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Organization: Sierra Club Environmental Law Program
Title: Staff Attorney
Comments: From: Nathan Matthews

To: FS-objections-chief

Subject: Atlantic Coast Pipeline Decision Objection

Date: Tuesday, September 05, 2017 11:59:42 PM

Attachments: Sierra Club objections to ACP Draft ROD.pdf

Ex. 1 - FWS - What We Do.pdf

Ex. 2 - Simpson & Weammert 2009.pdf

Reviewing Officer Casamassa--

Please see the attached objections of Sierra Club to the proposed Atlantic Coast Pipeline and amendments to the Monongahela and George Washington National Forest LRMPs.

For purposes of these objections I am the lead objector. Please confirm receipt of these objections, and please contact me if you have any difficulty with this file or the incorporated exhibits.

Thank you,

Nathan Matthews

--

Nathan Matthews

Staff Attorney

Sierra Club Environmental Law Program

2101 Webster Street, Suite 1300

Oakland, CA 94612

(415) 977-5695

Nathan.Matthews@sierraclub.org

From: Nathan Matthews

To: FS-objections-chief

Subject: Re: Atlantic Coast Pipeline Decision Objection

Date: Wednesday, September 06, 2017 1:20:11 AM

Attachments: Sierra Club objections to ACP Draft ROD CORRECTED.pdf

Sierra Club requests that the Forest Service accept the attached corrected version of the objections submitted roughly an hour ago and treat it as timely. The only changes between this version and the one previously submitted are:

the heading for part VI has been changed to correctly refer to the Monongahela and George Washington National Forests

the table of contents has been updated to refer to the correct page numbers

the pdf has been re-encoded using adobe acrobat, so that there are bookmarks to facilitate navigation between sections.

If it is not possible to accept this version as timely, then please disregard this email and use the initially-submitted document.

Many thanks,

Nathan Matthews

On Tue, Sep 5, 2017 at 8:57 PM, Nathan Matthews <nathan.matthews@sierraclub.org> wrote:

Reviewing Officer Casamassa--

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For purposes of these objections I am the lead objector. Please confirm receipt of these objections, and please contact me if you have any difficulty with this file or the incorporated exhibits.

Thank you,

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September 5, 2017

Sent via email

To: Reviewing Officer Glen Casamassa Associate Deputy Chief

USDA Forest Service

Attn: Administrative Reviews 1400 Independence Ave. SW Mailstop #1104

Washington, DC 20250 objections-chief@fs.fed.us

RE: Objection to the Draft Record of Decision: Atlantic Coast Pipeline Project Special Use Permit/Land and Resource Management Plan Amendments, Monongahela National Forest, Pocahontas County, West Virginia, George Washington National Forest, Highland, Bath, and Augusta Counties, Virginia

Responsible Official:

Tony Tooke, Regional Forester, Southern Region

Mary Beth Borst, Acting Regional Forester, Eastern Region

Pursuant to 36 C.F.R. Part 218, the Sierra Club ("Objectors") object to the Draft Record of Decision for the Atlantic Coast Pipeline Project Special Use Permit/ Land and Resource Management Plan Amendments for the Monongahela National Forest and George Washington National Forest. The objectors' names and contact information are provided below. In accordance with 36 C.F.R. [sect] 218.5(d), the lead objector for this objection is Nathan Matthews, on behalf of the Sierra Club.

The undersigned strongly object to the Draft Record of Decision ("ROD") and to the Atlantic Coast Pipeline project proposal. The proposed Atlantic Coast Pipeline will have severe, wide- ranging, and lost-lasting impacts on the environment and on recreational and aesthetic enjoyment of the Monongahela and George Washington National Forests, the Appalachian National Scenic Trail, and surrounding areas. The Final Environmental Impact Statement ("FEIS" or "Final EIS") fails to disclose many of these impacts, and the FEIS and Draft ROD do not justify any of them. Moreover, the process by which the FEIS was developed has failed to provide the statutorily-required opportunities for meaningful public input. FERC circulated a draft environmental impact statement ("DEIS") that was woefully incomplete, and many of these deficiencies remain uncured in the final. Many of these problems were previously identified by the Forest Service itself, in comments on the draft EIS or on other material submitted by the project applicants; the Forest Service has provided no justification for the draft ROD's implicit reversal of position with regard to these criticism.¹ For these reasons, Sierra Club requests that the Forest Service reject the proposed amendments and refuse to authorize the pipeline. If the Forest Service does not do so, the Forest Service must ensure that a new draft EIS, which cures the deficiencies identified below, is prepared and circulated for public comment prior to taking any other action on the proposal.

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1 Because this implicit reversal was not announced in any document for which the Forest Service provided a public comment period, Sierra Club could not have commented on this issue previously. 36 C.F.R. [sect] 281.8(c).

1.

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1. The Draft Record of Decision Violates the Procedural Requirements of NEPA by Relying on a Draft EIS That Was Woefully Incomplete

The Forest Service's decision to amend the Monongahela National Forest and George Washington National Forest Plans is a major action subject to NEPA. 36 C.F.R. [sect] 219.14(a). The Draft ROD claims that the Forest Service satisfied NEPA's requirements by participating as a cooperating agency in the Federal Energy Regulatory Commission's ("FERC") NEPA process and by adopting the FERC FEIS. Draft ROD at 3, 22, 41. However, FERC violated NEPA's procedural requirements, including 40 C.F.R. [sect] 1502.9, in that the DEIS circulated for public comment was woefully incomplete. See Appalachian Mountain Advocates, et al., Comment on DEIS ("Appalmad DEIS Comment") at 3-12, 45-94 (April 6, 2017);² Sierra Club, Request for Revised or Supplemental DEIS (July 19, 2017).

As explained in the following sections of these objections, the Final EIS violates NEPA by omitting required

analyses and by reaching conclusions that are not supported by the material cited. Many of the Final EIS's flaws are present in the DEIS as well. However, the DEIS also reflects a fundamental misunderstanding of the NEPA process. FERC "treats its draft EIS as a data request to the developers[mdash]a mere stepping stone on the Commission's way to gathering more information and eventually understanding the impacts of the proposed project." Appalmad DEIS Comment at 4-5. Sierra Club documented over 200 instances in which the DEIS itself identified information as missing, incomplete, under development, or forthcoming. Id. at 6 and

2 Sierra Club was a signatory to this comment.

Attachment 1; see also DEIS 5-32 to 5-44 (listing required analyses, plans, and documentation that Atlantic had not filed as of the DEIS issuance). This incomplete and premature DEIS violates NEPA regulations, which provide that a DEIS "must fulfill and satisfy to the fullest extent possible the requirements" for a final EIS, in order to provide a meaningful opportunity for public comment. 40 C.F.R. [sect] 1502.9(a). If the DEIS is incomplete, the public is deprived of the opportunity to provide meaningful input on the draft. Id. Accordingly, "[i]f a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." Id. (emphasis added). An EIS that fails to provide the public a meaningful opportunity to review and understand the agency's proposal, methodology, and analysis of potential environmental impacts violates NEPA. See, e.g., *California ex rel. Lockyer*

1. U.S. Forest Service, 465 F. Supp. 2d 942, 948-50 (N.D. Cal. 2006); see also *Idaho ex rel. Kempthorne v. U.S. Forest Service*, 142 F.Supp.2d 1248, 1261 (D. Idaho 2001) ("NEPA requires full disclosure of all relevant information before there is meaningful public debate and oversight.").

The DEIS's call for the applicants to submit additional information properly recognized that this information was available and needed for an understanding of the project's impacts.

FERC's decision to issue a DEIS prior to collection of this information represents a categorical error: all of this information should have been collected and used to inform the analysis in the DEIS. Appalmad DEIS Comment at 4-5. Moreover, Sierra Club, the Forest Service, and other commenters and agencies explained how much of the missing information was essential to "meaningful analysis" of the project's impacts on particular issues. 40 C.F.R. [sect] 1502.9(a).

For example, the DEIS flatly concludes that "the direct, indirect, and cumulative effects related to" many of the proposed Forest Plan amendments "cannot be determined until" forthcoming information and analyses are about sedimentation, steep slopes, and related concerns is provided. DEIS at 4-357, 4-361; see also Appalmad DEIS Comment at 68, 75-76. Missing information included details of the amount of erosion and sedimentation that would result from the project, including a "Soil Erosion and Sedimentation Modeling Report" that the Forest Service had requested, but which was not made available until close to the end of the DEIS public comment period. See FEIS at 4-128, Appalmad DEIS Comment at Attachment 1 pp.11-12, 21, 23. Forest Service Comment on the DEIS for the Proposed ACP at 31-32 (April 6, 2017) (Accession No. 20170406-5532) ("FS DEIS Comment"). Other information pertinent to the amendments' impacts but missing from the DEIS concerned Atlantic's plans to construct the pipeline on steep and very steep slopes on both national forests. Appalmad DEIS Comment at 53-54. In an information request dated October 24, 2016, the Forest Service requested that Atlantic provide site-specific design of stabilization measures in high-hazard portions of the proposed route on, or in close proximity to, the MNF and GWNF. Id. at 54. Citing the "very challenging terrain" of the central Appalachians, the Forest Service expressed concern about precisely how Atlantic would handle steep slopes, the presence of headwater streams, geologic formations with high slippage (landslide) potential, highly erodible soils, and the presence of high-value natural resources downslope of high hazard areas. Id. The Forest Service further noted that such concerns were compounded by high annual rates of precipitation and the potential for extreme

precipitation events. Id. The Forest Service provided Atlantic a list of specific requested information, including anticipated hazards, how Atlantic plans to minimize those hazards, specific design plans, short-term and long-term measures, and disclosure of potential natural resource impacts in the event of a failure. Id. at 54-55. The Forest Service requested that Atlantic provide more than "general descriptions and conceptual drawings": Atlantic must file documentation of the effectiveness of its purportedly "best in class" slope stabilization and erosion/sedimentation control measures. Id. As of the issuance of the DEIS in late December 2016, Atlantic had failed to provide the requested information. Absence of information regarding sedimentation, steep slopes, landslides, and related concerns precluded analysis of many issues, including impacts on karst, aquatic resources, freshwater mussels, sediment-sensitive fish, and other impacts. See FS DEIS Comment at 2, 21, 31-32, 34, 38.

Other information missing from the DEIS, but essential to analysis of and meaningful comment on the projects' impacts, included:

1.

* a complete list of water body crossings within the national forests,³

* updated plans for how major water body crossings would be accomplished,⁴

*

sources of water used for dust control, anticipated quantities of water to be appropriated from each source, and the measures that would be implemented to ensure water sources and its aquatic biota are not adversely affected by the appropriation activity. ⁵

*

Surveys for water wells and springs⁶

* Description of vegetation impacts as required by GWNF LRMP.⁷

3 DEIS at 5-12, Appalmad DEIS Comment, Attachment 11

4 DEIS 5-5, Appalmad DEIS Comment, Attachment 1 at 4;

5 DEIS 5-5, See also Virginia DEQ DEIS comments (Accession No. 20170406-5489), App. B at 14 ("Provide an assessment in the EIS of the river flows where withdrawals for hydrostatic testing are proposed with a discussion of how the withdrawals will affect flows, particularly during low flow or drought conditions.")

6 Appalmad DEIS Comment, Attachment 1 at 4

7 DEIS 5-7, Appalmad DEIS Comment at 7.

Finally, although Sierra Club has, in this section, focused on information missing from the DEIS but that was at least in part provided in the FEIS, the numerous gaps in the FEIS, discussed below, were of course also present in the DEIS.

In summary, the DEIS was woefully (and unlawfully) deficient. Contrary to the FEIS's statement, in the response to comments, that "the lack of this final information does not deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the projects or a feasible way to mitigate or avoid such

effect," FEIS App. Z at Z-78, the DEIS itself admits that the information contained therein provides an insufficient foundation for discussion of many issues, specifically including the impacts of the proposed Forest Plan amendments. The FEIS's response also misunderstands the nature of the NEPA process: the point of the Draft EIS is not to solicit information FERC needs to complete its own analysis, but rather to subject FERC's analysis to public scrutiny and comment. *Habitat Educ. Ctr. v. U.S. Forest Servs.*, 680 F. Supp. 2d 996, 1005 (E.D. Wis. 2010), *aff'd* by 673 F.3d 518 (7th Cir. 2012) ("[T]he purpose of the final EIS is to respond to comments rather than to complete the environmental analysis (which should have been completed before the draft was released).").

For similar reasons, although FERC asserts that the public will have the informal opportunity to comment on missing information as it is submitted, through FERC's e-Library website, this is not a substitute for a reasonably complete DEIS. Appalmad DEIS Comment at 11. NEPA obliges the agency, not the private project applicant, to assess and disclose the impacts of the project. Thus, the public needs to know not only what the applicant contends the impacts will be, but whether the agency agrees. The applicant submissions filed after issuance of the DEIS provide no information as to whether FERC, the Forest Service, or other agencies agree with the applicant's assessment, or with the completeness thereof.

Moreover, it is not clear when or how the public would comment on this material. As a practical matter, the public comments submitted during the DEIS comment period could not address this post-DEIS material. Even for the 8,000 pages of material submitted prior to the close of the public comment period,⁸ the public did not have sufficient time to consider and comment on it. Moreover, Atlantic continued to submit voluminous new information after the close of the DEIS comment period. See, e.g., *Sierra Club, Request for Revised or Supplemental DEIS* at 16-18. For materials submitted after the DEIS comment period, the public had no indication of when public comments would need to be submitted. And, as explained below, vital information is still outstanding: it is unclear when, if ever, the public will be able to comment on post-FEIS submissions.

II. The Final EIS Also Unlawfully Relies on Analyses That Have Not Been Completed

Many of the acknowledged gaps in the draft EIS remain unfilled in the final. As with the DEIS, the FEIS identifies a stunning amount of information yet to be provided by the applicant. This missing information includes fundamental details about the resources that will be impacted, the actions that will actually be undertaken pursuant to the project, and the likely efficacy of mitigation efforts. The FEIS candidly acknowledges that this information must be provided eventually, but mistakenly concludes that it need not be provided in the FEIS. "[I]t is the essence and thrust of NEPA that the pertinent Statement serve to gather in one place a discussion of the relative environmental impact of alternatives." *Natural Resources Defense Council, Inc. v.*

Morton, 458 F.2d 827, 834 (D.C. Cir. 1972) (emphasis added). The Forest Service cannot adopt an EIS that does not include this information, and the Forest Service cannot issue a draft or final Record of Decision without a complete EIS.⁹

⁸ Appalmad DEIS Comment at Attachment 4 (Table of Information Filed by Atlantic Coast Pipeline, LLC since Release of Draft EIS). See also, e.g., Accession Nos. 20170331-5087; 20170324-5283; 20170310-5157; 20170224-5149; 20170127-5202; 20170123-5110; 20170119-5180; 20170110-5142.

⁹ There was no formal public comment opportunity on the final EIS. Nonetheless, as summarized above, Sierra Club submitted comments explaining that information was improperly omitted from the draft EIS; those comments apply with even greater force to the final.

10 Surveys of actual compressor station noise to be conducted once the stations are built, FEIS 5-51 to 5-52, paras 69- 71.

Both the applicant and government agencies have yet to provide essential information about the project. The FEIS provides a list ten pages long, spanning 57 paragraphs, of missing information the applicant must provide prior to construction. FEIS at 5-43 to 5-52. With only one apparent exception,¹⁰ it appears that this information could be collected prior to completion of the FEIS and project authorization: the FEIS does not demonstrate that this information is unavailable. Cf. 40 C.F.R. 1502.22. Some of this information must be developed by the applicant in cooperation with the Forest Service or other government agencies. Other outstanding analyses must be completed by agencies themselves. Biological opinions prepared pursuant to the Endangered Species Act are still in the early stages. And perhaps most notably, FERC has continued to postpone analysis of whether there is a need for the project at all: rather than resolve this issue in the FEIS, FERC states that it will be addressed in FERC's order on the Natural Gas Act application.

Much of this forthcoming information is essential to analysis of the impact of the project, as we explain below. In general, the FEIS assumes that many impacts will be mitigated, but this assumption is unwarranted when the FEIS does not describe the details of the resource at issue; the scope of the impact; what mitigation will be used; or evidence of that mitigation's efficacy. The issue is especially complicated when impacts to multiple resources are considered. While there is no reason to assume, even for an individual resource, that mitigation will be effective, "there are likely areas along the pipeline route where the recommended avoidance and minimization measures described throughout section 4 for a species or resource may conflict with recommendations for another." FEIS at 5-2 (summarizing Forest Service concerns). For example, the Forest Service previously explained that:

the seasonal restrictions identified for both migratory birds and bats for tree and other vegetation removal is in direct conflict with several Forest Plan standards to avoid steep slope stability, soil movement, and winter road use concerns, as well as seasonal restrictions on [threatened and endangered] aquatic species and other sensitive species. These conflicting recommendations by FWS and Forest Service regulations need to be addressed and resolved before the FEIS is completed.

FS DEIS Comment at 28. But the FEIS does not explain how these conflicts will be reconciled[mdash] and such reconciliation is difficult if not impossible prior to full identification of what the particular conflicts are.

The Forest Service cannot rely on an EIS that omits this basic information.¹¹ The numerous gaps identified in the FEIS must be filled[mdash]and the public provided with an opportunity to comment[mdash]before the FEIS can amend the Plans or authorize the pipeline.

A. Species Impacts

The FEIS fails to provide a hard look at impacts on numerous species. Surveys to identify the population and location of numerous species and habitat had not been completed prior to release of the FEIS.¹² These surveys are essential to evaluating impacts of the project. Appalmad DEIS Comment at 9, 130-33.

¹¹ Sierra Club could not have previously commented on deficiencies in the FEIS. However, Sierra Club' comments on the DEIS raised closely related issues, explaining that NEPA does not permit an EIS to simply state that future analyses will identify details of environmental impacts and potential mitigation.

12 Surveys that have yet to be completed are described on e.g., FEIS at 4-222, 4-223 (additional surveys for Neuse River waterdog and Carolina madtom are pending); id. at 4-245 (species-specific surveys and consultations are ongoing); id. at 4-246 (noting that survey access was not available in all cases for several ESA-listed species or species under review, and that Atlantic and DETI continue to consult with the FWS to finalize conservation measures for some species"); id. at 4-254 ("surveys of karst features and potential bat hibernacula along the ACP route are not complete"); id. at 4-270 ("There are eight acoustic sites on the GWNF that remain to be surveyed [for bats] in 2017."); id. at 4-273 (for northern long-eared bat, occupancy surveys for suitable hibernacula, pedestrian hibernacula surveys, and potential hibernacula location surveys, and potential roost tree surveys remain to be completed); id. at 4-290 (stating that Atlantic must file revised Carolina madtom habitat assessments based on 2017 surveys and consultations with the FWS North Carolina Field Office); id. at 4-304 (final survey results for the dwarf wedgemussel are pending 2017 surveys including in the Neuse and Tar River watersheds in North Carolina and the Nottoway River watershed in Virginia); id. at 4-306, 4-308, 4-309 (final 2017 survey results for the Tar River spiny mussel, Atlantic pigtoe, and green floater mussel are expected in October 2017); id. at 4-315 (surveys for federal- and state-protected plant species are still needed on approximately 563.3 acres of the ACP route in West Virginia, 572.9 acres in Virginia, and 74.5 acres in North Carolina); id. at 4-317, 4-320 (final survey results for small whorled pogonia and running buffalo clover are pending 2017 surveys); id. at 4-331, Table 4.7.3-1 (identifying pending surveys on NFS lands); id. at 4-428 ("Atlantic is currently identifying areas of ecologically sensitive areas crossed by the proposed AP-1 mainline within the MNF and GWNF where the construction right-of-way can be narrowed[hellip].") (emphasis added); id. at 4-443 ("Discussions are ongoing concerning pending surveys, avoidance and minimization measures, project design features, and mitigation measures to minimize the effects on northern long-eared bat.").

Taking a hard look at impacts to species also requires completion of various analyses that are still outstanding, addressing impacts to species, opportunities to mitigate those impacts, efficacy of mitigation, and the species' ability to tolerate the ultimate impacts. Id. at 133-34. These analyses must be informed by the Biological Opinions prepared by NMFS and FWS pursuant to the Endangered Species Act. NMFS and FWS, through consultation, both offers their expert opinion as to the expected impacts on protected species and identify reasonable and prudent measures and alternatives that can lessen these impacts. 16 U.S.C. [sect] 1536(b)(3)(A), (b)(4). "[A]ction agencies must give great weight to the Services' biological opinion before deciding on a proposed action." U.S. Fish & Wildlife Serv. & Nat'l Marine Fisheries Serv., *Endangered Species Consultation Handbook* at 2-11 (March 1998) (emphasis added). To ensure that this is done, and that these measures can be incorporated into the action, the Fish and Wildlife Service has explained: "At the time the Final EIS is issued section 7 consultation should be completed. The Record of Decision should address the results of section 7 consultation." Id. at 4-11 (emphases added).¹³ Completing consultation before finalizing the EIS or proposing a decision is essential because consultation can reveal, for example, that additional mitigation measures are necessary, or that an available alternative would have lesser impacts. See, e.g., Appalmad DEIS Comment at 165; FEIS at 4-258 ("Conservation measures specific to occupied bat habitat and bat hibernacula would be further refined and defined upon FWS review of survey results, when impacts can be further quantified.").¹⁴ Here, the draft Record of Decision violates NEPA by adopting an EIS that was finalized many months prior to the anticipated completion of consultation.¹⁵

Similarly, for "special status" species outside the scope of Endangered Species Act consultation, the Forest Service has previously concluded that it is "unable to provide determinations of effects" on numerous species "without a finalized" Biological Evaluation. FS DEIS Comment at 62; accord id. at 38, Appalmad DEIS Comment at 82. As of the date of FEIS issuance, this Evaluation had not been finalized. FEIS at ES-7, 4-313, 4-327, 4-331, 4-440, 4-442 to 443, 5-24. The most recent draft was issued March 10, 2017. FEIS 4-128. That draft received extensive criticism from the Forest Service, and those concerns appear not to have been addressed or resolved. See Forest Service Comments of April 24, 2017.

13 Accord <https://www.fws.gov/endangered/what-we-do/faq.html>, attached as Exhibit 1.

14 See also FEIS at 4-179 ("Atlantic will file a revised Migratory Bird Plan prior to construction.") (emphasis added); id. at 4-224 (Freshwater Mussel Relocation Plan for ACP in North Carolina not yet complete), id. at 4-323, 4-325 (mitigation plan for running buffalo clover and small whorled pogonia on national forest land not yet complete);

15 The Draft ROD was issued on July 21, 2017. As of the date of this filing, the Biological Opinions from the National Marine Fisheries Service and Fish and Wildlife Service had target dates of October 28 and December 3, respectively.

Absent surveys, mitigation plans, and other fundamental information, the FEIS fails to take a hard look at impacts on special status species.

B. Other Information About the Affected Environment

Numerous additional information about the affected environment still has not been collected.

Surveys to simply identify wetlands are not yet complete. FEIS 4-131. A hard look at impacts to wetlands is impossible without knowing whether areas along the pipeline route are wetlands in the first place. Sierra Club and the Forest Service have both observed that these surveys should have been completed before issuance of even the draft EIS. Appalmad DEIS Comment at Attachment 1 p.5; FS DEIS Comment at 22-23. The FEIS states that "Wetland surveys have been conducted along approximately 92 percent of the proposed ACP route." FEIS 4-131. The FEIS does not adequately explain why these surveys have not been completed. It implies that surveys "were not possible" in some areas, "such as denied access parcels." Id. But the FEIS provides no explanation as to whether all of the 8% of the ACP route not yet surveyed is "impossible" to survey, and whether there were factors other than denied access that were relevant. FEIS 4-131.

The FEIS similarly fails to identify and describe springs and seeps in the national forests.

FEIS 4-99.

Identification and characterization of karst resources is also incomplete, with several planned but outstanding analyses, including "a fracture trace/lineament analysis utilizing remote sensing platforms (aerial photography and LiDAR), along with results of existing dye trace studies" and "electrical resistivity imagery." FEIS at 4-12.16 As the Forest Service and Sierra Club both previously explained, "These data should be collected prior to the project decision and should be used in this effects analysis to determine any effects from the construction and installation of the pipeline." FS DEIS Comment at 1-2; accord Appalmad DEIS Comment at 9- 10.

16 See also FEIS ES-4, ES-7, ES-11, 4-12, 5-44.

The FEIS also fails to identify the amount or location of old growth within national forests that will be impacted by the pipeline. "Because the old growth surveys have not been completed, the acres of old growth forests (as defined by the Regional Guidance) impacted by construction and operation of the pipeline are not yet available." FEIS 4-167. Impacts on old growth cannot be evaluated without knowing the amount, location, character of any old growth stands. This information should have been provided in the draft EIS, and absolutely cannot be omitted from the final. Appalmad DEIS Comment at 79, FS DEIS comment at 26 ("The acres of impact on old growth

forest must be disclosed in the EIS").

C. Project Implementation and Mitigation, Including the Construction, Operation, and Maintenance Plan

In addition to missing information about the affected environment, the FEIS lacks information about what the project actually entails. The "Construction, Operation, and Maintenance Plan," or "COM Plan," provides the details of how the pipeline will actually be constructed on national forest lands. FEIS 2-31. This plan is not yet final. FEIS 4-125, 4-313. Details of the plan that are still under review include mitigation for sliding and slope instability, 4-38, soil compaction, 4-55, erosion control and rehabilitation, 4-125, and numerous other measures. These details, especially mitigation, matter. The FEIS states that the Forest Service itself believes that the incomplete nature of the COM Plan renders impacts on sedimentation, wetland resources, erosion control, and other matters "unknown." FEIS 4-125, 4-129, 4-140. Issuance of the FEIS while these details were still so uncertain as to preclude analysis of impacts violated NEPA. Appalmad DEIS Comment at 59-60. As the Forest Service itself explained, "[w]aiting until after the Decision is made to identify the areas that ACP would be clearing vegetation during the nesting season does not allow the EIS to fully disclose and analyze the effects of the proposed actions on migratory birds." FS DEIS Comment at 28. "Nor does this allow for a full development of conservation and mitigation measures to address impacts of the proposed actions on migratory birds." Id.

Closely related to these issues are the forthcoming geotechnical studies and geohazard analysis. FEIS at ES-5, 5-4. This site-specific analysis addresses erosion, landslides, etc., on steep slopes. FEIS 4-28. Here, this analysis has not been completed for 25 sites on the AP-1 mainline; although not clearly stated in the EIS, these remaining 25 sites appear to be more than half the total for which this analysis is planned. FEIS at 4-28 ("46 steep slopes [hellip] met the criteria for further evaluation used in the Geohazard Analysis Program"). The program for management of landslides and other issues on steep slopes is therefore still in development. FEIS at 4-28, 5-2. This information is essential to analysis of the project impacts; for example, the Forest Service previously explained that it "cannot concur" in the FEIS's conclusion that the potential for the pipeline "to initiate or be affected by damaging karst conditions would be adequately minimized[hellip] until all erosion control, steep slope procedures, etc. are available for review." FS DEIS comment at 2. We agree: Sierra Club previously argued that waiting "until after completion of environmental review, until after permitting, or until after initiation of construction to provide specific plans and identify engineering solutions for the range of significant geohazard and water- related problems that confront the ACP project" would violate NEPA's obligation to present a hard look in the EIS. Appalmad DEIS comment at 219.

Other information still missing from the FEIS includes:

- * designs and standards "to minimize the risks for sliding and other slope instabilities." FEIS 4-38
- * potential impacts relating to water body crossings, including plans to mitigate these impacts. FEIS 4-113, 4-120.
- * Sources of water used for dust control, and impacts of withdrawing needed volumes of water from these sources. FEIS at 4-124.
- * information planned improvements for a key access road. FEIS 4-243.
- * final information regarding revegetation and seeding requirements for permanent easements and temporary construction rights-of-way on federally managed lands, FEIS 4- 277.
- * Cultural resource surveys. FEIS 4-554.
- * Methods used to cross individual trails, roads, and railroads in the GWNF. FEIS 5-28.

D. Purpose and Need

Finally, perhaps the most fundamental of the analyses postponed by the FEIS is the analysis of whether there is a need for the pipeline at all. 40 C.F.R. [sect] 1502.13. The FEIS states that the purpose of the project is to

"connect growing [natural gas] demand areas in Virginia and North Carolina with growing supply areas in the Appalachian region." FEIS at 1-3. The FEIS relied not only on this general purpose, but also on the "[m]ore specific[]" goal of "providing up to 1.5 Bcf/d of firm natural gas transportation service into West Virginia, Virginia, and North Carolina." Id. For example, the FEIS's dismissal of various system alternatives (i.e., use of other existing or proposed pipelines in lieu of the Atlantic Coast Pipeline) rests, in part, on the contention that these alternatives would be unable to satisfy the project purpose of transporting about 1.44 billion cubic feet per day of natural gas to the delivery points specified by the precedent agreements. See, e.g., FEIS at 3-4.

Although the FEIS relies on this statement of need, the FEIS does not support it. That is, the FEIS does not even purport to respond to Sierra Club's arguments challenging the purported need for the project. The FEIS, like the DEIS, states that this project need is demonstrated by the long-term precedent agreements the applicants have entered into with gas consumers. FEIS at 1-3. However, as Sierra Club explained in comments on the DEIS, these agreements are a poor indicator of project need[mdash]especially here, where many of the customers are corporate affiliates of the project applicants. Appalmad DEIS Comment at 13-14, 16-19. On the other hand, Sierra Club offered extensive other evidence demonstrating that the pipeline is not needed. Id. at 12-44. The FEIS in no way addressed the substance of these criticisms. FEIS App. Z-1738, CO87-2 (citing FEIS App. Z-694, CO46-1). Instead, the FEIS indicates that questions regarding public need will be resolved in FERC's ultimate order on the application. FEIS App. Z-694, CO46-1, see also id. at 4-373 ("A project's need is established by the FERC when it determines whether a project is required by the public convenience and necessity.").

Failure to adequately address the numerous concerns raised by Sierra Club, in or prior to the FEIS, interferes with the Forest Service and the public's ability to analyze the choice between the available alternatives, including the no-action alternative, and to assess whether the project's significant environmental costs are warranted.¹⁷ Failure to thoroughly analyze the project need also interferes with analysis of the relative merits of alternatives that would, for example, deliver some but not all of the proposed gas volumes. See Nat. Res. Def. Council, Inc. v. Callaway, 524 F.2d 79, 93 (2d Cir. 1975) ("the EIS must nevertheless consider such alternatives to the proposed action as may partially or completely meet the proposal's goal and it must evaluate their comparative merits"), N. Buckhead Civic Ass'n v. Skinner, 903 F.2d 1533, 1542 (11th Cir. 1990).

17 Although the FEIS's failure to respond to Sierra Club's comments is a new issue Sierra Club could not previously have commented on, Sierra Club comments on the DEIS explained the need to demonstrate purpose and need in the EIS. Appalmad DEIS Comment at 12-44.

III. The FEIS Fails to Take A Hard Look At the Effects of Creating A New Right-of-Way through Forests

Some of the "most significant and irreversible consequences of the proposed pipeline" result from construction and maintenance of a new pipeline right of way through otherwise contiguous forest. Appalmad DEIS Comment at 95. Although the direct impacts on the acres cleared for pipeline construction are themselves significant, impacts will extend far beyond these areas. Id. at 94-128. The open right of way changes the character of the forest on either side, creating permanent edge effects that extend into the forest. Appalmad DEIS Comment at 108-110. On a broader scale, the right-of-way represents a barrier that fragments formerly connected forest, reducing the size of contiguous forest cores and creating isolated smaller fragments. Id. at 110-

1. Here, FERC's FEIS fails to take the required hard look at the impacts of a new right-of-way on forests and forest habitat.

A. Edge Effects

As Sierra Club previously explained, the DEIS's cursory discussion of fragmentation of edge effects was deficient. Appalmad DEIS Comment at 108-110. The FEIS's discussion of edge effects is substantially expanded[mdash]from three pages in the draft to eighteen in the final. FEIS 4- 187 to 4-202 and 4-205 to 4-207. The FEIS nonetheless fails to take a hard look at this issue:¹⁸ this discussion is itself incomplete, and it also isolated from, and not reflected in, the broader body of the EIS. For example, in summarizing impacts of the pipeline, the FEIS routinely describes the scope of impacts of the pipeline only in terms of acreage directly cleared for pipeline construction and operation. For example, where the pipeline transforms interior forest to edge habitat, the pipeline clearly affects that habitat, but the FEIS routinely ignores these effects when describing the amount of forest that will be impacted by the pipeline. See, e.g., ES-10 to ES-11 ("Operation of ACP and SHP would have long-term to permanent effects on about 3,456 acres of vegetation, including about 2,744 acres of upland forest vegetation, [hellip] including about 103 acres in MNF, [and] 285 acres in GWNF."). Indeed, even within the discussion of edge effects, the FEIS excludes interior forest that is transformed to edge habitat from calculations of "loss" of interior forest. FEIS at 4-200.

¹⁸ Because this discussion was added to the FEIS, Sierra Club did not have a previous opportunity to comment on it.

Most importantly, the FEIS violates NEPA by only discussing edge effects of the preferred alternative. One of the primary benefits of the route alternatives that would follow existing rights- of-way is that these alternatives avoid impacts to interior forest. Appalmad DEIS Comment at 114. Co-location along an existing right of way reduces, if not outright eliminates, creation of new edge effects, because the forest bordering the right of way is already edge forest. But the FEIS provides no discussion of the extent to which impacts resulting from edge effects would be reduced by any of the route alternatives. Discussion of how the impacts would differ under the available alternatives is the heart of NEPA analysis. Simply describing the edge effects of the preferred alternative, without discussing how these effects could be avoided or how they would differ under the alternatives, fails to provide a hard look.

The Draft ROD states that "Atlantic would reduce some of" the impacts of edge effects by restoring vegetation along the right of way. Draft ROD at 18. However, as the Forest Service has previously recognized, these measures do not eliminate edge effects in either the short or long term: even if revegetation is fully successful, there will be a unbroken line of cleared land. FS DEIS Comment at 47.

B. Fragmentation

Edge effects are not the only impact on interior forest. The pipeline right-of-way would reduce the size of contiguous forest blocks and cause previously connected habitat to become isolated. These effects were essentially ignored by the DEIS. Appalmad DEIS Comment at 110-114. Although the FEIS added limited discussion of the general science and nature of fragmentation issues, FEIS at 4-188, in discussing the impacts of this specific proposal, the FEIS solely discusses the number and size of forest blocks that will be crossed by the pipeline, without discussing the resulting fragments. FEIS at 4-190, 4-194, 4-200, 4-205, 4-206. This discussion is also limited to the proposed route[mdash]the FEIS provides no analysis of how fragmentation impacts of alternative routes would differ. The FEIS also provides no discussion of the amount by which the pipeline will reduce the size of contiguous forest patches or the significance of such reductions. Nor does the FEIS discuss the number or character of fragments that will be created. For example, the consequences of dividing a "large"¹⁹

core may depend on where the division occurs. The division might produce two large or medium cores, or the division may be uneven, severing a small fragment that is too small to provide similar habitat value. Although the FEIS provides some general statistics describing the landscape as it exists now, the FEIS provides almost no discussion of the landscape that would result from the proposed pipeline. Instead, the FEIS simply identifies the number of acres of direct disturbance that will occur within various categories of existing interior forest. Appalmad DEIS Comment at 108-109

The record squarely refutes the Draft ROD's assertion that, because the disturbed width will be short enough that plant and animal species can cross it, the "it is unlikely that the pipeline rights-of-way would serve as a long-term barrier to plant or wildlife movement" and source of habitat fragmentation. Draft ROD at 18, see also FEIS at 4-201.20 At the threshold, this argument does not address impacts during the many years it will take for forest regeneration along the construction right-of-way to occur. Even confined to this long-term perspective, the Draft ROD's argument represents an arbitrary and unexplained reversal of the Forest Service's previous contention that "[t]he fact that some areas will be revegetated does not reduce the likelihood of fragmentation at all, because it is a linear fragmentation. There will still be a 600+ mile unbroken line of cleared land if this pipeline is installed." FS DEIS Comment at 47. The FEIS and Draft ROD provide no discussion of the extent to which movement of interior-dwelling species is restricted by the revegetated right-of-way and adjoining edge forest, rather than purely by the cleared herbaceous right of way. The cleared right-of-way influences habitat not only as a barrier between adjacent forest fragments, but also as a pathway bringing predators and invasive species into previously inaccessible habitat. Id. at 28; Forest Service Comments on Migratory Bird Plan, (April 10, 2017). When predators gain access to previously interior forest, this will reduce the suitability of surrounding habitat that was previously protected from those predators, an impact potentially extending beyond the range of vegetation changes. See, e.g., Appalmad DEIS Comment at 124. Risk of predation is also one of the reasons why many species will have difficulty crossing the right of way itself. FEIS at 4-189. While the risk may be highest in the narrow herbaceous operational right of way, that the risk is elevated in the adjoining revegetated areas and edge forest. Appalmad DEIS Comment at 124.

19 I.e., greater than 500 acre. FEIS at 4-190, 4-200.

20 This is a new argument that Sierra Club could not previously have commented on.

FERC and the Forest Service have the tools to provide a more thorough analysis of the effects on interior forest. Sierra Club encourages the agencies to revise the EIS using the tools described in the Virginia Forest Conservation Partnership's letter dated August 21, 2017, Accession Number 20170821-5099.

IV. The Forest Service's Analysis of Alternatives Is Arbitrary

The Forest Service cannot approve the Atlantic Coast Pipeline or related plan amendments without rigorously evaluating alternatives that would avoid new utility corridors or rights of way within the Monongahela and George Washington National Forests by either avoiding the forests entirely or by traversing the forest along existing rights of way. Appalmad DEIS Comment at 72, 88.

Here, the FEIS and Draft ROD give short shrift to such alternatives, and thus fail to support the creation of new rights of way. The FEIS and Draft ROD also fail to support rejection of the no action alternative. See Appalmad DEIS Comment at 8, 42 (DEIS's dismissal of no action alternative was arbitrary).

A. Use of Existing Natural Gas Pipelines

One way to avoid using the need to for new uses of the national forest, or a new right-of-way, would be to use existing pipeline capacity, or modifications of existing pipelines, to "increase incremental gas delivery capacity in Virginia and North Carolina." Appalmad DEIS Comment at 8; *id.* at 42-43, 72. The FEIS acknowledges three pipeline systems that could potentially be upgraded to provide additional capacity to deliver gas to these markets: the Transco, Columbia Gas, and East Tennessee pipelines. FEIS at 3-4 to 3-5. However, the final EIS, like the draft, fails to provide meaningful analysis of these alternatives.

As explained in Sierra Club and Forest Service comments on the DEIS, FERC has failed to show that modification of these pipelines is not viable, and FERC has provided no meaningful inquiry into the environmental impact of these alternatives. Appalmad DEIS Comment at 72, 252; FS DEIS Comment at 10-11. The FEIS's discussion of these alternatives appears to be entirely unchanged.

For example, the Transo pipeline appears to be a feasible and potentially environmentally beneficial alternative. As the Forest Service previously explained, there is no support for the FEIS's statement that modification of the Transco line would not meet the project purpose: "The purpose and need is stated in terms of providing gas to end users. Nothing in the subject section indicates that modification of the Transco system could not meet this need." FS DEIS comment at 10. The FEIS states that extensive modifications would be needed to enable this pipeline to deliver additional gas to these markets, but FERC entirely failed to respond to Sierra Club's comments explaining that some, if not most, of these modifications would be unnecessary in light of separate already-planned and approved changes to the Transco line. Appalmad DEIS Comment at 35, 42-43, 252, Attachment 9, p.3-4. Even if these existing plans are ignored, the FEIS provides no facts or analysis to support the conclusion that the modifications that would be needed to utilize this alternative prevent it from being "viable." And, as the Forest Service has previously observed, the FEIS provides no documentation to support its claim that the environmental impacts of a Transco alternative "would likely be similar to" the ACP proposal, despite the fact that the Forest Service had requested such analysis prior to issuance of the DEIS. FS DEIS Comment at 10; Appalmad DEIS Comment at 72. Even if the Transco alternative would require more miles or acreage of direct disturbance, the impact of each mile of disturbance along an existing right-of-way is likely to be much less than the per-mile impact of an entirely new corridor. See FS DEIS Comment at 10. The FEIS's analysis of the Columbia and East Tennessee alternatives is similarly deficient. *Id.* at 10-11.

In summary, the FEIS fails to show that existing pipeline alternatives are not viable, nor does it provide any meaningful analysis of the environmental consequences of these alternatives. Failure to examine these alternatives itself renders the FEIS, and the Forest Service's adoption thereof, arbitrary.

B. Non-National Forest System Lands Alternatives

The Forest Service cannot amend the plan to authorize the proposed routes because the Forest Service has not demonstrated that use of the national forests is necessary. Appalmad DEIS Comment at 47, 72, 88; Virginia Chapter Sierra Club DEIS Comment at 55, Accession No.

20170406-5364 (Apr. 6, 2017) ("Virginia Sierra Club Comment").²¹ A right-of-way for a gas pipeline across national forest system lands is a "special use" within the meaning of 36 C.F.R. [sect] 251.53(e). See Draft ROD at 7. According to the Forest Service Manual, special uses may be authorized only if "[t]he proposed use cannot reasonably be accommodated on non-National Forest System lands." FSM 2703.2(2)(b). The Monongahela Forest Plan similarly provides that special uses can be approved only where the use "cannot be accommodated off the National Forest." MNF LMRP, Management Direction Goal LS17, II-52 (2006). *Id.* at LS19 ("Work with utilities and others to minimize the use of NFS lands for utility corridors, and to share existing corridors when feasible.").

Here, the FEIS's cursory discussion of routes that would entirely avoid national forest system lands falls far short

of a hard look. The FEIS acknowledges two alternative routes, one to the north and one to the south of the national forests. FEIS at 3-19. These routes would be 15 and 43 miles longer than the proposed route, respectively. *Id.* Neither the FEIS nor the Draft ROD explain why neither of these routes could reasonably accommodate the pipeline. The FEIS's principle discussion of these alternatives speculates that neither route would offer a significant environmental advantage, *id.*, but the FEIS provides absolutely no analysis to support this statement. The fact that these routes would be longer is not itself informative, as the FEIS acknowledges. *Id.*, see also FEIS 3-21 (explaining that "Former National Forest Route" was dismissed as environmentally harmful even though it was shorter). As the Forest Service itself aptly explained, "No analysis of a National Forest Avoidance Alternative has been conducted, and environmental impacts of this alternative have not been considered or compared to the proposed action." FS DEIS Comment at 13. The FEIS provides no additional analysis of these alternatives, and the Forest Service has not provided any reason for departing from its previous characterization of these alternatives.

21 The Sierra Club is a single organization, and the Virginia Chapter has no organizational identity separate from the Sierra Club as a whole. As such, these comments were submitted on behalf of Sierra Club as a whole; this Objection refers to these comments as "Virginia Sierra Club Comment" solely for purposes of identification.

Nor has the FEIS provided any explanation as to why either of these avoidance alternatives would be infeasible. A separate section of the FEIS states that these routes were "determined to not be feasible on NFS lands because an avoidance of the MNF and GWNF to the south or to the north would result in increased mileage and there were no significant environmental advantages identified compared to the proposed route (see section 3.3.4.1)." FEIS 4-446. However, increased mileage does not itself demonstrate technical or economic infeasibility, and FERC has not even attempted to meet its burden of actually examining whether these alternatives would provide an environmental benefit.

C. Co-Locating Impacts Within National Forest

If National Forest System lands cannot be avoided entirely, then the Forest Service must co-locate impacts with an existing right of way if "practical." 30 U.S.C. [sect] 185(p); see Appalmad DEIS Comment at 72, Virginia Sierra Club Comment at 82. The Mineral Leasing Act provision applicable to natural gas pipelines states that

In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way across Federal lands, the utilization of rights-of-way in common shall be required to the extent practical, and each right-of-way or permit shall reserve to the Secretary or agency head the right to grant additional rights-of-way or permits for compatible uses on or adjacent to rights-of-way or permit area granted pursuant to this section. 30 U.S.C. [sect] 185(p) (emphasis added); see also 43 U.S.C. [sect] 1763 (FLPMA provision imposing same requirement on non-Mineral Leasing Act rights-of-way). Here, the FEIS failed to adequately consider co-locating with an existing right of way, or if that is not possible, co-locating with another proposed but not yet constructed project.

1. Existing Rights-of-Way

Both the Monongehela and George Washington Forest Plans have adopted standards that require colocation with existing rights-of-way unless co-location is shown to be infeasible. MNF Standard LS25, LRMP at II-52 ("Proposals for utility and communication facilities outside existing sites or corridors shall be considered only after improvement or expansion of existing facilities is determined to be inadequate or impractical."), GWNF Standard FW-243, GWNF LRMP 4-24. FERC orders similarly establish a general preference, not limited to federal lands,

for "pipeline routing along existing road or utility rights-of-way, whenever possible, over creating a new greenfield pipeline right-of-way." *Islander East Pipeline Co.*, 102 FERC [para] 61,054, at P 133 (2003) (emphasis added); accord *Entrega Gas Pipeline, Inc.*, 112 FERC [para] 61,177, at P 19, order on reh'g, 113 FERC [para] 61,327 (2005) (citing *Portland Natural Gas Transmission System*, 83 FERC [para] 61,080 (1998)). See *Appalachian Mountain Advocates et al. Motion to Intervene and Protest in CP16-10* at 51 (Nov. 27, 2015).

Here, both the MNF and GWNF have numerous existing rights of way. Prescription 6.1 lands in the Monongahela (the prescription principally crossed by the current proposal) already contain 18.2 miles of gas pipeline and 6.4 miles of other utility corridors. Monongahela LRMP at III-27. The GWNF has 7,000 acres of designated utility corridor. GWNF LRMP at 4-76. The FEIS provides no meaningful discussion of these corridors, or the extent to which any of the alternatives identified in the FEIS would utilize existing corridors within the national forests. Appalmad DEIS Comment at 72, Virginia Sierra Club Comment at 82. Because the FEIS fails to demonstrate that use of existing corridors is impractical, the Mineral Leasing Act and provisions of the existing forest plans that the Draft ROD does not propose to amend both prohibit creation of a new right of way.

2. Co-location with Mountain Valley Pipeline

The FEIS also fails to take a hard look at options for co-locating the pipeline with the proposed Mountain Valley Pipeline (MVP), whether by combining the two projects with a single, larger pipe along the MVP route, or by constructing two parallel pipelines along that route.

The FEIS fails to demonstrate that a single consolidated pipeline is infeasible, and provides no meaningful discussion of the environmental impact of this alternative. Virginia Sierra Club Comment at 24. Although the FEIS identifies several challenges associated with the planning and design of this alternative, which would result in a delay of project completion, the FEIS provides nothing to suggest that those challenges are insurmountable, and the possibility of an unspecified delay does not demonstrate infeasibility. Accord FS DEIS Comment at 11 (explaining that DEIS did not demonstrate that this alternative was infeasible or inconsistent with the project's purpose and need). FS points out that nothing in DEIS demonstrates that this option is infeasible or inconsistent with purpose and need; nor has FERC shown that this would not present environmental advantages. FS DEIS comment at 11.

Nor has the FEIS demonstrated that it would be infeasible or impractical to locate two pipelines along the MVP route. The FEIS states that there is "insufficient space along most ridgelines in West Virginia to accommodate two parallel 42-inch-diameter pipelines." *Id.* at 3-10 to 3-11. The FEIS provides no evidence to support this conclusion. Even if co-location along specific ridgelines was shown to be impractical, this would be a reason for avoiding co-location for those specific segments, and would not demonstrate that a largely co-located route was infeasible.

Indeed, the FEIS did not conclude that this alternative was infeasible. See Virginia Sierra Club Comment at 74 (explaining that identical analysis in DEIS did not demonstrate infeasibility). Instead, the FEIS dismissed the two-pipelines one-route alternative based on the assertion that this alternative did not "offer[] a significant advantage," FEIS at 3-11, but the FEIS provides no data or analysis to support this characterization.

D. The FEIS Does Not Support the Conclusion That Alternative Routes Are Not Environmentally Preferable
The FEIS states that none of the alternative routes offered "significant environmental advantages" over the proposed route. FEIS at 5-39. This conclusion is arbitrary because the FEIS's comparison of the proposed routes failed to adequately consider important impacts, and because it is contrary to the analysis presented.

First, the FEIS's comparison of alternatives ignores many of the impacts that collocation with existing corridors serves to reduce or avoid. See FEIS at 2-20. For example, while the Mineral Leasing Act and various Forest Service authorities have determined that is better to impact previously-disturbed areas than new sites, the FEIS, in discussing impacts on forest, wetlands, etc., simply discloses impact in terms of linear distance or area,

without addressing whether the area was previously disturbed. See, e.g., FEIS at 3-22 to 3-25, 3-48 to 3-55. Similarly, the FEIS does not address how the alternatives differ in terms of edge effects, or address the impact of fragmentation.²² See supra Part III. Nor does the FEIS provide any assessment of how visual impacts of the alternatives differ. Appalmad DEIS Comment at 137, 143, 155. Without this information, the FEIS cannot sharply define or provide a rigorous exploration of the alternatives, nor can the FEIS support the determination that these alternatives do not provide significant advantages over the proposed route. 40 C.F.R. [sect] 1502.14.

Second, even the limited information presented in the FEIS undermines the FEIS's assertion that alternative routes would not have significant environmental advantages. The FEIS's evaluation of the impacts of each alternative amounts to a superficial observation that each alternative would have some environmental benefits and some drawbacks. These tradeoffs are likely to be inherent in any decision between collocation, which will almost always require a longer route in order to detour toward existing corridors, and a new right-of-way, which can take a more direct route. The Forest Service and FERC, by adopting presumptions favoring collocation, have concluded that although both options have impacts, the former is generally environmentally preferable.

22 Although the FEIS calculates "interior forest crossed" for Alternatives 1, Columbia Gas of Virginia, and AEP-ANST, taking a hard look at impacts of fragmentation requires far more than merely identifying the amount of interior forest crossed: the FEIS must consider edge effects, the size of the forest fragments on either side of the crossing, and the resulting fragments' suitability for habitat and other purposes. Supra Part III. Moreover, the FEIS does not identify interior forest crossed for Alternative Hybrid 1A. FEIS at 3-27. Appalmad DEIS Comment at 72. Here, the FEIS's alternatives analysis provided no discussion whatsoever of the magnitude or severity of these impacts. Because it failed to provide this discussion of severity, the FEIS's alternatives analysis does not support the conclusion that alternative routes would not offer significant environmental benefits.

E. The Record Does Not Support Rejection of the No Action Alternative and the Draft ROD's Identification of the Proposal as Environmentally Preferable

The Draft ROD discusses alternatives on pages 38-39, and purports to identify the proposed project as the environmentally preferable alternative. This discussion and conclusion are arbitrary and unsupported by the record. See also Appalmad DEIS Comment at 44-45 (discussing DEIS's flawed treatment of no action alternative).

The Forest Service's decision to limit its analysis to "the proposal and the no action alternative," Draft ROD at 38, violates NEPA.²³ NEPA requires the Forest Service itself to identify, in the record of decision, all alternatives that the agency considered, and to provide an explanation as to which of these alternatives was determined to be environmentally preferable. 40 C.F.R.

[sect] 1505.2(b) and 36 C.F.R. [sect] 220.3. If the Forest Service did not actually consider alternatives beyond the proposal and no action, notwithstanding those alternatives' inclusion in the FEIS, then the Forest Service violated the NEPA obligation to consider a reasonable range of alternatives[mdash] which includes alternatives the Forest Service itself did not have jurisdiction to adopt. 40 C.F.R.

[sect] 1502.14(c). The record demonstrates that the Forest Service has already insisted upon numerous changes to the original proposal; the Forest Service plainly could have also adopted project- specific Plan amendments that would have required an alternative route. See 36 C.F.R.

[sect] 219.15(c) (explaining that Forest Service has the authority to "[m]odify the proposed project or activity to make it consistent with applicable plan components"). However, the Draft ROD provides no indication that the

Forest Service considered such an alternative. On the other hand, if the Forest Service did consider alternatives beyond the proposal and no action, the Draft ROD violates NEPA by failing to identify these alternatives and explain why they are not environmentally preferable. 40 C.F.R. [sect] 1505.2(b).

23 Because these objections concern the Draft ROD specifically, Sierra Club could not have raised this issue previously.

Even the limited discussion of the proposal and no action alternative is arbitrary, in that it understates impacts of the pipeline while overstating impacts of the no action alternative. The FEIS states that impacts on forest resources will be long-term and significant. FEIS 5-1, 5-5. The Forest Service has previously disagreed with FERC's conclusion that other impacts would be insignificant[mdash]for example, the Forest Service has explained that the project will have long-term and potentially significant impacts on water resources (FS Comment on DEIS at 31) and on wildlife (id. at 4). The Forest Service has provided no explanation as to how these significant impacts can be squared with the Draft ROD's conclusion that the Atlantic Coast Pipeline proposal "can be implemented without impairing the long-term productivity of National Forest System lands." Draft ROD at 39. The admittedly significant impacts have not been "avoid[ed], rectif[ied], [hellip] or eliminate[d]," and a finding that they would be "mitigated to the extent practical" does not entail the conclusion that these nonetheless-significant impacts will not impair long-term productivity. Draft ROD at 17.

Conversely, the record does not support the Draft ROD's speculation that the no action alternative would lead to adverse environmental impacts. Because the FEIS has not demonstrated a need for the project, supra Part II.D, Appalmad DEIS Comment at 15-45, the FEIS does not support the Draft ROD's dismissal of the no action alternative as failing to meet the project purpose. Draft ROD at 39. Nor does the record support the speculation that the no action alternative would "likely result in the need for an alternate energy means to satisfy the demand for natural gas and energy in the project area." Draft ROD at 39. Because there has been no showing of a need for the gas transportation service that would be provided by the Atlantic Coast Pipeline, there is no reason to believe that rejection of this proposal will lead to the other social, economic, and environmental impacts that would not otherwise occur.

Sierra Club encouraged FERC to prepare a programmatic EIS that evaluated the impacts of other potential pipelines, which would have enabled a determination as to which pipelines were needed to serve consumer demand and electric reliability. Appalachian Mountain Advocates et al., Scoping Comment at 4-12. FERC declined to do so, and it also declined to study how the pipeline would meet demands for electricity. FEIS at 1-19, 3-2. Insofar as denial of the proposal here leads to end users seeking alternate energy from "other natural gas transporters," Draft ROD at 39, applicable legal authorities create a presumption that this would have lesser impacts than the greenfield proposal here. Supra Part IV.B and IV.C.

In summary, the record demonstrates that the proposal will have significant adverse environmental impacts. The record does not support the suggestion that the no action alternative will lead to similar impacts, or the conclusion that the no action alternative will not meet a demonstrated need for the project. Accordingly, the Forest Service's statement that the proposal is the environmentally preferable alternative is arbitrary.

V. The FEIS Understates Impacts of Erosion and Sedimentation by Relying on Unreasonable Assumptions about the Efficacy of BMPs and Mitigation Measures

The FEIS fails to take a hard look at impacts of sedimentation and erosion that will likely result from the Atlantic Coast Pipeline, and the impact of erosion and sedimentation on aquatic habitat. To the extent that the FEIS addresses these issues, it drastically understates these impacts, by overstating the likely effectiveness of mitigation.

The FEIS states that "best management practices" or BMPs will be used to control the impacts of erosion and sedimentation, landslides, and similar hazards. As Sierra Club explained in comments on the DEIS, mitigation and use of BMPs are never 100% effective, and there has been no demonstration that the mitigation plans, or individual erosion control measures, contemplated here will actually work. See Appalmad DEIS Comment at 56, 285, 291-92, 314-325. Indeed, the FEIS candidly acknowledges that because the COM plan has not been finalized, impacts of erosion and sedimentation cannot yet be analyzed. FEIS at 4-125.

Nonetheless, the FEIS relies on an analysis that assumes that erosion control devices, as used in actual practice in construction of the ACP, will be 96% effective. See Soil Erosion and Sedimentation Modeling Report at vi, H-7 (Appendix H to draft Biological Evaluation), Accession No. 20170310-5157(32024298) (March 10, 2017).²⁴ This assumption is plainly unrealistic. Numerous examples show that pipeline construction has led to serious erosion and sedimentation impacts, despite the adoption of mitigation plans. Appalmad DEIS Comment at 291-92. The sedimentation report inappropriately uses effectiveness data from lab studies, which do not represent actual field use. See Forest Service Comment of April 24, 2017, at 38 ("Use of lab testing and efficiency rates are inappropriate for steep slope pipeline construction. Update model with more conservative assumptions about containment efficiencies. Document the literature references that apply to efficiencies in the field, particularly mountainous terrain in WV and VA."). An analysis of the overall efficacy of BMP measures in the field has found much lower control efficacies, with values potentially relevant here ranging from 40 to 60 percent.

Thomas Simpson and Sarah Weammert, Developing Nitrogen, Phosphorus and Sediment Reduction Efficiencies for Tributary Strategy Practices: BMP Assessment Final Report, University of Maryland/Mid-Atlantic Water Program 1-10 (Mar. 31, 2009) (summarizing efficacy of BMPs for, e.g. Urban Erosion and Sediment Control, Riparian Forest Buffers, and Forest Harvesting).²⁵

Because the FEIS relies on assumptions about erosion and sediment control efficacy that the Forest Service itself has recognized are implausible and unrepresentative, the Forest Service cannot adopt the FEIS's conclusion that impacts relating to erosion and sediment will be insignificant. The Forest Service cannot adopt the amendments until a new draft or supplemental EIS is prepared that corrects these flaws and the public is provided with a meaningful opportunity to comment thereon.

²⁴ This report was not included in the DEIS, and was only made available near the end of the comment period on the DEIS. Accordingly, Sierra Club has not had a meaningful prior opportunity to comment on this report.

²⁵ Attached as Exhibit 2.

VI. The Amendments to Monongahela and George Washington National Forest Plan Standards for Soil, Threatened and Endangered Species, Riparian, and Old Growth Are "Directly Related" to Substantive Provisions of the 2012 Planning Rule

Forest Service regulations require the Forest Service to determine whether proposed plan amendments are "directly related" to the substantive provisions of the Forest Planning Rule. 36 C.F.R. [sect] 219.13(b)(5). The provision titled "sustainability" provides that:

A plan developed or revised under this part must provide for social, economic, and ecological sustainability within Forest Service authority and consistent with the inherent capability of the plan area, as follows:

1. ecological sustainability [hellip]

1.

1. [hellip] The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial [hellip] ecosystems and watersheds in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, [hellip]

1.

1. [hellip] The plan must include plan components, including standards or guidelines, to maintain or restore: [hellip]

(ii) Soils and soil productivity, including guidance to reduce soil erosion and sedimentation. [hellip]

(iv) Water resources in the plan area, including lakes, streams, and wetlands; ground water; public water supplies; sole source aquifers; source water protection areas; and other sources of drinking water (including guidance to prevent or mitigate detrimental changes in quantity, quality, and availability).

(3) [hellip]

1. to maintain or restore the ecological integrity of riparian areas in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account: [seven enumerated factors, including "Deposits of sediment."].

36 C.F.R. [sect] 219.8 (emphases added). In addition, the provision entitled "Diversity of plant and animal communities" provides that:

A plan developed or revised under this part must provide for the diversity of plant and animal communities, within Forest Service authority and consistent with the inherent capability of the plan area, as follows:

1. Ecosystem plan components.

1.

1. Ecosystem integrity. As required by [sect] 219.8(a), the plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity.

1.

1. Ecosystem diversity. The plan must include plan components, including standards or guidelines, to maintain or restore the diversity of ecosystems and habitat types throughout the plan area. In doing so, the plan must include plan components to maintain or restore:

[hellip]

1. Rare aquatic and terrestrial plant and animal communities; and

1. The diversity of native tree species similar to that existing in the plan area.

1. Additional, species-specific plan components.

2.

1. The responsible official shall determine whether or not the plan components required by paragraph (a) of this section provide the ecological conditions necessary to: contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern within the plan area.[hellip]

36 C.F.R. [sect] 219.9 (emphasis added). Here, the Forest Service contends that the MNF proposed amendments to plan standards for soil, and threatened and endangered species, are not "directly related" to the substantive rule provisions. Draft ROD at 27. The Forest Service also contends

that the GWNF proposed amendments to soil and riparian standards, as well as the standard relating to old growth (if needed), are not "directly related" to substantive rule provisions. Id.

The Forest Service's contention is contrary to the plain meaning of "directly related."²⁶

For example, the Forest Service has stated that an amendment that "focuses on" an issue is directly related to that issue.²⁷ An amendment can directly relate to a rule provision even without "substantial adverse effects" or a "substantial lessen[ing of] protections"; the Forest Service must also consider "the purpose of the amendment" and beneficial effects. 36 C.F.R. [sect][sect] 219.13(b)(5)(i), (b)(5)(ii)(A).

For the MNF, the Draft ROD notes that "[t]his decision modifies three Forest Plan standards associated with soil stability and productivity" and that "[t]hese three standards [hellip] preclude standard industry pipeline construction methods like those being proposed by ACP." Draft ROD at 28. These amendments plainly are directly related to the planning rule's substantive soil provisions. Table 2 outlines the modified standards related to soils, which will lessen protections related to soils.²⁸ See Draft ROD at 9-10 (Table 2). The Draft ROD even states that sections 219.8(a)(2)(ii) and 291.10(a)(3) of the planning rule "are relevant to the plan amendment" for these three standards - yet maintains that they are not "directly related." Draft ROD at 29-30 (emphasis added). The existence of the COM Plan, which has not yet been finalized, as well as other plans such as the FERC Upland Erosion Control, Revegetation, and Maintenance Plan, Restoration and Rehabilitation Plan, does not mean that the amendments are not directly related to the planning rule's substantive soil provisions. The purpose of the amendments, as well as the lessening of plan protections and the adverse effects the amendments will cause, demonstrate their direct relation to the planning rule's substantive provisions. The Forest Service has not shown that it can allow these modifications yet still satisfy the substantive requirements of the NFMA and ensure that the agency meets its fundamental obligations to protect soil and water resources. See also Appalmad DEIS Comment at 65-70.

Similarly, the modification to Standard TE07, regarding the northern long-eared bat (listed as "threatened" under the Endangered Species Act), is directly related to the planning rule's substantive provisions found in 36 C.F.R. [sect] 219.9. Under Standard TE07, "Special use permits may be authorized in TEP [Threatened, Endangered, Proposed] species habitat if the uses do not adversely affect populations or habitat." Draft ROD at 10 (emphasis added). The amendment deprives the northern long-eared bat of the protection afforded by this standard: "However, this requirement will not apply to the Atlantic Coast Pipeline Construction SUP for the northern long-eared bat where the applicable mitigation measures identified in the COM Plan and SUP must be implemented." Id. (emphasis added). The amendment is plainly "directly related" to the planning rule provisions found in 36 C.F.R. [sect] 219.9. Yet despite noting that section 219.9(b) "is relevant to the plan amendment," the Draft ROD insists that it is not "directly related." Draft ROD at 31.

26 Because the Forest Service's position is articulated in the Draft ROD, Sierra Club could not comment on it before now.

27 81 Fed. Reg. 90723, 90725 (Dec. 15, 2016) ("For example, the 2012 Rule's requirements to establish a riparian management zone (36 CFR 219.8(a)(3)) would apply only if the plan amendment focuses on riparian area guidance.") (emphasis added, quoting FSH 1909.12, chapter 20, section 21.3).

28 Courts have explained that the Forest Service must "maintain" and "ensure" soil productivity. See *Ecology Ctr. v. Austin*, 430 F.3d 1057, 1062 (9th Cir. 2005) (Among the "substantive requirements" of NFMA, "the Forest Service must maintain soil productivity. 16 U.S.C. [sect] 1604(g)(3)(C)."), cert. denied sub. nom. *Mineral County v. Ecology Ctr., Inc.*, 549 U.S. 1111 (2007), overruled on other grounds by *Lands Council v. McNair*, 537 F.3d 981 (9th Cir. 2008); *Friends of the Columbia Gorge, Inc. v. Elicker*, 598 F. Supp. 2d 1136, 1155 (D. Or. 2007) ("NFMA also requires USFS to ensure . . . the productivity of the soil.").

For the GWNF, there are proposed modifications to five Forest Plan standards that are "designed to protect soil and riparian resources on the Forest which also serves to protect water quality." Draft ROD at 32. These five standards "preclude standard industry pipeline construction methods like those being proposed by ACP." Id. The amendments, outlined in Table 3 of the Draft ROD (at pp. 11-12) are plainly "directly related" to the substantive provisions found in 36 C.F.R. [sect] 219.8. See also Draft ROD at 32-33 (planning requirements of 36 CFR [sect] 219.8(a)(2)(ii), [sect] 219.8(a)(2)(iv), and [sect] 219.8(a)(3)(i) "are relevant to this amendment"). The Draft ROD again maintains that they are nevertheless not "directly related," concluding without adequate support that modification of these standards "will minimize adverse environmental impacts to soil and riparian resources and

will not cause substantial long-term adverse effects, nor a substantial lessening of protections, to the soil and riparian resources." Draft ROD at 34. Cf. Appalmad DEIS Comment at 74-76. In addition to not adequately supporting those flawed conclusions, the Forest Service appears to ignore that an amendment can directly relate to a rule provision even without "substantial adverse effects" or a "substantial lessen[ing of] protections"; as noted above, the Forest Service must also consider "the purpose of the amendment" and even beneficial effects. 36 C.F.R. [sect][sect] 219.13(b)(5)(i), (b)(5)(ii)(A).

The Draft ROD also maintains that any necessary modification to Standard FW-85, related to management of old growth, would meet the planning rule requirements of section 219.8(a)(1) because "[g]iven the amount of the impacted possible old growth compared to the amount identified across the entire Forest, it is not likely that there would be any 'substantial adverse effects' to the existing old growth communities on the GWNF." Draft ROD at 13. Notably, the need to modify this standard has not even been determined yet, as it "depend[s] upon Atlantic completing an old growth inventory on the portion of the corridor on the GWNF using the specified inventory criteria." Id. at 35. The Draft ROD states that if the standard does need to be amended, the relevant planning rule requirement is 36 C.F.R. [sect] 219.8(a)(1). Although the Forest Service estimates that construction would impact 81.6 acres of "possible old growth" on the GWNF, it nonetheless concludes that "there would not be any 'substantial adverse effects' to the ecological integrity of the existing old growth communities on the GWNF" - and that, consequently, "the planning rule requirement at [sect] 219.8(a)(1), is not 'directly related' to the amendment and this rule provision need not be applied." Id. at 35-36. The Forest Service does not provide adequate support for its contention that the estimated acreage of impacted "possible old growth" can be compared to the total estimate acreage of possible old growth in the three major forest community types across the GWNF and Jefferson National Forest in 2020, in order to conclude that there will not be substantial adverse effects. Id. at 36. See also Appalmad DEIS Comment at 80 ("Old growth communities are extremely rare in the southern Appalachians, perhaps occupying only about one half of one percent (0.5%) of the total forest acreage. Any existing old growth therefore merits protection."). Moreover, even if the Forest Service could support its finding of no substantial adverse effects, the agency once again appears to ignore that there are other criteria at play when determining whether an amendment directly relates to a rule provision. See 36 C.F.R. [sect][sect] 219.13(b)(5)(i), (b)(5)(ii)(A).

Here, where the amendments modify protections adopted in the Forest Plans and replace them with a different set of proposed mitigation and protections, these amendments plainly are directly related to the planning rule's substantive provisions related to soils, riparian and water resources, ecological integrity of terrestrial ecosystems, and threatened and endangered species. Because these amendments directly relate to these substantive provisions of the planning rule, the Forest Service must determine whether the amendments satisfy the substantive provisions. 36 C.F.R. [sect] 219.13(b)(5). This requires more than a mere determination that the amended rules will not cause adverse effects or a lessening of protections: in adopting the planning rule, the Forest Service contemplated that application of the rule's substantive provisions would require an increase in protection beyond what the prior plan provided. See, e.g., 81 Fed. Reg. at 90725. The Forest Service has not made this required assessment here. The Forest Service has not determined whether the amended rules will suffice to "maintain and restore" the protected values. 36 C.F.R. [sect] 219.8(a) (emphasis added). Absent such a determination, the Forest Service cannot adopt the proposed amendments. (Although the Forest Service's findings of no adverse effects are not sufficient for purposes of the planning rule, we further note that these findings are themselves unsupported.)

Finally, for modifications of the plan standards for utility corridors, ANST, scenic integrity objectives, and (if needed) road reconstruction, the Forest Service contends that the amendment "meets the relevant substantive rule requirements and consequently, there is no need to make a determination as to whether the Rule requirement is directly related to these parts of the amendment." Draft ROD at 27. But the Draft ROD does not adequately demonstrate that the relevant substantive rule requirements have been met. For example, with regard to the ANST crossing, the amendment would add the italicized portion to Standard 4A-025: "Locate new public utilities and rights-of-way in areas of this Rx area where major impacts already exist, with the exception of the

Atlantic Coast Pipeline right-of-way." Draft ROD at 12. The standard is "intended to minimize impacts to the ANST," while the amendment would "allow ACP to cross the ANST at a location where no other major impacts already exist." Id. at 34. As pointed out in comments, "[t]he greatest concern with respect to the crossing of the [Appalachian Trail] is the questionable feasibility of Atlantic's plan to use the Horizontal Directional Drill (HDD) method or contingency Direct Pipe Installation (DPI) method to install 4,639 feet of pipeline beneath the" trail. Appalmad DEIS Comment at 76 (footnote omitted). See also id. at 77-78 (deficiencies in DEIS related to analysis of ANST crossing impacts). The Forest Service has not shown that the amendment meets the substantive requirements of the planning rule, including 36 CFR 219.10(b)(1)(vi). The Forest Service has similarly failed to demonstrate that the other modifications - related to utility corridors,²⁹ scenic integrity objectives,³⁰ and road reconstruction³¹ (if needed) - meet the relevant substantive rule requirements.

29 In the DEIS, the proposal was for the ACP pipeline route to be within a newly designated 50-foot wide utility corridor. Draft ROD at 31; see also Appalmad DEIS Comment at 71-74. In the Draft ROD, the Forest Service instead proposes an amendment to exempt the ACP right-of-way from being designated as a utility corridor. Draft ROD at 11. While the Draft ROD offers a brief explanation of this decision, id. at 32, it does not adequately support its assertion that the amendment meets the relevant substantive rule requirements, including but not limited to 36 C.F.R. [sect] 219.10(a)(3).

30 For example, the Draft ROD notes that the VIA had not been finalized as of the issuance of the FEIS, notes only that the FS "has consulted with FERC on additional mitigation measures to reduce visual impacts of the operational right-of-way" but cannot guarantee their inclusion in the final SUP and COM Plan (such that the Forest Service can only "expect [that] the ACP Project would achieve the desired SIO objective within five years of completing construction, meeting Forest plan standard FW-182 as amended"), and acknowledges that "even with mitigation, the foreground view from the portion of the Shenandoah Mountain Trail impacted by the ACP route (200 - 225 feet) would be reduced from an SIO of Moderate to Low." Draft ROD at 36-37 (emphasis added). See also Appalmad DEIS Comment at 85. Despite the missing information, plans that are still in draft form, and known impacts, the Forest Service nonetheless concludes that with the implementation of mitigation measures, "this planning rule requirement to provide for scenic character will be met." Draft ROD at 37.

31 The Forest Service's contention that reconstruction of Forest Road 281 "would not substantially affect the outstandingly remarkable values associated with the Cowpasture River Segment B" is not adequately supported. Draft ROD at 14. See Draft ROD at 37 (cursory assertion that "the outstanding remarkable values of Cowpasture River Segment B would still be protected if the standard is modified"); id. ("Should it be determined that reconstruction of this segment of road is needed for long term monitoring of the ACP, measures that are necessary to protect the resource values of Cowpasture River Segment B would be incorporated into SUP and the COM Plan." (emphasis added).) See also Appalmad DEIS Comment at 82-84.

VII. Cumulative Impacts

FERC failed to comply with NEPA's requirement to fully consider the cumulative impacts of the pipeline. See Appalmad comments 353-89. A cumulative impact is the

[I]mpact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively

significant actions taking place over a period of time.

40 C.F.R. [sect] 1508.7. EPA guidance on cumulative impacts states that "[s]patial and temporal boundaries should not be overly restrictive in cumulative impact analysis." Appalmad DEIS Comments at 356, quoting CEQ, Considering Cumulative Effects Under the National Environmental Policy Act p. 15 (1997). The FEIS unreasonably restricts the geographic and temporal scope of analysis, as well as the types and magnitude of the cumulative impacts considered (FEIS at 4-591, 4-596).

FERC unreasonably restricted the temporal boundary of its cumulative impacts analysis to "up through about mid-2019." FEIS at 4-592. The Forest Service correctly criticized FERC's arbitrary and truncated restriction of the analysis period, explaining that it "seems unrealistically optimistic about the rate of environmental recovery," especially because "effects to forest could persist for a century or more, and sedimentation and slope stability impacts could persist well beyond the in-service date." FS Comments on DEIS at 44.

FERC also unreasonably restricted the geographic boundaries of its cumulative impacts analysis to the vicinity of the pipeline. FEIS at 4-592; Appalmad DEIS Comments at 354. This decision contravenes EPA guidance on cumulative impacts that says it may be necessary to look beyond the "immediate area of the proposed action" on the scale of "human communities, landscapes, watersheds, or airsheds." CEQ, Considering Cumulative Effects under the National Environmental Policy Act, p. 12 (1997). FERC persisted in analyzing cumulative impacts to water resources and wetlands, vegetation, wildlife, fisheries and aquatic resources, and special status species on a HUC10 sub-watershed level, which as Commenters noted, is inappropriate for certain impacts, such as impacts to vegetative resources and resident wildlife, which would be better assessed at the ecosystem level. Id. at 15; Appalmad Comments at 354-55. The Forest Service reinforced this point in its comments on the DEIS: "While a watershed may be the logical/appropriate effects zone for aquatic resources, that logic does not extend to terrestrial wildlife. FS Comments on DEIS at 44. While the Forest Service provided useful suggestions for FERC to follow, including considering "overall range size for endemics/local populations and home range size for larger/very mobile species," FERC continued to use the HUC10 sub- watershed level analysis for these resources in the FEIS. See, e.g., FEIS 4-608 to 4-609 (wildlife cumulative impacts).

Finally, FERC unreasonably restricted the categories of actions considered in its cumulative impacts analysis to eight types of projects. FEIS at 4-596. The Forest Service likewise criticized this narrow approach, pointing out that restricting the cumulative effects analysis to only projects that fit within eight project types "would seem to be a fatal procedural flaw." FS DEIS Comments at 44. The Forest Service further correctly noted that "[u]sing this approach undermines the legitimacy of conclusions drawn from this cumulative effects analysis." Id. The FEIS does nothing to address this "fatal flaw."

VIII. Conclusion

For the reasons stated above, the Draft ROD and FEIS fail to meet the Forest Service's obligations under the National Forest Management Act and NEPA. Sierra Club requests that the Forest Service reject the proposed amendments and refuse to authorize the pipeline. If the Forest Service does not do so, the Forest Service must ensure that a new draft EIS, which cures the deficiencies identified below, is prepared and circulated for public comment prior to taking any other action on the proposal.

Sincerely,

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