



United States  
Department of  
Agriculture

Forest  
Service

Monongahela National Forest

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Elkins, WV 26241  
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**File Code:** 1900; 2700  
**Date:** September 30, 2016

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First St., N.E., Room 1A  
Washington, DC 20426

Dear Ms. Bose:

**Subject:** Forest Service Comments on the Preliminary Draft Biological Evaluation for the Monongahela National Forest and George Washington National Forest OEP/DG2E/Gas 4 Atlantic Coast Pipeline, LLC  
Docket Nos. CP15-554-000 and CP15-001

The Forest Service provides comments on the Preliminary Draft Biological Evaluation (BE) filed with the Federal Energy Regulatory Commission (FERC) on August 15, 2016, by Atlantic Coast Pipeline, LLC for the proposed Atlantic Coast Pipeline Project. The proposed project would affect National Forest System (NFS) lands in the Monongahela National Forest and George Washington National Forest.

Our comments on the Preliminary Draft BE are contained in the attachment. Please note that we cannot provide comments on sedimentation impacts on aquatic resources until the sedimentation analysis is provided and the Order 1 Soil Survey Report is revised based on our recent comments. Additionally, future changes in components of the construction, operation, and maintenance plan may result in edits to the BE.

We recommend revising the Preliminary Draft BE by incorporating the attached comments, relevant data from the sedimentation analysis, and our recently filed comments on biological reports. The Draft BE should be filed with FERC and submitted to the Forest Service. We will review and provide comments on the Draft BE, for the development of the Final BE following submission of the aforementioned data required for the Final BE.



Kimberly D. Bose, Secretary

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Because the Draft and Final BEs contain information about project effects to species occurring on NFS lands (i.e., public lands), the public should have an opportunity to review the documents. Therefore, please develop and file with FERC public versions of the Draft and Final BEs (i.e., versions that do not contain specific locations and other privileged information) for review by stakeholders, in addition to the privileged versions of the documents for the Forest Service and FERC staff.

For questions, please contact Jennifer Adams, Special Project Coordinator, by phone at (540) 265-5114 or by email at [jenniferpadams@fs.fed.us](mailto:jenniferpadams@fs.fed.us).

Sincerely,

A handwritten signature in blue ink that reads "Clyde Thompson".

CLYDE THOMPSON  
Forest Supervisor

cc: Atlantic Coast Pipeline, LLC

**U.S. FOREST SERVICE COMMENTS**  
**PRELIMINARY DRAFT BIOLOGICAL EVALUATION**  
**ATLANTIC COAST PIPELINE PROJECT**

Section #	Page #	Comments
Document in general		<b>Comment:</b> The OAR table with the OAR codes is lacking. This table is essential for the analysis. All sensitive species need to be considered in the table and given the appropriate code number. Species that are out of the known range can be dismissed immediately (OAR code #1). From the field work, species for which there is no suitable habitat can be dismissed (OAR code #2), UNLESS there is the possibility that they could have been overlooked due to a low likelihood of detection or the survey was conducted at the wrong time of year. Those species should be coded: Species not seen during field survey, but possibly occurs in activity area based on habitat observed, OR Field survey not conducted when species is recognizable. Therefore assume presence and no additional surveys needed (OAR code #6). There are other OAR codes as well.
Document in general		<b>Comment:</b> The purpose of a Biological Evaluation is to assess the potential impacts of a project on Regional Forester’s Sensitive Species. This document contains a great deal of extraneous material not relevant to a BE. Locally rare species are not addressed in a BE. Federally listed species are addressed in a Biological Assessment, a separate document.
Entire Document		<b>Comment:</b> Spellcheck the entire document.
Entire Document		<b>Comment:</b> Capitalize all bird common names throughout the entire document. Both American Ornithologist Union and International Ornithologist Union recommend that the proper English names of birds be capitalized.
TABLE OF CONTENTS	ii	<b>LIST OF FIGURES:</b> Construction Spread Breaks. <b>Comment:</b> Conflicting information between LIST OF FIGURES and Title of Figure 1 on Page 8. LIST OF FIGURES and Figure 1 title must be in agreement.
TABLE OF CONTENTS	ii	<b>LIST OF FIGURES:</b> Figure 6b entry is missing. <b>Comment:</b> Consider including, Figure 6b Species/Habitat Locations - GWNF .....68
TABLE OF CONTENTS	iii	<b>LIST OF TABLES:</b> Table 2.1-1. Summary of National Forest Lands Affected by the Atlantic Coast Pipeline .....5 <b>Comment:</b> Conflicting information between LIST OF TABLES and Table 2.1-1 title. Both LIST OF TABLES and Table 2.1-1 title must be in agreement. Consider rewording, Table 2.1-1 Summary of National Forest Lands Affected by the Atlantic Coast Pipeline (acres).....5
TABLE OF CONTENTS	iii	<b>LIST OF TABLES:</b> Table 3.3-2 USFS Sensitive Species with Potential Habitat or Populations within the

		<p>Analysis Area: ACP MP 83.0 to MP 123.5, George Washington National Forest, VA  .....39</p> <p><b>Comment:</b> Conflicting information between LIST OF TABLES and Table 3.3-2 title. Both LIST OF TABLES and Table 3.3-2 title must be in agreement.</p>
TABLE OF CONTENTS	iii	<p><b>LIST OF TABLES:</b> Table 4.1-2 missing from LIST OF TABLES. Summary of Terrestrial Natural Communities in George Washington National Forest (<i>data pending</i>) .....53</p>
TABLE of CONTENTS	iii	<p><b>LIST OF APPENDICES:</b> All of the listed appendices (A through G) are missing from the report. It is not possible to verify determinations of effect or mitigation measures when the referenced document is not in the report.</p>
1.0 Intro	1	<p><b>Report States:</b> The purpose of this document is to ensure that USFS actions do not contribute to loss of viability of threatened, endangered, proposed, or sensitive plant and animal species</p> <p><b>Comment:</b> BE should address FS sensitive species only, not threatened, endangered proposed or locally rare.</p>
1.0 INTRODUCTION	1	<p><b>Report States:</b> This Biological Evaluation (BE) examines potential impacts on Regional Forester Sensitive Species (RFSS) on U.S. Department of Agriculture, Forest Service (USFS) lands from construction, operation, and maintenance of the Atlantic Coast Pipeline (ACP or Project; see Figure 1) proposed by Atlantic Coast Pipeline, LLC (Atlantic), in accordance with Forest Service Manual (FSM) BE standards 2672.42.</p> <p><b>Comment:</b> Conflicting information between INTRODUCTION and Figure number. INTRODUCTION information and Figure number must be in agreement.</p>
2.0 Proposed action	3+	<p><b>Comment:</b> Focus on proposed actions that will occur on or affect National Forest land and downstream species if effects are carried downstream.</p>
2.1	4	<p>Bottom of page notes that the construction ROW is reduced from 125' to 75' in wetland and certain other ecologically sensitive areas, but those other areas are not listed. Disturbance in the vicinity of TE or Sensitive (RFSS) species habitat should be minimized as well.</p>
2.1	5	<p><i>"The permanent right-of-way will be maintained in an herbaceous state to allow for..."</i> ROW vegetation in forested habitats should include rooted woody vegetation (trees or shrubs) at the perimeter to the maximum extent allowable (including for shallow-rooted shrubs). If this is discussed elsewhere, it should be noted here as well, with the appropriate link to the more detailed information.</p>
2.1 Proposed facilities	5	<p><b>Report States:</b> Construction of the ACP Project will require the use of existing USFS roads for access to the right-of-way. Some of these roads will require improvements, ranging from light grading and graveling of existing road prisms, to widening at certain locations to accommodate pipe and log trucks. A small number of new roads will be required, principally short spurs to connect existing roads with the right-of-way.</p> <p>Once the pipeline is installed, these same roads will be used to access the right-of-way for operations and maintenance purposes.</p> <p><b>Comment:</b> Detailed maps of the proposed access roads (permanent and temporary), construction methods of new and improvements of existing roads and reports of all biological surveys for these sites must be provided for this aspect of the project. The effects need to be detailed in the BE for all species. In addition, access roads and their effects need to be included in the sediment analysis to elucidate downstream effects on aquatic species.</p>

2.3	9	Last Paragraph: Installation of new permanent road stream crossing structures or replacement of existing stream crossings should be designed to satisfy existing standards for stream simulation (Forest Plan Standard RF04 and Guideline WF21). Temporary road stream crossings should also address stream simulation design standards if they will remain in place during periods of essential aquatic species migration or for an extended period of time (including anticipated periods of elevated stream discharge). Stream simulation design should be referenced in this section.
2.3	9	“Access road locations have been identified based on the needs of construction and operations ... Permanent access roads may require permanent improvements, such as placement of culverts or widening of the roadbed... For purposes of analysis of impacts, a 30 foot wide corridor along access roads has been assumed.” The required improvements need to be described on a site-specific basis for each access road, particularly any areas that require widening or other disturbance of vegetation, rock, or soil. Detailed maps of the proposed access roads (permanent and temporary), construction methods of new and improvements of existing roads and reports of all biological surveys for these sites must be provided for this aspect of the project. Site-specific effects must be analyzed in the BE. Such detail is required to assess impacts to sensitive species located adjacent to or near these roads.
2.3.2	10	The report states that only 12 inches of topsoil will be segregated when grading construction and ATWS areas that have more than 12 inches of topsoil. The FS would require that all topsoil be segregated, regardless of depth.
2.3.8	14	“As part of Atlantic’s Restoration and Rehabilitation Plan, Atlantic will incorporate regionally-specific and endemic forb (flowering plant) mixes in its traditionally all-grass seed mixes.”  “Endemic” usually refers to species that are found nowhere else, and thus usually refers to very rare species. “Native” would be more appropriate here.
2.3.8	15	“Both soil types and degree of slope will be considered in the selection of the seed mixes.”  Elevation, soil moisture, pH, and soil macronutrient status need to be considered as well.
2.3.8	15	“Other factors to consider will be the introduction and control of woody species that may compete with the native forbs.”  This sentence is unclear. Woody species are not likely to be accidentally introduced in the herbaceous seed mixes. Perhaps this refers to non-native invasive species rather than woody species? Please clarify.
2.4	16	“DTI will monitor the permanent right-of-way for infestations of invasive species...and will treat such infestations...as described in the <i>Invasive Plant Species Management Plan</i> for the Projects.”  “...minimal hand or spot spraying could be implemented for invasive plant species.”  Please coordinate with the FS to develop plans for targeted applications of approved herbicides to control non-native invasive species, particularly in areas near known occurrences of Threatened, Endangered, and Sensitive (TES) plant species.
2.5.3	17	“Atlantic has and continues to review the route and analyze the feasibility and potential impacts of alternative routes...alternative routes have been identified that minimize, shorten, or avoid wetland or waterbody crossings; ...avoid known sensitive habitats...”

		Please continue to evaluate alternatives that avoid and minimize impacts to sensitive plant populations to the maximum extent practical, in accordance with Forest Plan direction.
2.5.11	20	<b>Comment:</b> Water Withdrawal and discharge will not be allowed on the GWNF
2.5.13	22	<i>“Plant shallow-rooted shrubs along the outer edges of and within the permanently maintained areas of the right-of-way, except for directly over the pipeline, between MP 158.9 and MP 159.1 of AP-1 to minimize visual impacts in this area.”</i> Shallow-rooted shrubs should be planted in many other areas, particularly where forested habitat is being fragmented to minimize sharp edge effects. More deeply rooted woody vegetation also could be planted adjacent along the edge of the ROW in such areas to the extent that it does not affect pipeline safety.
2.5.14	22	“Make good faith efforts to control invasive plants within the right-of-way and to work with adjacent landowners to prevent the spread of invasive plants to adjacent lands.”  Please describe how impacts to populations of sensitive plant species will be avoided while still controlling NNIS.
2.5.1.6	23	In addition to measures listed in this section, please also describe what monitoring will be done for restoration plantings (both for erosion control mixes, and native seed mixes for pollinators/wildlife). Please describe how long such monitoring will continue, and how monitoring results will be used to inform future management decisions. Monitoring of woody vegetation could also be required to ensure survival 2-3 years post-planting. If all this is described in the Restoration and Rehabilitation plan, please reference it here.  Monitoring of species populations might be required in some areas where sensitive species populations are likely to be affected.
3.1	24	“The analysis area for this BE (see Figures 2 and 3) includes all areas within the MNF and GWNF that could be directly or indirectly affected by the Project, including the footprint of the Project and a surrounding buffer of 0.25 mile to encompass potential indirect impacts (e.g., dust, disturbance, noise, etc.).”  Please elaborate on the reasoning for the blanket 0.25 mile buffer distance and why it would include all potential direct and indirect impacts (e.g., potential downstream impacts associated with potential sedimentation/pollution).  The analysis area (as opposed to the project area) that is described is vague in one sense (“includes all areas within the MNF and GWNF that could be directly or indirectly affected by the Project”) but in another sense is probably too restrictive (“the footprint of the Project and a surrounding buffer of 0.25 mile”) to serve as an adequate analysis area for aquatic resources. Spatial boundaries used to conduct effects analyses for aquatic species are typically based on watershed delineations of appropriate scale to consider potential contributions of project direct and indirect effects to cumulative effects for a particular species. Although it may be reasonable to define and use the same analysis area for all aquatic species (including aquatic RFSS), the analysis area should not necessarily be identical for all species being analyzed for a project (plants, wildlife, fish, etc.). Reconsider the spatial extent of the analysis for each species to establish a more purposeful ecological context of potential project effects. In particular, use an appropriately scaled watershed boundary for aquatic species.

		There is no analysis area defined for cumulative impacts. The MNF uses the entire proclamation boundary for cumulative impacts analysis, as that is the scale at which viability determinations are made. There is also no analysis timeframe defined. The MNF analyzes direct, indirect, and cumulative impacts according to how long the impacts are expected to affect the resource.
3.1; Figure 2 and Figure 3	24	Although The Analysis Area statements indicates “Figures 2 and 3 includes all areas within the MNF and GWNF that could be directly or indirectly affected by the Project”, Figures 2 and 3 do not highlight any access roads proposed for the project. Provide detailed maps for all proposed access roads, detailing construction of new and improvements of existing roads, and the results of biological surveys.
3.2 and 5.1	24 and 60	The “Beneficial Effect” determination for RFSS should be worded as “Beneficial Impact”.
3.3.1	27	<b>Report States:</b> In total, there are 147 species on the GWNF sensitive species list. Of these 147 species, 57 were carried forward for additional analysis in this BE based on the species selection process described above. <b>Comment:</b> The numbers appear to be in error. In total, there are 147 species on the George Washington National Forest sensitive species list. Of these 147 species, 54 were carried forward for additional analysis in this BE based on the species selection process described above.
3.3.1	27	<i>“Fifty-two species were eliminated from further consideration because the range of the species does not extend into the Analysis Area or these species are otherwise considered to be absent from the Analysis Area.”</i> The Likelihood of Occurrence Table should include the reasoning for each species eliminated from detailed analysis (e.g., out of range, habitat not present, etc.).
3.3.2	27	<b>Report States:</b> The GWNF uses an Occurrence Analysis Results (OAR) ranking to determine sensitive species. The OAR rank also determines suitable habitat based on GWNF knowledge of the species and habitat occurrences. <b>Comment:</b> This description of the OAR as a rank is confusing and incorrect. OAR is a code used to display the results of a step-down analysis process. Replace “rank” with “code” and use the step-down process language that is contained in the sample BE provided by the GWNF.
3.3.1 and Table 3.3.1	27 and 32-38	The BE methodology states, “Species determined through consultation with USFS staff and/or in field assessment to occur or have suitable habitat in the Analysis Area were carried forward for additional analysis in this BE.”  However, in Table 3.3.1 beginning on p. 32, 37 plant species that are listed as having “suitable habitat potentially present within the survey corridor based on general habitat conditions” were not carried forward for assessment, apparently because botany surveys did not find them. This is inconsistent with the MNF requested methodology and the methodology described earlier in the document, and it is not sufficient for an effects analysis. Botany surveys following accepted protocols still only cover a portion of potentially affected habitat, leaving the possibility that undiscovered populations exist. Therefore the potential effects of proposed construction must be analyzed for all species having suitable habitat in the proposed work area, not just the ones that were found. To facilitate this analysis, the MNF generally groups these species according to preferred habitat, such as wetlands, dry rocky slopes, etc. Please consult with MNF staff in developing this analysis for the next draft of the BE.

		Also, some species designated as having suitable habitat have a “N/A” classification under “Species Detected?” whereas others are classified as “No” for the same column. The notes at the bottom of the table indicate that “N/A = Not applicable because species-specific surveys have not been conducted for this species to date.” This statement is concerning because MNF botany survey protocol required documentation of all plant species encountered during surveys. Furthermore, it is illogical that species that have been identified as having suitable habitat in the survey corridor would not be surveyed for. If it is the case that some species were intentionally not surveyed for, and therefore were not included in survey results, then the plant survey results are insufficient to render a determination as to RFSS presence or absence, or to come up with effect determinations for this BE. Please work with MNF staff to clarify.
Table 3.3-1	28	Since the alignment has changed, the most recent access road and alignment near Gibson Knob encroaches on WV Northern Flying Squirrel habitat. As a result, this species and potential impacts to its habitat must be considered in this Table and brought forward for further analysis in the BE. If impacts would occur, avoidance and minimization measures should be proposed.
Table 3.3-1	28	Eastern Small-footed Myotis was not carried further in the assessment due to “ <i>lack of suitable habitat in the survey corridor.</i> ” Based on the described habitat preference and the species’ known habitats on the MNF, we do not concur with this conclusion. Please carry this species forward in the analysis, or provide a justification for not doing so that is consistent with the known habitat preferences.
Table 3.3-1	28	Little Brown Myotis “ <i>Field survey confirmed that suitable habitat occurs within 150 feet of the centerline of the proposed right-of-way between mileposts 76 and 77.</i> ” Suitable habitat occurs in more areas than that based on historical MNF mist-netting; suitable habitat for this species occurs throughout most of the MNF.
Table 3.3-1	28	Tri-colored Bat: See comments for Little Brown above
Table 3.3-1	29	Long-eared Owl is listed twice.
Table 3.3-1	29	Golden-winged Warbler - No individuals detected during surveys though “ <i>Field survey confirmed that potentially suitable habitat occurs in the following locations: call stations AR2_B_CS1 and AR2_B_CS2 as described in the survey report.</i> ” Note that male GWWAs were detected along the proposed centerline near transect B in 2012 and 2014 as part of a separate GWWA survey effort; please coordinate with Rich Bailey, WVDNR, regarding this area.
Table 3.3-1	29	Timber Rattlesnake: While the MNF concurred that there was “ <i>no suitable timber rattlesnake denning or gestational habitat along the surveyed corridor within the boundaries of the MNF</i> ” based on the survey report received, the timber rattlesnake could still be present foraging within the ROW during construction. As such, please carry this species forward for a more detailed assessment in the BE and discuss avoidance/mitigation measures if a rattlesnake is found during construction to ensure that no harm will come to any individuals (e.g., will be moved to off-site; how far; training for construction personnel; etc.).
Table 3.2-2	39	Small footed bat is missing from table and should be included. Suitable habitat is present.
TABLE 3.3-2	39	<b>Report Status:</b> Alleghany Woodrat ( <i>Neotoma magister</i> )..... <b>Comment:</b> Delete Alleghany Woodrat from this table/report for the George Washington National Forest. Alleghany Woodrat is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Alleghany Woodrat should be included in the locally rare species report for the GWNF



TABLE 3.3-2	40	<p><b>Report States:</b> Northern Saw-whet Owl (<i>Aegolius acadicus</i>).....</p> <p><b>Comment:</b> Delete Northern Saw-whet Owl from this table/report for the George Washington National Forest. Northern Saw-whet Owl is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on northern saw-whet owl should be included in the locally rare species report for the GWNF</p>
Table 3.3-2	41	<p><b>Report States:</b> Clams and Mussels...</p> <p><b>Comment:</b> OAR code for green floater is incorrect, and does not match "habitat present" verbiage. For all mussel species, correct habitat preference location information.</p>
TABLE 3.3-2	42	<p><b>Report States:</b> Comet darter (<i>Anax longipes</i>).....</p> <p><b>Comment:</b> Delete Comet darter from this table/report for the George Washington National Forest. Comet darter is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on comet darter should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	42	<p><b>Report States:</b> Martha's pennant (<i>Celithemis Martha</i>).....</p> <p><b>Comment:</b> Delete Martha's pennant from this table/report for the George Washington National Forest. Martha's pennant is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Martha's pennant should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	42	<p><b>Report States:</b> Northern pigmy clubtail (<i>Lanthis parvulus</i>).....</p> <p><b>Comment:</b> Delete Northern pigmy clubtail from this table/report for the George Washington National Forest. Northern pigmy clubtail is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Northern pigmy clubtail should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	42	<p><b>Report States:</b> Red saddlebags (<i>Tramea onusta</i>).....</p> <p><b>Comment:</b> Delete Red saddlebags from this table/report for the George Washington National Forest. Red saddlebags is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Red saddlebags should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	42	<p><b>Report States:</b> Southern sprite (<i>Nehalennia intergricollis</i>).....</p> <p><b>Comment:</b> Delete Southern sprite from this table/report for the George Washington National Forest. Southern sprite is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Southern sprite should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	42	<p><b>Report States:</b> Spatterdock darter (<i>Rhionaschna mutata</i>).....</p> <p><b>Comment:</b> Delete Spatterdock darter from this table/report for the George Washington National Forest. Spatterdock darter is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not</p>

		addressed in Biological Evaluations. Discussion and effects of proposed project on Spatterdock darter should be included in the locally rare species report for the GWNF
TABLE 3.3-2	43	<b>Report States:</b> Chestnut clearwing moth ( <i>Synanthedon castaneae</i> )..... <b>Comment:</b> Delete Chestnut clearwing moth from this table/report for the George Washington National Forest. Chestnut clearwing moth is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Chestnut clearwing moth should be included in the locally rare species report for the GWNF
TABLE 3.3-2	44	<b>Report States:</b> Silver-bordered fritillary..... <b>Comment:</b> Delete Silver-bordered fritillary from this table/report for the George Washington National Forest. Silver-bordered fritillary is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on silver-bordered fritillary should be included in the locally rare species report for the GWNF
TABLE 3.3-2	44	<b>Report States:</b> Hoary elfin ( <i>Callophrys polios</i> )..... <b>Comment:</b> Delete Hoary elfin from this table/report for the George Washington National Forest. Hoary elfin is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Hoary elfin should be included in the locally rare species report for the GWNF
TABLE 3.3-2	44	<b>Report States:</b> Pink-edged Sulphur ( <i>Colias interior</i> )..... <b>Comment:</b> Delete Pink-edged Sulphur from this table/report for the George Washington National Forest. Pink-edged Sulphur is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Pink-edged sulphur should be included in the locally rare species report for the GWNF
TABLE 3.3-2	44	<b>Report States:</b> Early hairstreak ( <i>Erora laeta</i> )..... <b>Comment:</b> Delete Early hairstreak from this table/report for the George Washington National Forest. Early hairstreak is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Early hairstreak should be included in the locally rare species report for the GWNF
TABLE 3.3-2	44	<b>Report States:</b> Olympia marble ( <i>Euchloe olympia</i> )..... <b>Comment:</b> Delete Olympia marble from this table/report for the George Washington National Forest. Olympia marble is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Olympia marble should be included in the locally rare species report for the GWNF
TABLE 3.3-2	44	<b>Report States:</b> Northern crescent ( <i>Phyciodes cocyta</i> )..... <b>Comment:</b> Delete Northern crescent from this table/report for the George Washington National Forest. Northern crescent is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Northern crescent should be included in the locally rare species report for the GWNF

TABLE 3.3-2	44	<p><b>Report States:</b> Atlantis fritillary (<i>Speyeria atlantis</i>).....</p> <p><b>Comment:</b> Delete Atlantis fritillary from this table/report for the George Washington National Forest. Atlantis fritillary is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Atlantis fritillary should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	44	<p><b>Report States:</b> Mottled duskywing (<i>Erynnis martialis</i>).....</p> <p><b>Comment:</b> Delete Mottled duskywing from this table/report for the George Washington National Forest. Mottled duskywing is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Mottled duskywing should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	44	<p><b>Report States:</b> Two-spotted skipper (<i>Euphyes bimaçula</i>).....</p> <p><b>Comment:</b> Delete Two-spotted skipper from this table/report for the George Washington National Forest. Two-spotted skipper is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Two-spotted skipper should be included in the locally rare species report for the GWNF</p>
TABLE 3.3-2	44	<p><b>Report States:</b> Precious underwing (<i>Catocala prettiosa prettiosa</i>).....</p> <p><b>Comment:</b> Delete Precious underwing from this table/report for the George Washington National Forest. Precious underwing is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Precious underwing should be included in the locally rare species report for the GWNF</p>
Table 3.3-2	45-47	<p>For some of the plant species in Table 3.3-2 a determination of “Lack of suitable habitat in the survey corridor” has been made when such a determination does not seem justifiable. An example is sweet pinesap which is a cryptic species, often overlooked or not visible because it is covered with leaves. This species has been found in a variety of habitats from quite mesic to dry.</p> <p>Species from Table 3.3-2 for which a No Habitat Present determination is questionable:</p> <ul style="list-style-type: none"> <li>Variable sedge</li> <li>Bentley’s coralroot</li> <li>Butternut</li> <li>Sweet pinesap</li> <li>Sword-leaf phlox</li> <li>Torrey’s mountain-mint</li> <li>Rock skullcap</li> </ul> <p>Please assume presence in suitable habitat and re-evaluate these species.</p>
3.4	48	<p>“For species considered to be potentially present in the analysis area and for which USFS staff recommended field survey, species-specific field surveys were conducted based on consultations with MNF and GWNF biologists.”</p>

		USFS staff at the MNF recommended botanical survey protocols that included documenting all plant species found along the survey corridor. Species-specific surveys may not have been carried out for particular species, but if protocol was followed, the lack of species-specific surveys is not cause for concluding that the species is not present in the survey corridor or that it should not be analyzed for possible effect determinations. Please clarify the field botany survey methodology with MNF staff and in this document, both in this section and in all sections below describing field botany survey methods for individual species.
4.1.1	52	Pine Plantation – this heading should say Pine Plantation and Hemlock Forest or break the Hemlock piece into a separate heading as they are very different habitat types.
4.2	55 - 57	This section describes a general classification for streams (based on the hydrologic regime) located within the project area on the Forests, but it does not establish a meaningful environmental baseline for various aquatic habitat parameters that may be affected by the proposal. It is important to describe this baseline because it provides the foundation for documenting and explaining potential effects associated with the proposal. Describe the existing condition for species that may be present in the project area. This description should focus on key issues and habitat attributes that can be tracked through the effects analysis and can serve as a basis for making conclusions about effects on sensitive aquatic species. Attributes to consider may include habitat composition, water quality, bank stability, shade conditions, or other specific environmental factors that are important to the sensitive aquatic species that could occur in the project area.
5.1	59	<b>Report States:</b> In-water activities may cause a temporary increase in turbidity. Atlantic anticipates that in-water work activities will not exceed State or Commonwealth water quality standards and will comply with all Federal and State/Commonwealth permit conditions. The aquatic zone of the action area is established by the maximum extent that sediment may travel or re-suspend into the water column as a result of in-water activities, and is variable based on the flow within the waterbody. <b>Comment:</b> The report needs to define the aquatic analysis area for downstream effects based on sediment analysis, which needs to include all ground disturbing activities, including the pipeline corridor, ATWS, staging areas and access roads.
5.3	61	The discussion of potential aquatic impacts consists of brief statements about the location of three stream crossings that have been identified along the proposed pipeline route on the MNF (and others on the GWNF). This section offers no description of potential effects to aquatic resources associated with the three stream crossings. In addition, there is no recognition of the potential for effects to aquatic resources associated with other actions that would occur as part of this proposal. The analysis needs to address the effects of the stream crossings and watershed impacts on sensitive aquatic species.
5.3 Aquatic Impacts	61	<b>Report States:</b> The remaining 1 ephemeral, 2 intermittent, and 7 perennial waterbodies listed in Table 5.3-1 for the GWNF are crossed by temporary or permanent access roads. <b>Comment:</b> Table 5.3-1 lists <b>8 perennial waterbodies</b> crossed by access roads with an additional 5 in the table that are “culverted or not fully crossed by access road”, for a total of 13. Please address the number discrepancy and describe what “culverted or not fully crossed by access road” means.
Table 5.3-1	61	<b>Comment:</b> There are crossings in the latest project shapefile provided to the FS that are not in the table, such as Laurel Run access road. A complete analysis of the project needs to be provided.

Table 5.3-1	63	<b>Comment:</b> Several approximate crossing widths seem too wide. For example, 221 feet, 74 feet, and 290 feet for unnamed tributaries. Confirm all distances.
5.4	64	This section acknowledges that an analysis and documentation of potential effects is absent for species whose presence within the analysis area has yet to be determined. This includes eastern hellbender, fishes, bi-valves, odonates, and others for the MNF. Potential effects on these species need to be addressed.
5.4.1.1	64-66	Please update the information for Description and rewrite based on the species' current status (post-WNS). Potential Presence: <i>"Nine secondary roost trees, less than ideal habitat, were identified as potential bat habitat between MPs 76 and 77"</i> See comments in Bat Survey Report regarding this information/roost tree survey. Impact Evaluation: <i>"Individuals are considered absent from the Project area."</i> This species should not be considered absent in Project Area – see comments in Bat Survey Report. Also, the Impact Evaluation, Conservation Measures and Effect Determination Sections are not comprehensive enough to support the determination. Please supply a comprehensive effects analysis for this species.
5.4	64-80	The analyses for individual species need to include more specific information, in the case of the MNF species – relevant to WV where possible. There is an abundance of published and gray literature available on most of these species and reliance on NatureServe for reviews is generally not adequate to assess impacts and determine appropriate conservation measures.
5.4.1.2	66-69	See general literature comment above. Potential Presence: <i>"rock formation near the northern extent of Cloverlick Mountain (milepost 73.3). However, ... and the area was isolated from other suitable habitat that would facilitate dispersal and genetic exchange."</i> Explain how such isolation was determined when the area of survey was limited to 150' from centerline. Please see our comments on the woodrat survey report for more detail. Should woodrats be present or potentially present, avoidance and minimization measures will be needed.  Impact Evaluation and Conservation Measures – Be clearer and more comprehensive in describing how the conservation measures justify the determination. Because no details were provided on the use and management of the access road near occupied woodrat habitat, the effects analysis does not adequately support the determination. Post-construction monitoring may be needed to confirm the determination and the effectiveness of conservation measures.
Figure 6b	69	<b>Report States:</b> In Upper Legend: Rock Vole and Alleghany Woodrat Habitat Data. <b>Comment:</b> Consider rewording, Rock Vole Habitat Data. Delete Alleghany Woodrat information from this map for the George Washington National Forest. Alleghany Woodrat is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations.
5.4.1.3	70	Potential Presence: The same basic thing has been repeated for the 3 bat species here (related to Indiana and long-eared bat roost tree identification) – these species are not all the same and this should be focused on the habitat selection of the tri-colored bat. Impact Evaluation: <i>"Direct impacts on hibernacula could include destruction of habitat and alteration of cave microclimates..."</i> This kind of statement should not be made without a great deal of follow-up explanation. If such impacts could occur, ACP must coordinate with the Forest Service to develop avoidance measures. Comment for all bat Conservation Measures sections – seasonal restrictions should be discussed.

5.4.2.2	74	Conservation Measures: “Atlantic has prepared and will implement a Migratory Bird Plan to avoid, minimize, and mitigate for impacts on migratory birds, including the long-eared owl.” Ensure that the breeding season for the owl is considered (the limitations on clearing for migratory birds begin after the onset of long-eared owl breeding).
5.4.2.3	75	Conservation Measures: “...The qualified biological monitor will walk ahead of the clearing crews and search for roosting bald eagles and nesting bald eagles” Roosting golden eagles should be included as part of this monitoring sentence.
5.4.2.4	76	Potential Presence, Impact Evaluation and Determination: Known breeding presence (from 2012-14 surveys) along the ROW near Gibson Knob needs to be considered.
5.4.4	78-80	The FS cannot provide comments until these sections are completed.
5.4.5.1	80	Please list the number of known populations of Roan Mountain Sedge (RMS) within the MNF proclamation boundary, as well as populations known from the Appalachians as whole. Coordinate with MNF botanists for this information.
5.4.5.1	81	<p>In the impact evaluation for RMS, it is stated that a variety of direct and indirect impacts are anticipated, but the evaluation does not state how much of the known RMS within the survey corridor will be affected, the duration (temporary or permanent) of each expected impact, the magnitude of each expected impact (lethal vs. non-lethal, direct vs indirect), nor the acreage of each expected impact. The impact evaluation also does not analyze expected impacts in the context of either the number or condition of RMS populations Forest-wide, nor does it analyze this project’s impacts in the context of cumulative impacts from other projects Forest-wide. All this information is essential for substantiating an effect determination.</p> <p>The Preliminary Determination of Effect states that “the Project may impact individuals but is not likely to cause a trend toward Federal listing or loss of viability of roan mountain sedge” but provides no justification for this conclusion. In order to substantiate this determination, please provide the information requested above, and also describe the extent of the population expected to be avoided during the project. MNF Forest Plan direction requires avoidance of impacts to the maximum extent practical, and mitigation of any unavoidable impacts. For any individuals that are avoided or outside the study/construction corridor, please explain how they will benefit from the implementation of the COM Plan, Plan and Procedures, and the Restoration and Rehabilitation Plan.</p>
	83	Page 83 is missing from this document or page number error.
5.4.5.2	84	Please describe the extent of each expected impact to Appalachian oak fern in terms of either individuals or acreage, as well as timeframe and magnitude. Please also analyze expected impacts in terms of the number and extent of other known Appalachian oak fern populations on the MNF, and in terms of other known impacts, so as to assess cumulative impacts. Please also describe more specifically the acreage or extent to which the population within the corridor will be avoided. MNF Forest Plan direction requires avoidance of impacts to the maximum extent practical, and mitigation of any unavoidable impacts.
5.4.5.2	86	The Preliminary Determination of Effect states that “the Project may impact individuals or habitat, but is not likely to cause a trend toward Federal listing or loss of viability of Appalachian oak fern” but provides insufficient justification for this conclusion. In order to substantiate this determination, please provide the information requested above, and also describe the extent of the population expected to be avoided during the project. For any individuals that are avoided or

		outside the study/construction corridor, please explain how they will benefit from the implementation of the COM Plan, Plan and Procedures, and the Restoration and Rehabilitation Plan.
5.4.5.3	86	<p>The Impact Evaluation for white alumroot states that, “Direct impacts on white alumroot include the temporary loss of habitat and loss of individuals during the clearing phase of construction.” Please explain why this loss is expected to be temporary while the same types of losses to Roan Mountain sedge and Appalachian oak fern are not described as temporary (or conversely, explain why all such losses of habitat and individuals are expected to be temporary).</p> <p>Please describe the extent of each expected impact to white alumroot in terms of either individuals or acreage, as well as timeframe and magnitude. Please also analyze expected impacts in terms of the number and extent of other known Appalachian oak fern populations on the MNF, and in terms of other known impacts, so as to assess cumulative impacts. Please also describe more specifically the acreage or extent to which the population within the corridor will be avoided. MNF Forest Plan direction requires avoidance of impacts to the maximum extent practical, and mitigation of any unavoidable impacts.</p>
5.4.5.3	86-87	The Preliminary Determination of Effect states that “the Project may impact individuals or habitat, but is not likely to cause a trend toward Federal listing or loss of viability of white alumroot” but provides no justification for this conclusion. In order to substantiate this determination, please provide the information requested above. Please also describe the extent of the population expected to be avoided during the project. For any individuals that are avoided or outside the study/construction corridor, please explain how they will benefit from the implementation of the COM Plan, Plan and Procedures, and the Restoration and Rehabilitation Plan.
5.4.5.4	87	<p>“...diagnostic characteristics (i.e. fruits) were not available at the time of the field surveys. A revisit to this occurrence would be necessary in late summer when fruits are present to confirm the proper identification of this species. Atlantic will complete this field visit prior to the submittal of the final BE.”</p> <p>Please transmit results of this second field visit as soon as they are available.</p>
5.4.5.4	87	<p>“Indirect effects to soils in the vicinity of the Project could result during the construction phase of the project where clearing and trenching will take place. Soil impacts could also occur during construction in the temporary workspace due to vehicle and heavy equipment use.”</p> <p>Please describe what effects to bristly black currant are anticipated from these potential soil impacts, and the expected timeframe and magnitude. Currently it is not clear how these effects will impact bristly black currant if the population is, as earlier stated “24 feet away from the temporary workspace for the Project.” Please also describe expected timeframe and magnitude of impacts anticipated from changes in light and moisture regimes.</p>
5.4.5.4	88	The Preliminary Determination of Effect states that “the Project may impact individuals or habitat, but is not likely to cause a trend toward Federal listing or loss of viability of bristly black currant” but provides insufficient justification for this conclusion. In order to substantiate this determination, please provide the information requested above. Please also describe the extent of the population expected to be avoided during the project. For any individuals that are avoided or outside the study/construction corridor, please explain how they will benefit from the implementation of the COM Plan, Plan and Procedures, and the Restoration and Rehabilitation Plan.

5.5.1 Mammals	88	<b>Comment:</b> Small-footed bat should be included in this table. Suitable habitat exists in the area.
5.5.1.1 Southern water shrew. Potential presence in analysis area	88	<b>Report States:</b> Biologists did not observe any rock vole habitat within the study area. <b>Comment:</b> The sentence about rock vole should not be in the southern water shrew section. However, biologists did observe suitable water shrew habitat according to the small mammal report. This should be stated here.
Preliminary Determination of Effect	89	<b>Report States:</b> Based on the above discussion, Atlantic believes that the Project <i>may impact individuals but is not likely to cause a trend toward Federal listing or loss of viability</i> of the southern water shrew. <b>Comment:</b> For clarification, consider rewording. Based on the above discussion, Atlantic believes that the Project <i>may impact individuals but is not likely to cause a trend toward Federal listing or loss of viability</i> of the southern water shrew on the George Washington National Forest.
5.5.1.2	89-93	<b>Report States:</b> Alleghany Woodrat ( <i>Neotoma magister</i> )..... <b>Comment:</b> Delete Alleghany Woodrat from this report regarding the George Washington National Forest. Alleghany Woodrat is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Alleghany Woodrat should be included in the locally rare species report for the GWNF.
Figure 9a	91	<b>Report States:</b> Figure 9a Species/Habitat Locations GWNF.....91 <b>Comments:</b> Delete Figure 9a from LIST OF FIGURES. Delete Figure 9a from document. Alleghany Woodrat is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations.
Figure 9b	92	<b>Report States:</b> Figure 9b Species/Habitat Locations GWNF.....91 <b>Comments:</b> Delete Figure 9b from LIST OF FIGURES. Delete Figure 9b from document. Alleghany Woodrat is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations.
5.5.2 Birds	93	<b>Comment:</b> Peregrine falcon is missing from the analysis for the GWNF. The table of sensitive species for the GWNF (page 39) states that suitable habitat is present in the area. A writeup is included in the Monongahela Section, but not in the GW Section. Please address peregrine falcon on the GWNF.
5.5.2 Birds	93	<b>Comment:</b> Bald eagle is missing from the analysis for the GWNF. The table of sensitive species for the GWNF (page 39) states that the species was detected and suitable habitat is present in the area for bald eagles. A writeup for bald eagle is in the Monongahela Section, but not in the GW Section. Please address bald eagle on the GWNF.
Migrant loggerhead shrike Preliminary Determination of Effect	94	<b>Report States:</b> Based on the above discussion, including the negative survey results in the George Washington National Forest, Atlantic believes that the Project will have <i>no impact</i> on loggerhead shrike or occupied habitat. <b>Comment:</b> Consider rewording. Based on the above discussion, including the negative survey results in the George Washington National Forest, Atlantic believes that the Project will have <i>no impact</i> on loggerhead shrike or potential habitat. Also, the report states that potential suitable habitat could be created by the pipeline for loggerhead shrike. If that is the case, consider whether a <i>beneficial impact</i> determination may be appropriate.



Preliminary Determination of Effect	95	<b>Report States:</b> Northern Saw-whet Owl ( <i>Aegolius acadicus</i> )..... <b>Comment:</b> Delete Northern Saw-whet Owl from this report regarding the George Washington National Forest. Northern Saw-whet Owl is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Northern saw-whet owl should be included in the locally rare species report for the GWNF.
5.5.10.1	97	<b>Report States:</b> Chestnut clearwing moth ( <i>Synanthedon castaneae</i> )..... <b>Comment:</b> Delete Chestnut clearwing moth from this report for the George Washington National Forest. Chestnut clearwing moth is considered a Locally Rare species on the George Washington National Forest. Locally Rare species are not addressed in Biological Evaluations. Discussion and effects of proposed project on Chestnut clearwing moth should be included in the locally rare species report for the GWNF.
5.5.9	97	See comments on Insect Report for <i>Hydranea maureenae</i> concerning the use of an inappropriate sampling technique.
5.5.4 etc..	97+	<b>Comment:</b> Incomplete sections. Incorporate FS comments made on all species reports and surveys and other pertinent documents.
REFERENCES	101	<b>Report States:</b> Available online at <a href="http://www.vararespecies.org/specie/Euchlaena%20milnei">http://www.vararespecies.org/specie/Euchlaena%20milnei</a> . Virginia Herpetological Society. 2016. Cow knob Salamander. Available online at: <a href="http://www.virginiaherpetologicalsociety.com/amphibians/salamanders/cow-knobsalamander/cow_knob_salamander.php">http://www.virginiaherpetologicalsociety.com/amphibians/salamanders/cow-knobsalamander/cow_knob_salamander.php</a> . Accessed April 2016. <b>Comment:</b> Editing error. Separate the two references. Available online at <a href="http://www.vararespecies.org/specie/Euchlaena%20milnei">http://www.vararespecies.org/specie/Euchlaena%20milnei</a> .  Virginia Herpetological Society. 2016. Cow knob Salamander. Available online at: <a href="http://www.virginiaherpetologicalsociety.com/amphibians/salamanders/cow-knobsalamander/cow_knob_salamander.php">http://www.virginiaherpetologicalsociety.com/amphibians/salamanders/cow-knobsalamander/cow_knob_salamander.php</a> . Accessed April 2016.
REFERENCES	102	<b>Comment:</b> Duplicate entry, delete one entry: Boltz M. Jeffrey, Stauffer R. Jay, White R. Laura. 1995. <i>The Fishes of West Virginia</i> . Available online at: <a href="https://books.google.com/books?id=ATYnjnKaFlcC&amp;pg=PA358&amp;lpg=PA358&amp;dq=Notropis+semperasper&amp;source=bl&amp;ots=NykwWym1Q7&amp;sig=tW8z3GgXjNUUPHHNDHnbqyTTTQ&amp;hl=en&amp;sa=X&amp;ved=0ahUKEwjKkjjmJjMAhWESSYKHGXGUDq44ChDoAQg3MAc#v=snippet&amp;q=roughhead&amp;f=false">https://books.google.com/books?id=ATYnjnKaFlcC&amp;pg=PA358&amp;lpg=PA358&amp;dq=Notropis+semperasper&amp;source=bl&amp;ots=NykwWym1Q7&amp;sig=tW8z3GgXjNUUPHHNDHnbqyTTTQ&amp;hl=en&amp;sa=X&amp;ved=0ahUKEwjKkjjmJjMAhWESSYKHGXGUDq44ChDoAQg3MAc#v=snippet&amp;q=roughhead&amp;f=false</a> . Accessed April 2016.
REFERENCES	113	<b>Report States:</b> Nelson, W. Michael. 2011. Notes on a Recently Discovered Population of <i>Hadena ectypa</i> (Morrison, 1875) (Noctuidae: Noctuinae: Hadenini) in Massachusetts. <i>Journal of the Lepidopterists' Society</i> 66(1), 2012, 1–10 Available online at <a href="http://images.peabody.ttp://imagepsoc/jls/2010s/2012/2012-66-1-001.pdf">http://images.peabody.ttp://imagepsoc/jls/2010s/2012/2012-66-1-001.pdf</a> . Accessed May 2016. Pagels, J. F., L. A. Smock, and S. H. Sklarew. 1998. The water shrew, <i>Sorex palustris</i> (Richardson) (Insectivora: Soricidae) and its habitat in Virginia. <i>Brimleyana</i> 25:120-134. <b>Comment:</b> Editing error. Separate the two references. Nelson, W. Michael. 2011. Notes on a Recently Discovered Population of <i>Hadena ectypa</i> (Morrison, 1875) (Noctuidae: Noctuinae: Hadenini) in Massachusetts. <i>Journal of the Lepidopterists' Society</i>

		66(1), 2012, 1–10 Available online at <a href="http://images.peabody.ttp://imagepsoc/jls/2010s/2012/2012-66-1-001.pdf">http://images.peabody.ttp://imagepsoc/jls/2010s/2012/2012-66-1-001.pdf</a> . Accessed May 2016.  Pagels, J. F., L. A. Smock, and S. H. Sklarew. 1998. The water shrew, <i>Sorex palustris</i> (Richardson) (Insectivora: Soricidae) and its habitat in Virginia. <i>Brimleyana</i> 25:120-134.
7.0	116	Weakley's Flora of Virginia is the most recent work on Virginia plants. Use that source, or explain why it was not used.

Document Content(s)

FS comments on ACP prelim draft BE.PDF.....1-18