS 2019c) shows that the entire MVP project is located in a USFWS-designated Unoccupied Zone. The report states that no RPBBs were captured or observed during the surveys or incidentally. The Service reviewed the report and agrees that the results of the report are accurate.

US Fish and Wildlife Service (USFWS). 2019a. Survey Protocols for the Rusty Patched Bumble Bee (*Bombus affinis*), Version 2.2. April 12, 2019.

US Fish and Wildlife Service (USFWS). 2019b. Rusty Patched Bumblebee (*Bombus affinis*) Endangered Species Act Section 7(a)(2) Voluntary Implementation Guidance. Version 2.1. April 2019. U.S. Fish and Wildlife Service, Regions 3, 4, 5 and 6. 24 pp.

US Fish and Wildlife Service (USFWS). 2019c. Rusty Patched Bumble Bee Guidance for Project Proponents. U.S. Fish and Wildlife Service Midwest Region. Available online at: <https://www.fws.gov/midwest/endangered/insects/rpbb/ProjectProponent.html>. Accessed April 2, 2020.

Northeastern bulrush	Surveys completed. No suitable habitat identified in the project area. Agree with NE determination. The Service agrees that the analysis in the SBA reflects the best available scientific data.
Running buffalo clover	Surveys were completed in all areas containing suitable RBC habitat and no individuals were found. The project area does not currently contain known populations of the running buffalo clover. Agree with NLAA determination. The Service agrees that the analysis in the SBA reflects the best available scientific data.

Shale barren rock cress	Surveys completed. No suitable habitat identified in the project area. Agree with NE determination. The Service agrees that the analysis in the SBA reflects the best available scientific data.
Small whorled pogonia	Excerpt from 7/9/2020 FWS letter to FERC. "During consultation on the Mountain Valley Pipeline project in 2017, due to restricted land access, 0.22 mile of the construction right-of-way in Greenbrier County, WV, was not surveyed for small whorled pogonia and the FERC assumed presence of small whorled pogonia in this unsurveyed area. As a result, effects to the small whorled pogonia were evaluated in the 2017 biological opinion. Since issuance of the 2017 biological opinion, surveys for small whorled pogonia were completed in the area where species presence was assumed. Suitable habitat for the small whorled pogonia was found to be present, but no small whorled pogonia individuals were found. Therefore, the Service concurs with the FERC's may affect, not likely to adversely affect determination for small whorled pogonia. Because Section 7 has been concluded informally for the small whorled pogonia, this species will not be included in formal consultation on the Mountain Valley Pipeline project." The Service agrees that the analysis in the SBA reflects the best available scientific data.
Smooth coneflower	Agree with NLAA determination. Excerpt from 2017 FERC BA "Mountain Valley conducted a field survey for smooth coneflower on August 24, 2015 in Montgomery County. Individual smooth coneflower were not observed, but potential habitat for the species was determined to be present within the Project Area in Montgomery County. Due to route realignments and land access issues in 2015, Mountain Valley conducted additional surveys in Montgomery County in 2016 from June 22 through July 3, August 8 through August 12, and September 19 through September 20. Again, no individuals were observed. Mountain Valley was granted land access to previously unsurveyed parcels in 2016 after the survey window for smooth coneflower had closed. Mountain Valley conducted assessments for smooth coneflower habitat on these parcels on October 7 and October 25, 2016. Mountain Valley did not identify suitable habitat for smooth coneflower on these parcels; therefore, no additional surveys are needed for this species." Excerpt from Mountain Valley's 5/28/2020 second revised Supplement to the Biological Assessment (SBA) "After issuance of the BO, further route adjustments necessitated an additional habitat assessment on February 28, 2019 in Montgomery County, Virginia (Table 7). No suitable habitat was identified. Critical habitat has not been proposed or designated for the species." The Service agrees that the analysis in the SBA reflects the best available scientific data.
Virginia spiraea	Agree with LAA determination. Species included in Opinion.
Whorled sunflower	The Service's Virginia Field Office was notified by Christopher Ulrey (National Park Service [NPS]) of the presence of this species on the Blue Ridge Parkway in Franklin County, VA. Visual identification was confirmed by Johnny Townsend (VDCR-DNH); however, genetic work indicated 2 new genotypes never sampled before, which are distinctive from other populations (C. Ulrey, NPS, email to J. Stanhope and S. Hoskin, Service, April 6, 2020). Genetically distinct plants potentially represent a hybrid or unknown population (Service 2020). The plants occur in two distinct clusters (with nearly 300 total stems) and are located at the margin of a mowed field on the Blue Ridge Parkway (owned and managed by NPS; Service 2020). Because of the unusual location of these plants, their unconfirmed identity, and uncertainty of the population's origins (i.e., the species may have been planted not as part of a NPS plan or species recovery action), this population is not considered to be contributing to recovery at this time (Service 2020). Researchers from the University of Memphis are currently working to address these uncertainties and confirm the species' identity (S. Wiggers, Service, email to A. Irizarry, Service, August 12, 2020). The location is approximately 23 km from the pipeline ROW. Due to the uncertainties

	related to this population and the distance from the pipeline ROW, the proposed project will have no effect on the whorled sunflower.
Yellow lance and yellow lance proposed critical habitat	The available information does not indicate that the yellow lance or its proposed critical habitat occurs at or downstream of the MVP pipeline crossing of Craig Creek or any other MVP pipeline stream crossings, or in the action area (which includes upland sedimentation effects). Therefore, the proposed project will have no effect on the yellow lance. Critical habitat for yellow lance was proposed on 2/6/2020.
Atlantic pigtoe and Atlantic pigtoe proposed critical habitat	The Atlantic pigtoe was proposed for federal listing as threatened on October 11, 2018. Critical habitat for the species was proposed on the same date. The available information does not indicate that the Atlantic pigtoe occurs at or downstream of the MVP pipeline crossing of Craig Creek or any other MVP pipeline stream crossings, or in the action area (which includes upland sedimentation effects). Therefore, the proposed project will have no effect on the Atlantic pigtoe. Additionally, the proposed project will have no effect on proposed critical habitat.