UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of

MOUNTAIN VALLEY PIPELINE, LLC Docket No. CP19-14-000

REQUEST FOR REHEARING OF ORDER ISSUING CERTIFICATE FOR MOUNTAIN VALLEY PIPELINE, LLC'S SOUTHGATE PROJECT

Pursuant to section 19(a) of the Natural Gas Act ("NGA"), 15 U.S.C. §717r(a) and Rule 713 of the Federal Regulatory Energy Commission's ("FERC") Rules of Practice and Procedure, 18 C.F.R. § 385.713, Appalachian Mountain Advocates, Center for Biological Diversity, and Sierra Club, on behalf of Appalachian Voices, Blue Ridge Environmental Defense League, Center for Biological Diversity, Chesapeake Climate Action Network, Haw River Assembly, and the Sierra Club (collectively, "Intervenors") hereby request rehearing of the Federal Energy Regulatory Commission's ("FERC") Order Issuing Certificate ("Certificate" or "Certificate Order") issued June 18, 2020, in the above-captioned proceeding for Mountain Valley Pipeline, LLC's ("Mountain Valley") Southgate Project ("the Project"). *See* Mountain Valley Pipeline, LLC, 171 FERC ¶ 61,232 (June 18, 2020). Intervenors' timely motions to intervene in this proceeding were granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(c)(1) and 385.214(a)(2). *See id.* at ¶ 14 n.22. Thus, the Intervenors are "parties" to this proceeding, 18 C.F.R. § 385.214(c), and have standing to file this request for rehearing. See 15 U.S.C. § 717r(a); 18 C.F.R. § 385.713(b).

Intervenors request that the Certificate Order and deficient final environmental impact statement ("FEIS") be withdrawn and the environmental analysis and public convenience and necessity analysis be redone in a manner that complies with FERC's obligations pursuant to the

National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., and the Natural Gas Act ("NGA"), 15 U.S.C. § 717 et seq.

STATEMENT OF RELEVANT FACTS

FERC's Certificate Order authorizes Mountain Valley to construct the Southgate Expansion Project, which includes over 75 miles of 16- and 24-inch diameter pipeline with the capacity to carry 375,000 dekatherms (Dth) per day of gas from the terminus of Mountain Valley's MVP Mainline System at Transcontinental Gas Pipe Line, LLC's (Transco) Compressor Station 165 in Pittsylvania County, Virginia, to connections with Dominion Energy North Carolina's (Dominion) local distribution system in Rockingham County, North Carolina (the Dan River Interconnect) and Alamance County, North Carolina (the Haw River Interconnect). The Certificate Order supports its finding of market need for the project with Mountain Valley and Dominions's precedent agreement for 300,000 dekatherms (Dth) per day of firm transportation capacity, roughly 80 percent of the pipeline's capacity. Mountain Valley claims that the increased capacity is necessary not for electrical generation but to supply residential, commercial, and industrial customers. The Certificate also grants Mountain Valley's requested rate of return, including its requested 14 percent return on equity.

Notice of Mountain Valley's application was published in the Federal Register on November 26, 2018. 83 Fed. Reg. 60,420 (Nov. 26, 2018). Intervenors filed a timely Motion to Intervene and Protest on December 10, 2018. Accession No. 20181210-5098. On July 26, 2019, FERC issued its Notice of Availability of the Project's Draft Environmental Impact Statement (DEIS). On September 16, 2019 Intervenors submitted detailed comments on the draft environmental impact statement. Accession No. 20190916-5161. On January 20, 2020, Intervenors submitted a request for a supplemental or revised DEIS to address numerous

deficiencies in the DEIS and the substantial new information filed by Mountain Valley after the close of the public comment period on the DEIS. Accession No. 20200128-5120. On February 14, 2020, FERC issued its Final Environmental Impact Statement (FEIS) without revising or supplementing the DEIS or providing an opportunity for the public to comment on the new information. Accession No. 20200214-3010. On June 18, 2020, FERC issued its Certificate Order. Mountain Valley Pipeline, LLC, 171 FERC ¶ 61,232 (June 18, 2020).

CONCISE STATEMENT OF ALLEGED ERRORS

1. FERC violates the NGA by failing to meaningfully assess and consider the market demand for the Project. FERC's failure to meaningfully consider substantial evidence in the record showing the lack of market demand for the Project's capacity renders its finding that the project is required by the public convenience and necessity, 15 U.S.C. § 717f(c)(1)(A), unreasonable. FERC's decision to rely solely on the existence of a precedent agreement in the presence of contrary evidence showing a lack of market demand runs counter to its Certificate Policy Statement. Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227, 61, 744, 61,747 (Sept. 15, 1999) ("Certificate Policy Statement"), *clarified*, 90 FERC ¶ 61,128 (Feb. 9, 2000), *further clarified*, 92 FERC ¶ 61,094, 61,373 (Jul. 28, 2000).

2. FERC violates the NGA by failing to rationally support its decision to approve an unreasonably high rate of return on equity of 14 percent. FERC's blind reliance on past precedent, without any effort to evaluate the risk faced by the developers of this specific project, renders its finding that the project is required by the public convenience and necessity, 15 U.S.C. § 717f(c)(1)(A), unreasonable. *See Sierra Club v. FERC*, 867 F.3d 1357, 1378 (D.C. Cir. 2017). FERC's treatment of Mountain Valley as a new market entrant building a greenfield pipeline instead of an existing natural gas company constructing a system extension is contrary to FERC precedent. *Cheyenne Connector, LLC*, 168 FERC ¶ 61,180 at PP 51-52.

3. FERC violates NEPA by failing to adequately analyze the climate change impacts of the gas transported by the Project in several ways. First, FERC failed to analyze and disclose reasonably foreseeable upstream greenhouse gas effects. *Birckhead v. FERC*, 925 F.3d 510, 517–19 (D.C. Cir. 2019). Second, FERC fails to acknowledge that the greenhouse gas emissions from the combustion of the gas are indirect effects of the projects. 40 C.F.R. § 1508.8(b); 40 C.F.R. § 1502.16(b); *Sierra Club v. FERC*, 867 F.3d 1357, 1371–74 (D.C. Cir. 2017). Third, FERC failed to evaluate the impacts of the Project's direct and indirect GHG emissions, including their significance and

cumulative impact. *Sierra Club*, 867 F.3d at 1374–75; *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1217 (9th Cir. 2008).

4. FERC violates NEPA and the NGA by failing to adequately consider and disclose the Project's greenhouse gas emissions, including the volume of indirect emissions, climate impacts, and their significance. FERC's failure to adequately consider these emissions as part of its public convenience and necessity determination is contrary to NEPA's goals of informed decisionmaking and informed public comment and the NGA's requirement that FERC determine that the Project's public benefits outweigh its adverse impacts, including environmental impacts. *Sierra Club*, 867 F.3d at 1373. *See also Minisink Residents for Envtl. Pres. and Safety v. FERC*, 762 F.3d 97, 102-03 n.1 (D.C. Cir. 2014); 15 U.S.C. § 717f(e).

5. FERC violates NEPA by failing to adequately analyze the environmental and health impacts of the Project's non-greenhouse gas air emissions. FERC's reliance on Mountain Valley's alleged compliance with National Ambient Air Quality Standards pursuant to future permits imposed by other agencies to dismiss the significance of localized air impacts is arbitrary and capricious. *Sierra Club*, 867 F.3d at 1375 (citing *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1122–23 (D.C. Cir. 1971)). Further, FERC failed to take a hard look at the cumulative impacts and environmental justice implications resulting from the proximity of other polluting facilities, such as Transco Station 166. *See Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 92 (4th Cir. 2020). Finally, FERC's reliance on flawed air dispersion modelling performed by Mountain Valley renders its decision arbitrary and capricous. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

6. FERC violates NEPA by improperly relying on inadequate mitigation measures to dismiss as insignificant the Project's impacts to aquatic resources from erosion and sedimentation. *See Nat'l Parks Conservation Ass'n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001), abrogated on other grounds by *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 157 (2010). FERC refused to meaningfully consider evidence demonstrating that the mitigation measures it relies on here to reduce aquatic impacts below significance have proven ineffective in numerous instances, including on the MVP Mainline project constructed by Mountain Valley. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998).

7. FERC violates NEPA by failing to adequately consider the Project's cumulative impacts to aquatic resources in combination with other reasonably foreseeable projects. FERC's conclusions that the aquatic impacts of the Project and those of

other reasonably foreseeable projects would not be significant because they would not overlap in space or time are not supported by the evidence, rendering FERC's determination of cumulative impacts arbitrary and capricious. *State Farm*, 463 U.S. at 43.

8. FERC violates NEPA by failing to take a "hard look" at the direct, indirect, and cumulative impacts of the projects on protected bats, migratory birds, aquatic species, and plants. For example, FERC fails to adequately analyze the direct and indirect impacts because it bases findings of no significant impact (FONSI) and "not likely to adversely affect" (NLAA) determinations for special status species on unspecified and undetermined mitigation measures, using purely perfunctory and conclusory statements about the efficacy of mitigation measures. *Ohio Valley Envtl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177, 206 (4th Cir. 2009) (citing *O'Reilly v. U.S. Army Corps of Engr's*, 477 F.3d 225, 231 (5th Cir. 2007)). FERC also makes conclusory statements about impacts to listed species without completing species surveys or Endangered Species Act (ESA) Section 7 consultations with the United States Fish and Wildlife Service, thus failing to demonstrate a "rational connection between the facts found and the choice made." *State Farm*, 463 U.S. at 43 (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)). FERC's assessment of sedimentation impacts on aquatic species is further undermined by its failure to account for long-term increases in runoff and erosion as a result of land cover change within the pipeline right-of-way. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). Finally, FERC never performed an analysis of the cumulative impacts of the project on protected aquatic species in conjunction with other past, present, and reasonably foreseeable projects, instead relying on other agencies' future permitting and consultation processes to reach its FONSI. 40 C.F.R. § 1508.7; *Natural Res. Def. Council v. Hodel*, 865 F.2d 288, 298-99 (D.C. Cir. 1988); *Res. Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1306 (9th Cir. 1994).

9. FERC violates NEPA by failing to include sufficient information in its draft EIS to permit meaningful public review and comment. 40 C.F.R. § 1502.9(a). The Draft Environmental Impact Statement (DEIS) was so lacking in information and analysis that the public (and FERC's sister federal agency) could not properly assess the project's impacts or critique FERC's assessment thereof. FERC's deficient DEIS and its refusal to provide a revised or supplemental EIS for public review and comment thus violates NEPA's public participation requirements. *Burkey v. Ellis*, 483 F. Supp. 897, 915 (N.D. Ala. 1979); *Habitat Educ. Ctr. v. U.S. Forest Servs.*, 680 F. Supp. 2d 996, 1005 (E.D. Wis. 2010) (emphasis added), *aff'd sub nom. Habitat Educ. Ctr., Inc. v. U.S. Forest Serv.*, 673 F.3d 518 (7th Cir. 2012).

STATEMENT OF ISSUES

I. FERC's Certificate Order Violates the Natural Gas Act

A. FERC's Narrow Reliance on Mountain Valley's Precedent Agreement and Dismissal of Evidence Showing a Lack of Market Demand for the Project's Capacity Renders Its Finding of Public Convenience and Necessity Arbitrary and Capricious

FERC violated the Natural Gas Act by failing to establish the public market demand for the gas proposed to be carried by the Project and relying exclusively on Mountain Valley's precedent agreement to establish need for and public benefits of the Project. Under Section 7(c) of the NGA, a proponent of an interstate natural gas pipeline must obtain a "certificate of public convenience and necessity" from FERC. 15 U.S.C. § 717f(c)(1)(A); *Minisink Residents for Envtl. Preservation and Safety v. FERC*, 762 F.3d 97, 101 (D.C. Cir. 2014). "The statute provides that a certificate shall be issued to any qualified applicant upon a finding that . . . the proposed service and construction is or will be *required* by the present or future *public convenience and necessity*." *Minisink*, 762 F.3d at 101 (quoting 15 U.S.C. § 717f(e)) (internal quotation marks and ellipses omitted) (emphasis added). Because such certificates confer federal eminent domain power upon the applicant, they may only be issued for projects that serve a "public use" in accord with the Fifth Amendment to the United States Constitution. *See Kelo v. City of New London*, 545 U.S. 469 (2005). Those polestars of "public use" and "public convenience and necessity" must at all times guide FERC's consideration of applications to construct new pipelines, notwithstanding FERC's past precedent or policy statements. *See Pac. Gas & Elec. Co. v. FPC*, 506 F.2d 33, 38–39 (D.C. Cir. 1974) ("When the agency applies the policy in a particular situation, it must be prepared to support the policy just as if the policy statement had never been issued. An agency cannot escape its responsibility to present evidence and reasoning supporting its substantive rules by announcing binding precedent in the form of a

general statement of policy." (internal citations omitted)). Here, substantial evidence supplied to FERC demonstrates that the precedent agreement between Mountain Valley and its single customer, Dominion, is not sufficient to establish that the Project is required by the present or future convenience and necessity. FERC's Certificate Order thus violates the Natural Gas Act.

FERC uses a policy statement that it issued in 1999 to guide its certificate decisions. Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227, 61,747 (Sept. 15, 1999) ("Certificate Policy Statement"), *clarified*, 90 FERC ¶ 61,128 (Feb. 9, 2000), *further clarified*, 92 FERC ¶ 61,094, 61,373 (Jul. 28, 2000). On its face, FERC's 1999 Certificate Policy Statement represented a shift in FERC's evaluation of certificate applications away from narrow reliance on the existence of precedent agreements towards a more holistic analysis. Historically, FERC policy required applicants to show market support for a project through contractual commitments for at least 25 percent of the proposed pipeline's capacity. Certificate Policy Statement at ¶ 61,743. But in 1999, FERC revised its policy, acknowledging that the percentage-of-capacity test was inadequate because, in part, "[t]he amount of capacity under contract . . . is not a sufficient indicator by itself of the need for a project." *Id.* at ¶ 61,744.

The 1999 policy statement sought to remedy problems caused by FERC's long-standing sole reliance on precedent agreements. To that end, it established a list of means by which the Commission could assess market need, one of the indicators of public benefit for a proposed project. *See id.* at ¶ 61,747. Those means included, but were not limited to "precedent agreements, demand projections, potential cost savings to consumers, or a comparison of projected demand with the amount of capacity currently serving the market." *Id.* In clarifying its policy, FERC explicitly stated that "as the natural gas marketplace has changed, the Commission's traditional factors for establishing the need for a project, such as contracts and

precedent agreements, may no longer be a sufficient indicator that a project is in the public convenience and necessity." Order Clarifying Statement of Policy, 90 FERC ¶ 61,128, 61,390 (Feb. 9, 2000).

Despite the fact that a central, stated purpose of the new policy was to reduce FERC sole reliance on precedent agreements, the agency stubbornly adheres to that outdated approach in its Section 7 Certificate proceedings. Here, FERC relied exclusively on the existence of the Dominion precedent agreement for roughly eighty percent of the Project's capacity to establish the market need for the Project. Certificate, ¶39 ("[N]othing in the Certificate Policy Statement or in any precedent construing it suggest that the policy statement requires, rather than permits, the Commission to assess a project's benefits by looking beyond the market need reflected by the applicant's precedent agreements with shippers. Given the substantial financial commitment required under these agreements by project shippers, we confirm that precedent agreements are the best evidence that the service to be provided by the project is needed in the markets to be served. Moreover, it is current Commission policy to not look beyond precedent or service agreements to make judgments about the needs of individual shippers."); *id.*, ¶41 ("Given the uncertainty associated with long-term demand projections, including those presented in the studies noted by commenters and applicant above, where an applicant has precedent agreements for long-term firm service, the Commission deems the precedent agreements to be the better evidence of demand."). Although FERC discussed the extrinsic evidence submitted by Commenters regarding the lack of need for the Project's capacity, *id.*, ¶¶31–36, FERC nonetheless refused to consider the need for the Project's capacity in the context of regional demand for gas and instead relied solely on the existence of the precedent agreement with Dominion. *Id*., ¶ 41 ("We disagree with commenters' assertion that the Commission should

examine the need for pipeline infrastructure on a region-wide basis.); *id.*, ¶51 ("In conclusion, we find that the precedent agreement signed by Dominion for approximately 80% of the Southgate Project's capacity adequately demonstrates that the project is needed.").

In its Certificate Order, FERC recites Mountain Valley's claim that the gas to be transported by the Project is necessary to "make bundled gas sales primarily to residential and small- and medium-sized commercial customers for heating, cooking, and other end-uses typical of natural gas local distribution company customers." *Id.*, ¶34 n.60. In its application, Mountain Valley justifies the need for the Project primarily by referenced to future increased demand for natural gas in the region. Resource Report 1 at 1-2, August 2018. But objective evidence in the record shows that such demand is unlikely to increase, and that any such increase could be met with expansion of efficiency measures and renewables. FERC's failure to meaningfully consider this evidence undermines its finding that the Project is required by the public convenience and necessity.

As Intervenors explained in their comments on the draft environmental impact statement (DEIS) for the project, an analysis performed by the Applied Economics Clinic ("AEC Report") confirms that the increased demand that Mountain Valley claims necessitates the Project is illusory. *See* Elizabeth A. Stanton, PhD, and Eliandro Tavares, *Analysis of the Mountain Valley Pipeline Southgate Project* (July 25, 2019), attached as Exhibit A to Intervenors' Comments on Draft Environmental Impact Statement for Mountain Valley Pipeline, LLC's Proposed Southgate Project (Accession No. 20190916-5161) (DEIS Comments). Because Mountain Valley has provided no evidence that the Project or Dominion[1] will use the additional supply to provide gas

[1] The report refers not to Dominion, but to its predecessor PSNC Energy, which was acquired by Dominion. The distinction is not material to the report's analysis.

to electric generators, the report focuses on gas demand for final use by residential, commercial, and industrial customers. AEC Report at 7. The report finds that Mountain Valley's claims of increased future demand are uniformly inflated. Mountain Valley relies on a nationwide projection to claim that gas demand is likely to increase by 0.9 percent per year between 2017 and 2040, but the Energy Information Administration (EIA)'s projection for the region that would be served by the Project only foresees growth of 0.2 percent annually for the period analyzed. *Id.* at 8. Further, Mountain Valley wrongly cites an annual increase of in demand for gas in North Carolina of 7.6 percent from 2010 to 2017 as evidence of need for the Project. That figure, however, includes the increase in consumption of gas both for direct use and for electric generation, whereas there is no evidence the Project will be used to deliver gas for electric customers. North Carolina's direct gas consumption by residential, commercial, and industrial customers—which is what the project proposes to serve—actually fell by an annual rate of 0.1 percent between 2010 and 2017. *Id.* at 9. Finally, MVP uses an inflated projection of future population growth and fails to acknowledge that per capita gas consumption has been steadily falling due to increased energy efficiency and other advances when claiming that future population growth necessitates increased supply. *Id.* at 9-10.

Table 1: North Carolina gas and population growth, MVP LLC and corrections

MVP LLC Claims	AEC Fact Check
MVP claims: **7.6 percent** historical (2010-2017) annual growth in North Carolina gas demand (including gas for electricity)	Fact check: **-0.1 percent** historical (2010-2017) annual growth in North Carolina gas demand (excluding gas for electricity)
MVP claims: **0.9 percent** annual growth in future gas sales (2017-2040) based on all U.S. expected growth from EIA forecast	Fact check: **0.2 percent** annual growth in future gas sales (2017-2040) for the South Atlantic region from EIA forecast
MVP claims: **1.6 percent** annual growth in future gas use (2020-2035) for the Southeast, which MVP states is largely due to population growth	Fact check: North Carolina's population is only expected to grow **1.0 percent** annually (2020-2035)

Sources: EIA. North Carolina Natural Gas Consumption by End Use. Available at: https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_snc_a.htm. EIA, AEO 2019, Reference Case. Available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=2-AEO2019&region=1-5&cases=ref2019&start=2017&end=2050&f=A&linechart=ref2019-d111618a.3-2-AEO2019.1-5&map=ref2019-d111618a.5-2-AEO2019.1-5&sourcekey=0. North Carolina Office of State Budget and Management, County/State Population Projections. Available at: https://www.osbm.nc.gov/demog/county-projections. Note: South Atlantic region includes Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, and the District of Columbia.

Likewise, comments submitted by the North Carolina Department of Environmental Quality (NCDEQ) controvert FERC and Mountain Valley's claim that the Project's additional capacity is needed to meet future demand in the service area. *See* NCDEQ, Comment Regarding Demonstrated Need and the Public Interest of the Mountain Valley Pipeline- Southgate Extension Project, Docket Number: PF18-4-000 (Nov. 5, 2018) (Accession No. 20181106-5000). NCDEQ explained that, even assuming an eleven percent increase in Dominion's design day requirements, the project would supply far more capacity than needed, roughly doubling Dominion's capacity in the area to be served by the Project. *Id.* at 3–5. In its later comments on the DEIS, NCDEQ noted that "[d]omestic commercial and residential natural gas demand is flat." NCDEQ, North Carolina Department of Environmental Quality Comment on the draft Environmental Impact Statement (DEIS) for the Southgate Project, proposed by Mountain Valley Pipeline, LLC: Docket Number: CP19-14-000 at 3 (Sept. 16, 2019) (Accession No. 20190916-5167) (citing U.S. Energy Information Administration, EIA Expects Relatively Flat

Natural Gas Prices, Continued Record Production Through 2020 (January 17, 2019), *available at* https://www.eia.gov/todayinenergy/detail.php?id=38052).

Mountain Valley's claims that future demand growth necessitate the Project's added capacity are further undermined by North Carolina Governor Roy Cooper's Executive Order 80, which directs North Carolina to transition to a clean energy economy and address the impacts of climate change on the state. EO 80, which was issued in October of 2018, establishes a goal of forty percent reduction in statewide greenhouse gas (GHG) emissions from 2005 levels by 2025, and directs the NCDEQ to develop a Clean Energy Plan. Executive Order No. 80 – North Carolina's Commitment to Address Climate Change and Transition to a Clean Energy Economy (October 29, 2018) at 1, *available at* https://governor.nc.gov/documents/executive-order-no-80-north-carolinas-commitment-address-climate-change-and-transition. This plan will "foster[] and encourage[] the utilization of clean energy resources, including energy efficiency," thus further reducing demand for gas. *Id.* at 2. The initial report on the Clean Energy Plan released by NCDEQ specifically encourages the reduction of carbon emissions from the sectors Mountain Valley claims will require additional capacity in the future—"such as fuel use in buildings, homes, industrial processes, and agricultural operations"—through switching from direct fossil fuel power sources to clean electric power. NCDEQ, North Carolina Clean Energy Plan, Transitioning to a 21st Century Electricity System, Policy and Action Recommendations at 139–40 (October 2019), *available at* https://deq.nc.gov/energy-climate/climate-change/nc-climate-change-interagency-council/climate-change-clean-energy-16. As the NCDEQ explained in its comments on the DEIS, FERC's own guidance provides that project applicants should "[d]escribe the effect of any state or regional energy conservation, load-management, and demand-side management programs on the long-term and short-term demand for the energy to

be supplied by the project." NCDEQ DEIS Comments at 3 (citing FERC, Guidance Manual for Environmental Report Preparation (2002)).

FERC's Certificate Order fails to in any way address the impact of North Carolina's commitment to a clean energy future on the need for future pipeline capacity. And despite reciting certain of Intervenors' other critiques, FERC fails to meaningfully grapple with them. Certificate, ¶¶ 32–35. Rather, it merely notes that Mountain Valley disagrees with some of the claims without in any way resolving the disputed issues of fact, choosing instead to blindly rely on the existence of the Dominion precedent agreement. *Id.*, ¶¶37–38. FERC's failure to rationally consider the substantial evidence showing a lack of any long-term market demand for the Project's capacity renders its Certificate Order arbitrary and capricious and violates the Natural Gas Act's mandate that all approved projects be *required* by the public convenience and *necessity*.

B. FERC's Failure to Rationally Justify Mountain Valley's Fourteen Percent Return on Equity Renders Its Finding of Public Convenience and Necessity Arbitrary and Capricious

FERC's decision to grant Mountain Valley the same inflated fourteen percent return on equity for its Southgate Project that FERC grants for greenfield pipelines by new market entrants was not justified. Relying solely on citations to past decisions without any substantive analysis of market risk for this Project, FERC granted Mountain Valley's requested fourteen percent return on equity. Certificate, ¶57. To support its decision, FERC improperly treated Mountain Valley as a new market entrant despite the Southgate Project being an extension of the previously-approved MVP Mainline. *Id.* FERC's decision will have adverse impacts on ratepayers and incentivizes overbuilding of pipeline infrastructure.

Return on equity has a substantial impact on the recourse rates that FERC allows Mountain Valley to charge its customers and, consequently, the incentive to build a new pipeline instead of utilizing existing infrastructure. In reviewing proposed rates, FERC has an obligation to ensure that pipeline investors do not receive an excessive return. *Sierra Club v. FERC*, 867 F.3d 1357, 1377 (D.C. Cir. 2017). Given the potential for high rates of return to skew incentives towards building new, unnecessary pipelines, it was incumbent on FERC to give closer scrutiny to Mountain Valley's requested return on equity. Instead, FERC's dismissal of that danger relies entirely on past decisions and conclusory statements, without meaningfully assessing the appropriate return on equity according to the specific circumstances of this project

FERC's high return on equity for greenfield pipelines incentivizes overbuilding by offering returns in excess of what can be achieved through other market investments. The return that FERC provides for new pipeline construction is much higher than the returns available in comparable industries or elsewhere in the marketplace. *See* Request for Rehearing of Appalachian Mountain Advocates, et. al. of the October 13, 2017 Certificate Order under CP16-10, et. al. at 22–23 (November 13, 2017) (Accession No. 20171113-5366). The abnormally high returns on equity authorized by FERC, in the absence of any coordinated planning process for pipeline infrastructure, attracts more capital to pipeline building than is needed to serve market demand and results in overbuilding. *See* Institute for Energy Economics and Financial Analysis, Risks Associated With Natural Gas Pipeline Expansion in Appalachia at 9 (April 2016), attached as Exhibit E to Intervenors' Motion to Intervene and Protest. The Certificate Order does not show FERC accounted for those market-skewing incentives when it approved Mountain Valley's requested return on equity.

Even assuming that such a high rate of return would be appropriate for a greenfield pipeline constructed by a new market entrant, that rate is not justified here. As Commissioner Glick noted in his dissent, FERC's grant of the inflated fourteen percent ROE was "unwarranted and gratuitous and will ultimately come at the expense of end-users, such as the residential, commercial, and industrial customers this project is meant to serve." Comm'r Glick Dissent, ¶22. Commission Glick notes that FERC here departed from its "general policy in developing rates for incremental expansion projects," which is "to require a pipeline to use the ROE approved in its last NGA section 4 rate proceeding, or, if the pipeline has not filed a rate case, the ROE from the last litigated NGA section 4 rate case. *Id.* (citing *Cheyenne Connector, LLC,* 168 FERC ¶ 61,180 at PP 51-52). Because of Mountain Valley's ownership of the MVP Mainline, for which it has executed binding service contracts with shippers for the system's full design capacity, it should be treated like an existing pipeline company proposing an expansion, not a new market entrant proposing a greenfield pipeline. *Id.*, ¶¶22–23. Had FERC followed its past precedent, Mountain Valley would have only received a rate of return of 10.55 percent. *Id.*, ¶23. FERC's decision to grant Mountain Valley a fourteen percent return on equity, despite Mountain Valley not facing the same level of financial risk that FERC claims justifies that higher rate for new market entrants, renders FERC's Certificate Order arbitrary and capricious and in violation of the Natural Gas Act.

II. FERC's Environmental Impact Statement Violates the National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires that federal agencies prepare a "detailed" environmental impact statement (EIS) for every "major federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C); *see, e.g.*, *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 757 (2004). The EIS is an information dissemination tool,

allowing federal agencies and the public to understand the environmental impacts before they are commenced and, critically, before resources are irretrievably committed. *See, e.g., Ariz. Cattle Growers' Ass'n v. Cartwright*, 29 F. Supp. 2d 1100, 1116 (D. Ariz. 1998) (quoting *Or. Envtl. Council v. Kunzman*, 817 F.2d 484, 492 (9th Cir. 1987)) (The NEPA requirement to issue an EIS serves two purposes: to "ensure[] that federal agencies have sufficiently detailed information to decide whether to proceed with an action in light of potential environmental consequences" and "to provide[] the public with information on the environmental impact of a proposed action and encourage[] public participation in the development of that information.").

The EIS must include the full consideration of environmental consequences that may result from a proposed project, the alternative means that may be used to minimize those impacts, and the cumulative impact of the project with other foreseeable actions. 40 C.F.R. § 1500.1; *see also Sierra Nevada Forest Prot. Campaign v. Weingardt*, 376 F. Supp. 2d 984, 990 (E.D. Cal. 2005) (These "mandatory" regulations "require that an agency give environmental information to the public and then provide an opportunity for informed comments to the agency."). This process has been described by the courts as one designed to bring "clarity and transparency" to federal decisions affecting the environment. *N.C. Wildlife Fed'n v. N.C. Dep't of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) (citing *Dep't of Transp. V. Pub. Citizen*, 541 U.S. 752, 756-57 (2004)). Only if an EIS is "based on adequately compiled information, analyzed in a reasonable fashion . . . can the public be appropriately informed and have any confidence that the decisionmakers have in fact considered the relevant factors and not merely swept difficult problems under the rug." *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973).

An EIS must provide a full and fair discussion and analysis of significant environmental information and impacts to foster informed decision-making and public participation. 40 C.F.R.

§ 1502.1. This analysis is required to ensure important environmental consequences will not be "overlooked or underestimated." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). A cursory reference to the impacts of an activity does "not satisfy the necessary 'hard look' at the project's environmental impact that is required by NEPA." *Sierra Club v. Austin*, 82 F. App'x 570, 572 (9th Cir. 2003). The adequacy and accuracy of this impacts analysis will guide the sufficiency of the following alternatives, mitigation, and cumulative impacts analyses. *Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 200 (4th Cir. 2005).

In order to ensure agencies take a "hard look" at the environmental impact of their actions, CEQ regulations require a discussion of mitigation measures throughout the EIS. *See* 40 C.F.R. §§ 1502.14(f) (agency must discuss mitigation measures in discussing alternatives to proposed action), 1502.16(h) (agency must discuss mitigation in assessing consequences of the proposed action), 1508.25(b) (agency must discuss mitigation in defining scope of the EIS), 1505.2(c) (agency must discuss mitigation in explaining its ultimate decision); *Robertson*, 490 U.S. at 351–52 (recognizing that an agency must discuss mitigation when defining the scope of the EIS, discussing possible alternatives and impacts, and in explaining its final decision). A sufficient mitigation analysis requires a detailed discussion of mitigation measures and a full consideration of each measure's effectiveness in minimizing the specifically identified project impacts. Courts have found a discussion of general best management practices to be inadequate where those BMPs were not evaluated in light of the unique concerns raised by the proposed project. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998) (mitigation measures inadequate where BMPs designed to reduce erosion from logging on *unburned* areas but project proposed logging in severely burned areas). While courts do not require agencies to develop specific implementation and planning criteria for each measure, a

mere listing of mitigation measures without supporting analytical data has consistently been found to be inadequate in meeting an agency's NEPA duties. *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1381 (9th Cir. 1998) (Service's EIS inadequate where mitigation analysis lacked details of the proposed mitigation measures and consideration of each measure's level of effectiveness); *S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (finding EIS inadequate where BLM, due to uncertainty, failed to consider whether any of the listed mitigation measures would be effective in avoiding impact).

NEPA regulations also require agencies to discuss the cumulative impacts of proposed management activities. Cumulative impacts analysis must consider together the impacts of the project and all other past, present, and reasonably foreseeable actions planned by other federal and state agencies and activities on private land. 40 C.F.R. § 1508.7. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." *Id.* Future impacts must be considered in the context of the current condition of the affected environment. Cumulative impacts analysis cannot be deferred to future studies at the project level. *Kern v. Or. Natural Res. Def. Council*, 284 F.3d 1062, 1075 (9th Cir. 2002) (citations omitted). NEPA "cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until after the first step has already been taken." *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985); *Neighbors of Cuddy Mountain*, 137 F.3d at 1372. The analysis of cumulative impacts should "equip a decisionmaker to make an informed decision about alternative courses of action" and should be "useful to a decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts." *Natural Res. Def. Council v. Hodel*, 865 F.2d 288, 298-99 (D.C. Cir. 1988). Agencies must analyze the "synergistic

effects from implementation of the Plan as a whole." *Res. Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1306 (9th Cir. 1994).

The foregoing NEPA analysis is required to ensure agency decisionmakers consider accurate, high quality information about environmental impacts and to make this information available to the public and encourage involvement in decisionmaking. *See* 40 C.F.R. §§ 1500.1(b), 1500.2(b),(d); *see also Nat'l Audubon Soc'y*, 422 F.3d at 194 (agencies are required to disclose and address different scientific views, not sweep them under the rug); *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443, 446-48 (4th Cir. 1996); *Kettle Range Conservation Grp. v. U.S. Forest Serv.*, 148 F.Supp.2d 1107, 1127 (E.D. Wash. 2001) (agencies' plans to complete surveys "sometime in the future" are insufficient to demonstrate that the agency has taken a "hard look" at impacts). "[P]ublic scrutiny" is "essential to implementing NEPA," and a detailed EIS "serves as a springboard for public comment . . . ." 40 C.F.R. § 1500.1(b); *N. Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1540 (11th Cir. 1990). An agency action is arbitrary and capricious where the agency has "entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)). An uninformed, arbitrary and capricious decision to move forward with a proposed project is not consistent with the strict procedural duties mandated by NEPA. The Certificate Order and the EIS on which it rests do not meet these requirements, as discussed further below.

A. FERC Failed to Adequately Assess and Disclose the Project's GHG Effects

As explained in Commissioner Glick's dissent, the EIS and Certificate Order's treatment of greenhouse gas ("GHG") effects violates both NEPA and the Natural Gas Act. FERC acknowledges the severity of the climate crisis, FEIS at 4-261 to -262, yet refuses to take a hard look at the Project's greenhouse gas effects. *See Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1217 (9th Cir. 2008) (fact that climate change is a global phenomenon does not release agency from duty of assessing effects of *its* action on climate change). This failure to evaluate a major project impact undermines FERC's analysis of alternatives and mitigation, as well as its determination that the Project is in the public interest.

1. FERC Failed to Analyze and Disclose Upstream Greenhouse Gas Effects

NEPA requires agencies to consider indirect effects, which "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). This includes consideration of "growth inducing effects and other effects related to induced changes in the pattern of land use … and related effects on air and water and other natural systems." *Id.* § 1508.8(b). Effects are reasonably foreseeable if they are "sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision." *EarthReports, Inc. v. FERC*, 828 F.3d 949, 955 (D.C. Cir. 2016) (citation omitted).

FERC has acknowledged that "there may well be instances in which upstream gas production is both reasonably foreseeable and sufficiently causally connected to a pipeline project to qualify as an indirect effect." *Birckhead v. FERC*, 925 F.3d 510, 517 (D.C. Cir. 2019). But here, FERC claims that it is not required to take a hard look at these impacts because "there is no evidence in the record that would help the Commission determine the origin of the natural gas that will be transported on the Southgate Project" or "predict the number and location of any

additional wells that would be drilled as a result of any production demand associated with the project." Certificate, ¶97.

This argument fails for several reasons. As an initial matter, FERC should have sought out information to help it "predict the number and location of any additional wells that would be drilled as a result of production demand created by the Project." *Birckhead*, 925 F.3d at 517. "It should go without saying that NEPA … requires the Commission to at least *attempt* to obtain the information necessary to fulfill its statutory responsibilities." *Id*. at 520 (emphasis in original). *See also Delaware Riverkeeper Network*, 753 F.3d at 1310 ("While the statute does not demand forecasting that is not meaningfully possible, an agency must fulfill its duties to the fullest extent possible." (internal quotation marks omitted)); *Barnes v. U.S. Dep't of Transportation*, 655 F.3d 1124, 1136 (9th Cir. 2011) ("an agency must use its best efforts to find out all that it reasonably can" (internal quotation marks omitted)).

Moreover, even if FERC undertakes the requisite concerted effort but ultimately cannot determine information regarding the precise location of upstream production activities, it can still assess and disclose useful information. For example, for purposes of estimating the amount of GHG emissions associated with upstream production, it is not necessary to know the exact location of the upstream wells. FERC is aware that the Project is designed to transport 375 million cubic feet per day of gas. FERC has previously "estimated the impacts associated with the production wells that would be required to provide 100 percent of the volume of natural gas to be transported by [a gas pipeline project], on an annual basis for GHGs." *Transcon. Gas Pipe Line Co., LLC*, 158 FERC ¶ 61125, 2017 WL 496024 at *35 (Feb. 3, 2017). In that case, FERC used "the project volume and the expected estimated ultimate recovery of Marcellus shale wells" to estimate the number of wells that "would be required to provide the gas over the estimated 30-

year lifespan of the project." *Id*. FERC then used the Department of Energy's Life Cycle Analysis of Natural Gas Extraction and Power Generation to estimate upstream GHG emissions. *Id*. at n.210. Here, FERC failed to undertake any such analysis—and also failed to comply with 40 C.F.R. § 1502.22, which outlines the procedures an agency must comply with when "there is incomplete or unavailable information."

FERC claims there is no "evidence that, absent approval of the Southgate Project, this gas would not be brought to the market by other means." Certificate, ¶97. FERC makes no attempt to reconcile this statement with its finding that this Project is "necessary." *See* Comm'r Glick Dissent, ¶10 ("[I]f a proposed pipeline neither increases the supply of natural gas available to consumers nor decreases the price that those consumers would pay, it is hard to imagine why that pipeline would be 'needed' in the first place."). Indeed, Mountain Valley argues that the Project "will provide North Carolina and southern Virginia access to *new* natural gas supplies in the Marcellus and Utica shale regions" and "provide the opportunity to serve commercial and industrial load in Virginia and North Carolina not currently served by natural gas." Certificate, ¶38 (emphasis added). In other words, the Project's purpose is "to facilitate additional natural gas consumption"—and "adding firm transportation capacity is likely to 'spur demand' for natural gas." Comm'r Glick Dissent, ¶10.[2] FERC cannot ignore the resulting indirect effects. *See Barnes*, 655 F.3d at 1138; *Birckhead*, 925 F.3d at 519 (Because FERC may "'deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment, the agency is

[2] Models exist to forecast how changes to cost inputs (e.g., new fossil fuel transportation projects) affect supply and demand for substitute energy sources. *See, e.g., Ctr. for Sustainable Economy v. Jewell*, 779 F.3d 588, 609 (D.C. Cir. 2015) (praising agency's "economic model" to assess substitution effects); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003) (noting the availability of "computer models that are widely used" to "forecast the effects of [a] project on the consumption" of energy sources). These models do not require precise specification of end use.

a "legally relevant cause" of the direct and indirect environmental effects of pipelines it approves'—even where it lacks jurisdiction over the producer or distributor of the gas transported by the pipeline.") (emphasis added).

2. FERC Failed to Analyze and Disclose Downstream GHG Effects

In the gas pipeline context, downstream greenhouse-gas emissions are quintessential indirect effects because such emissions predictably result from operating a pipeline whose sole purpose is to transport gas that will be consumed by end-users. *See Sierra Club v. FERC* (*Sabal Trail)*, 867 F.3d 1357, 1371–72 (D.C. Cir. 2017). FERC's refusal to assess downstream GHG effects is at odds with the D.C. Circuit's decision in *Sabal Trail* and subsequent decisions.

In the Certificate Order, FERC claims that the court's decision in *Sabal Trail* was limited to instances "where it is known that the natural gas transported by a project will be used for a specific end-use combustion." Certificate, ¶98. The court has made clear that its *Sabal Trail* decision is not so limited. *See* Comm'r Glick Dissent, ¶9 (noting that the D.C. Circuit has "emphatically" rejected the argument that *Sabal Trail* is narrowly limited to the facts of that case); *Birckhead*, 925 F.3d at 519 ("[C]ontrary to the Commission's position, *Sierra Club* hardly suggests that downstream emissions are an indirect effect of a project only when the project's 'entire purpose' is to transport gas to be burned at 'specifically-identified' destinations."). Indeed, it is well-established that downstream emissions are an indirect effect even if the ultimate destination of the fuel is unknown. *See San Juan Citizens Alliance v. BLM*, 326 F. Supp. 3d 1227, 1242–43 (D.N.M. 2018) (collecting cases).

FERC states that "the end-use of the contracted for volumes is unknown" and that, as a result, "any potential GHG emissions associated with the ultimate combustion of the transported gas are not reasonably foreseeable." Certificate, ¶99. As an initial matter, FERC has conceded

that "its lack of jurisdiction over shippers, distributors, and end users 'doesn't preclude or foreclose' it from further developing the record by requesting additional data from the project applicant." *Birckhead*, 925 F.3d at 520. In any event, here FERC knows that "the currently subscribed volume of natural gas, 300 MMcf/d, would be used in North Carolina, primarily by residential and small and medium-sized commercial customers for heating, cooking, and other end-uses." FEIS at 4-263. *See also* Comm'r Glick Dissent, ¶3 ("[T]he record plainly provides that the Project will be used to transport natural gas to residential and commercial end-users in North Carolina and Virginia."); Certificate, ¶34 n.60 ("Mountain Valley states that the natural gas transported by the Southgate Project will be used to make bundled gas sales primarily to residential and small- and medium-sized commercial customers for heating, cooking, and other end-uses typical of natural gas local distribution company customers.") (citation omitted); *id*., ¶43 ("The project shipper is a local distribution company, which will locally distribute gas to residential, commercial, and industrial end-use customers."); *id*. at P99 ("[M]ost of the gas will serve North Carolina end-users, primarily by residential and small and medium-sized commercial customers.").

Accordingly, the information that FERC already has is "more-than-sufficient to confirm that the gas is highly likely to be combusted, making the resulting GHG emissions reasonably foreseeable." Comm'r Glick Dissent, ¶12. In addition, even if considerable uncertainty remained regarding the precise end use of the gas, that would not relieve FERC of its duty to consider downstream GHG effects. NEPA requires agencies to analyze and consider downstream effects even if the "exact[]" net increase in emissions may "depend[] on several uncertain variables." *Sabal Trail*, 867 F.3d at 1374. "[S]ome educated assumptions are inevitable in the NEPA process," and agencies can disclose "assumptions so that readers can take the resulting estimates

with the appropriate amount of salt." *Id.* (citations omitted). *See also* 40 C.F.R. § 1502.22(a)-(b) (NEPA procedure for addressing incomplete or unavailable information). FERC cannot use uncertainty regarding the precise destination of every molecule of transported gas as a justification for treating downstream emissions as if they do not exist.

Finally, FERC notes Mountain Valley's contention that FERC previously quantified the GHG emissions that could result from the end-use consumption of the volumes transported on Mountain Valley's mainline system. Certificate, ¶100. As Commissioner Glick points out, while FERC may have quantified the GHG emissions for the Mountain Valley mainline system, "at no point did the Commission consider them in making its public interest determination." Comm'r Glick Dissent, ¶11. Accordingly, this does not rectify FERC's failure to assess, disclose, and consider downstream GHG effects here. *See also id.* ("The Commission's utter failure to actually consider these emissions as part of its public interest determination renders Mountain Valley's argument empty and unconvincing.").

3. FERC Failed to Consider the Impact of the Project's GHG Emissions

FERC failed to evaluate the impacts of the Project's direct and indirect GHG emissions, including their significance and cumulative impact. *See Sabal Trail*, 867 F.3d at 1374; *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1217 (9th Cir. 2008) ("The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct."); *id.* at 1216 (analysis inadequate where agency "quantifie[d] the expected amount of CO2" but failed to "evaluate the 'incremental impact' that these emissions will have on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions"). As a result, nothing in the EIS allows the public or

decisionmakers to meaningfully determine whether the harm caused by the Project's GHG emissions would warrant mitigation, selection of a less harmful alternative, or certificate denial.

First, FERC claims that it has "not been able to find any GHG emission reduction goals established at the federal level." FEIS at 4-263. But the U.S. has adopted a GHG emission reduction goal to compare emissions against, as part of the Paris climate accords. The EIS states that "[i]n November 2019, formal notification was sent to the United Nations of the U.S.'s withdrawal from the Paris climate accord," *id*. at n.59, but this withdrawal is not yet effective or even certain. As of the date of the FEIS and the Certificate Order, the Paris climate accords are in effect, and FERC should have considered them.

FERC's dismissal of Virginia's and North Carolina's reduction goals is similarly unwarranted. FERC acknowledges that Virginia has a plan calling "for a reduction of GHG emissions 30% below a 'business as usual scenario' by 2025." FEIS at 4-263. Rather than utilize that information to assess the Project's emissions, FERC simply states: "We do not have the data that identified the 'business as usual' scenario." *Id*. There is no attempt to procure that data and then evaluate the Project's emissions in the context of Virginia's reduction goals. NEPA requires more. *See, e.g*., *Birckhead*, 925 F.3d at 520 ("It should go without saying that NEPA … requires the Commission to at least *attempt* to obtain the information necessary to fulfill its statutory responsibilities." (emphasis in original)); *Barnes*, 655 F.3d at 1136 ("an agency must use its best efforts to find out all that it reasonably can") (internal quotation marks omitted). In addition, FERC states: "As the Southgate Project is intended to serve end users in North Carolina, we cannot determine Southgate Project effects, if any, on Virginia's GHG goals." FEIS at 4-263. But in the very next paragraph, FERC states that transported gas "could be utilized" in Virginia.

Id. FERC's approach also ignores direct GHG emissions from the Lambert Compressor Station in Virginia.

FERC also improperly dismisses North Carolina's executive order mandating "a statewide reduction of greenhouse gas emissions by 2025 to 40 percent below 2005 levels." *Id*. FERC does not make any real attempt to justify its refusal to undertake an analysis utilizing this statewide reduction goal, instead simply stating that "[f]or both the subscribed and unsubscribed volumes, we cannot determine Southgate Project effects on the states' goals." *Id*. No further explanation is provided. This conclusory statement, which is at odds with FERC's prior assertions regarding the role that state and federal GHG reduction goals can play in evaluating a pipeline project's emissions, renders FERC's analysis arbitrary and capricious. *See* Comm'r Glick Dissent, ¶14 ("The Commission cannot simultaneously argue an established benchmark is necessary to determine significance and, then, when a benchmark is provided, argue the relevant comparison is not useful.").

Moreover, contrary to FERC's claims, assessing climate impacts under NEPA does not require a "universally accepted methodology to attribute discrete, quantifiable, physical effects on the environment to the Southgate Project's incremental contribution to GHGs." FEIS at 4-263. NEPA analysis does not require a "universally accepted" methodology; agencies must use sound judgment to pick among available methodologies, and use best efforts when precise tools are unavailable. *See, e.g.*, 40 C.F.R. § 1502.22(b). Although FERC has discretion to choose among reliable methodologies for evaluating impacts, FERC cannot refuse to provide any evaluation whatsoever when a generally accepted methodology is available. *See Sierra Club*, 867 F.3d at 1374; 40 C.F.R. § 1502.22.

FERC nonetheless refused to utilize a widely accepted and easy-to-use tool. FERC has acknowledged that the Social Cost of Carbon ("SCC") is an "appropriate[]" tool for federal agencies to use "to inform their decisions," and that agencies have been rightly "faulted for failing to use it." *Mountain Valley Pipeline, LLC*, 163 FERC ¶ 61197, 2018 WL 3032149 at *73 (June 15, 2018). Like those other agencies, FERC is the legally relevant cause of the GHG emissions at issue. *Sierra Club*, 867 F.3d at 1373. FERC does not (and cannot) offer a rational explanation for refusing to use a tool it acknowledges is useful and appropriate to inform other agencies' decisionmaking. Despite readily acknowledging in the Mountain Valley Pipeline Mainline Certificate Order that the SCC tool is appropriate for project-level review, FERC now rejects it as "not appropriate in project-level NEPA review." Certificate, ¶102. *But see Mountain Valley Pipeline, LLC*, 163 FERC ¶ 61197, 2018 WL 3032149 at n.772 (discussing Bureau of Ocean Energy Management's use of the Social Cost of Carbon for a specific project).

FERC relies on several excuses for its failure to use the SCC methodology, none of which justify refusing to use a readily available and widely accepted tool that would allow FERC to evaluate the impacts of the Project's GHG emissions.[3]

First, FERC maintains that there is no consensus as to an appropriate discount rate and, as a result, "significant variation in output can result." Certificate, ¶102. Courts have rejected this reasoning. *See Ctr. For Biological Diversity v. NHTSA*, 538 F.3d 1172, 1200 (9th Cir. 2008) ("[W]hile…there is a range of values, the value of carbon emissions reduction is certainly not zero."). Indeed, agencies routinely exercise judgment to choose a discount rate, and routinely use multiple rates. *See, e.g.*, EPA, Proposed Requirements for Cooling Water Intake Structures at

[3] Although this tool was withdrawn by Executive Order 13,783, 82 Fed. Reg. 16,093 (Mar. 28, 2017), FERC "do[es] not dispute that" it remains "generally accepted in the scientific community." *Fla. Se. Connection, LLC*, 164 FERC ¶ 61,099 P35 (Aug. 10, 2018).

Phase III Facilities, 69 Fed. Reg. 68,444, 68,499 (Nov. 24, 2004) (presenting analyses using both 3% and 7% discount rates). Moreover, in deciding how to "mov[e] from the facts and probabilities on the record to [a] policy conclusion" about the weight to afford to future impacts, FERC does not write on a blank slate. *Motor Vehicle Mfrs. Ass'n,* 463 U.S. at 52. In 2003, the Office of Management and Budget ("OMB") released still-operative regulatory impact analysis guidance on, *inter alia*, the choice of discount rate. Office of Management and Budget, Circular A-4, 31-37 (Sept. 17, 2003).[4] OMB explained that for widely distributed and intergenerational impacts, a discount rate of 3% or less is generally appropriate. *Id.* However, OMB encourages agencies to present their analyses using multiple rates. *Id.* In 2010, the Interagency Working Group on Social Cost of Carbon, which created the federal SCC protocol, and of which OMB was a member, provided further guidance specific to climate impacts. Building on, *inter alia*, OMB's prior conclusion that distributed, intergenerational effects should be discounted at 3% or less, the group reached consensus on 2.5, 3, and 5% rates as "span[ning] a plausible range" and "reflect[ing] reasonable judgments."[5] Insofar as agencies were concerned about uncertainty over which rate was best, the group encouraged agencies to use all three. In sum, FERC can publish estimated ranges of monetized damages; what it cannot do is assume that the impact is zero.

Second, FERC states that the SCC tool "does not measure the actual incremental impacts of a project on the environment." Certificate, ¶102. *See also* FEIS at 4-263. But the protocol was specifically developed to assess the "incremental impacts" of emissions. It uses integrated models to assess the physical impacts of emissions and then converts those physical impacts into a dollar-figure estimate. Indeed, FERC has acknowledged that the SCC "constitute[s] a tool that

[4] https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf.
[5] https://www.epa.gov/sites/production/files/2016-12/documents/scc_tsd_2010.pdf

can be used to estimate incremental physical climate change impacts." *Mountain Valley Pipeline, LLC*, 163 FERC ¶ 61197, 2018 WL 3032149 at *76 (June 15, 2018). *See also id.* at *75 (SCC "estimates the monetized climate change damage associated with an incremental increase in CO2 emissions"); FERC, Rio Grande LNG Project Final Environmental Impact Statement, Vol. III, pt. 3, at 23 (2019) (SCC "can be used to estimate incremental physical climate change impacts"); Comm'r Glick Dissent, ¶15 ("By measuring the long-term damage done by a ton of carbon dioxide, the Social Cost of Carbon links GHG emissions to actual environmental effects from climate change…."). And, as FERC has acknowledged, the tool remains "generally accepted in the scientific community," 40 C.F.R. § 1502.22(b)(4), notwithstanding the fact that the tool has been withdrawn by executive order.[6] *Fla. Se. Connection*, 162 FERC ¶ 61,233 P48; *accord High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1190 (D. Colo. 2014) (holding that "the social cost of carbon protocol" is a "[s]tandardized protocol designed to measure factors that may contribute to climate change, and to quantify climatic impacts").

Third, FERC states that "there are no established criteria identifying the monetized values that are to be considered significant for NEPA reviews." Certificate, ¶102. *See also* FEIS at 4-263 to -264. As an initial matter, the climate harms disclosed by use of the SCC tool for a pipeline project of this magnitude are on their face worth paying attention to. In any event, assessing the significance of *any* impact requires FERC's professional judgment. For example, no third party provided FERC with a threshold for significance for impacts to housing, public services, or property values, but FERC nonetheless concluded that the Project would not "have significant adverse impacts on housing," "would not significantly impact public services" and

[6] Executive Order 13,783 did not identify any specific defect in or disagreement with the social cost of carbon protocol.

"would not have a significant adverse impact on property values." FEIS at 5-10 to -11. *See also* Comm'r Glick Dissent, ¶17; *id.*,¶14 n.56 (noting that FERC determined that impacts of Buckeye Xpress Project on prime farmland would not be significant "[n]otwithstanding the fact that there are no universally accepted or objective standards or targets to compare this impact to"). The Certificate Order "does not explain . . . why it is appropriate to exercise subjective interpretation and judgment when it comes to potential impacts such as those to property values and forests, but not climate change." Comm'r Glick Dissent, ¶17 n.62. Moreover, "[c]laiming that a project has no significant environmental impacts while at the same time refusing to assess the significance of the project's impact on the most important environmental issue of our time is not reasoned decisionmaking." *Id.*,¶2.

In addition, although NEPA requires agencies to determine whether impacts are "significant," the issue is not merely whether impacts cross this threshold. NEPA requires a hard look at the "ecological …, aesthetic, historic, cultural, economic, social, [and] health" effects of an agency's actions, 40 C.F.R. § 1508.8, including the "severity" of those effects. *Robertson v. Methow Valley Citizens,* 490 U.S. 332, 352 (1989). Although NEPA does not require cost-benefit analyses, monetization of costs may be required where "alternative mode[s] of [NEPA] evaluation [are] insufficiently detailed to aid the decision-makers in deciding whether to proceed, or to provide the information the public needs to evaluate the project effectively." *Columbia Basin Land Prot. Ass'n v. Schlesinger*, 643 F.2d 585, 594 (9th Cir. 1981). Assigning a dollar value to climate impacts provides otherwise missing but essential information even without a full cost-benefit analysis.[7] Although the tool was originally developed specifically for use in

[7] FERC routinely evaluates the relative importance of monetized benefits (such as construction-related tax revenues, and economic benefits in terms of dollar expenditures during construction), and weighs them against qualitative impacts. *See also Montana Envtl. Info. Ctr. v. Office of*

regulatory impact analysis, the Environmental Protection Agency, courts, and FERC itself have recognized that the tool can be appropriate for evaluating project-level impacts. *High Country*, 52 F.Supp.3d at 1190 (noting EPA's suggestion to use the tool for evaluating impacts of Keystone XL pipeline, and holding that Forest Service's refusal to use tool in land management decision was arbitrary), *Mountain Valley Pipeline*, 163 FERC ¶ 61,197, P281 (June 15, 2018). A ton of carbon dioxide emitted by an individual project has the same impact as a ton emitted as a result of a changed regulation. Using the social cost of carbon to provide otherwise absent information about the severity of climate impacts is useful even without a full cost-benefit analysis. In addition to aiding a significance determination, translating GHG emissions into climate damages would contextualize the impact, making it more accessible to the public and decision-makers.

FERC has the authority and obligation to examine whether the Project's GHG effects, together or in combination with other adverse impacts, warrant denial or modification of the Project. *Sabal Trail*, 867 F.3d at 1373. Even if FERC finds that evaluating GHG effects (e.g., quantifying indirect emissions and assessing impacts) is more difficult than evaluating other impacts, "the proper response to that problem is for [FERC] to do the best it can with the data it has, not to ignore the [issue] completely." *Montana Wilderness*, 666 F.3d at 559. FERC's failure to use available tools to assess the Project's GHG effects violates NEPA.

4. FERC's Failure to Adequately Analyze the Project's GHG Effects Precluded Informed Decisionmaking

FERC's failure to adequately assess and disclose the Project's GHG emissions—including the volume of indirect emissions, climate impacts, and their significance—is contrary

Surface Mining, 274 F. Supp. 3d 1074, 1096 (D. Mont. 2017) (arbitrary to monetize payroll and other project benefits but not climate costs).

to NEPA's goals of informed decisionmaking and informed public comment. FERC is required to take a hard look at these impacts so it can consider them when deciding whether to approve the Project, deny it on the ground that it "would be too harmful to the environment," or select a less harmful alternative. *Sierra Club,* 867 F.3d at 1373. *See also Minisink Residents for Envtl. Pres. and Safety v. FERC,* 762 F.3d 97, 102-03 n.1 (D.C. Cir. 2014) (citation omitted) (FERC will issue a certificate only "where the public benefits of the project outweigh the project's adverse impacts," including environmental impacts). FERC also failed to assess possible mitigation of GHG impacts. *See Sierra Club*, 867 F.3d at 1374 (FERC "has legal authority to mitigate" downstream emissions); Comm'r Glick Dissent, ¶19 n.68 (noting that FERC "could consider discrete measures that offset the adverse effects of the Project itself, just like it does for a host of other adverse environmental impacts"); 15 U.S.C. § 717f(e).

In sum, FERC failed to "engage in 'informed decision making' with respect to the greenhouse-gas effects of this project." *Sierra Club*, 867 F.3d at 1374 (citation omitted). "A public interest determination that systematically excludes the most important environmental consideration of our time is contrary to law, arbitrary and capricious, and not the product of reasoned decisionmaking." Comm'r Glick Dissent, ¶7.

B. FERC Failed to Adequately Analyze the Environmental and Health Impacts of non-GHG Project Emissions

FERC's failures related to Project emissions go beyond its climate conclusions, particularly in relation to analysis of emissions from compressor stations. Both FERC's discussion in the EIS and Mountain Valley's underlying analysis are flawed in ways that render FERC's NEPA analysis arbitrary and capricious.

For instance, FERC's determination that air impacts would not be significant because state air permits would require pollution concentrations to stay below federal standards does not

satisfy NEPA. FERC asserts without support that the Lambert Compressor Station's substantial PM2.5 and formaldehyde emissions would not result in significant impacts. FEIS at 4-188. According to the EIS, the Lambert compressor station in Pittsylvania County, Virginia has the potential to emit 10.4 tons per year ("tpy") of PM2.5 and 3.5 tpy of formaldehyde. FEIS at 4-178. FERC concludes that the impacts would not be significant because air quality dispersion modeling shows that "emissions due to the compressor station's operations would not exceed the NAAQS or the Virginia formaldehyde SAAC." *Id*. *See also id*. ("[A]lthough ambient air quality in the area near the compressor station would degrade, we conclude that criteria pollutant and formaldehyde emissions from operations would not result insignificant [sic] impacts on local or regional air quality."). Rather than take a hard look at the environmental and human health impacts of these emissions, FERC states that "air quality impacts during operation of the compressor station would be minor" because "[c]ompliance with the applicable federal and state air quality standards and regulations would be addressed … in the air quality permit." FEIS at 4-186. But "the existence of permit requirements overseen by another federal agency or state permitting authority cannot substitute for a proper NEPA analysis." *Sierra Club*, 867 F.3d at 1375 (citing *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1122–23 (D.C. Cir. 1971)). And there is no threshold concentration below which PM2.5 is known to be harmless; it may "cause[] adverse health effects at any non-zero atmospheric concentration." *Am. Trucking Ass'ns v. EPA*, 283 F.3d 355, 359-60 (D.C. Cir. 2002). *See also* National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3,086, 3,098 (Jan. 15, 2013). Moreover, no support is provided for the proposition that using "clean-burning fuels and good combustion practices" represents the best available control technology for controlling

PM2.5 emissions from the compressor station turbines. FEIS at 4-186. Additional reduction measures that are listed are "voluntary." *Id*.

FERC also failed to take a hard look at the cumulative impacts due to the proximity of other polluting facilities. *See, generally,* Blue Rudge Environmental Defense League, Comments and Request for 60-Day Extension of Comments at 15–18 (Sept. 16, 2019) (Accession No. 20190916-5106). For example, another compressor station, Transco Station 166, is located approximately 600 feet northeast of the Lambert Compressor Station site, and Transco Compressor Station 165 is located approximately 0.62 mile from the Lambert Compressor Station site. FEIS at 4-234, -249. *See also id*. at 4-249 (noting that other projects located within 0.25 miles of the Project include, but are not limited to, the Virginia Southside Expansion, Virginia Southside Expansion II, and Mountain Valley Pipeline Project). FERC's cursory analysis of the cumulative impacts, which does not adequately address health impacts and instead relies on the fact that each project "would need to comply with federal, state, and local air regulations," *id*. at 4-256, is inadequate under NEPA. This also raises environmental justice issues that FERC has not adequately addressed. *See id.* at 4-251 (noting that the Project crosses two census block groups in Pittsylvania County where minority populations exceed 50 percent, and that low-income communities exist along the Project route within two census blocks in Pittsylvania County). FERC's reliance on air quality standards to conclude that that environmental justice populations would not be disproportionately affected, *see id*. at 4-253, is flawed for the reasons described above. *See also Friends of Buckingham v. State Air Pollution Control Bd*., 947 F.3d 68, 92 (4th Cir. 2020) ("The Board rejected the idea of disproportionate impact on the basis that air quality standards were met. But environmental justice is not merely a box to be checked….").

Finally, FERC's analysis of impacts from the Lambert Compressor Station is inadequate because the underlying air modeling performed by Mountain Valley using the U.S. EPA's atmospheric dispersion modeling system (AERMOD) was fundamentally flawed. Mountain Valley used AERMOD to model the dispersion of air pollutants from the Lambert Compressor Station to determine compliance with NAAQS. FEIS at 4-186 to -187. However, Mountain Valley failed to analyze impacts to one of the most vulnerable locations that would suffer from cumulative air pollutant emissions: the adjacent Transco property. *See* Declaration of Mark Barker, ¶10, **attached as Exhibit A**. This failure to model air pollution receptors on the adjacent Transco property runs counter to decades of EPA guidance regarding use of AERMOD. *Id.*, ¶¶12–15. When running AERMOD with receptors on the Transco property, the model shows up to fifteen percent increases in 24-hour and fifty percent increases in annual pollutant concentrations. *Id.*, ¶17. Mountain Valley's and, consequently, FERC's failure to assess the impacts of these emissions on the Transco property renders its analysis of direct and cumulative air emissions arbitrary and capricious in violation of NEPA.

C. FERC Failed to Adequately Consider the Project's Impacts to Aquatic Resources

As Intervenors explained in their DEIS Comments, the Project would have substantial impacts on aquatic resources, particularly from sedimentation associated with project construction in upland areas and at stream crossings. The Project would require crossing 223 waterbodies, including four major waterbodies, using primarily a dry, open-cut crossing technique. FEIS at 4-35. It would also traverse substantial areas of steep slopes. *Id.*, Appendix C.3. FERC recognizes that

> Construction activities in stream channels and on adjacent banks may affect waterbodies. Clearing and grading of stream banks, in-stream trenching, the installation and removal of temporary crossing structures (e.g., culverts,

> cofferdams), trench dewatering, and backfilling could each cause temporary, local modifications of aquatic habitat involving sedimentation, increased turbidity, and decreased dissolved oxygen concentrations.

FEIS at 4-48 to -49. FERC likewise notes that

> The clearing and grading of stream banks could expose soil to erosional forces and would reduce riparian vegetation along the cleared section of the waterbody. The use of heavy equipment for construction could cause compaction of near-surface soils, an effect that could result in increased runoff into surface waters in the immediate vicinity of the proposed construction right-of-way. Increased surface runoff could transport sediment into surface waters, resulting in increased turbidity levels and increased sedimentation rates in the receiving waterbody. Disturbances to stream channels and stream banks could also increase the likelihood of scour after construction

Id. at 4-49. Nonetheless, FERC concludes that these impacts would be temporary and localized and that Mountain Valley's compliance with FERC's Plan and Procedures and the Project-specific Erosion and Sediment Control (E&SC) Plan would minimize impacts to the level of insignificance.[8] *Id.* at 4-51. Further, FERC concluded that the cumulative impacts of the Project combined with other reasonably foreseeable actions would not be significant, largely based on FERC's belief that these other projects would also be subject to effective E&SC measures. *Id.* at 4-242 to -43. FERC's conclusion are not supported by the record.

1. FERC Arbitrarily Relied on Mountain Valley's Erosion and Sediment Control Measures to Find that the Project Will Not Have Significant Impacts on Aquatic Resources Despite Overwhelming Evidence that Such Measures Are Not Effective In Practice

[8] FERC, in the same breath that it says Mountain Valley's compliance with FERC's Procedures would adequately minimize impacts, allows Mountain Valley to violate those same Procedures in nearly 40 instances. FEIS at 4-37 (allowing Mountain Valley to violate the Procedure's prohibition on constructing extra work areas within 50 feet of waterbodies and wetlands in fifteen locations); *id.* at 4-37 to -38 (allowing Mountain Valley to violate the Procedure's requirement to maintain a fifteen-foot buffer when constructing parallel to a waterbody at 23 locations). FERC does not analyze the impacts of allowing Mountain Valley to violate the Procedures in this way.

FERC's conclusions are not supported by the available evidence showing that pipeline construction has substantial adverse impacts on water quality, primarily through sedimentation associated with slips and runoff from cleared areas adjacent to stream crossings. FERC offers no explanation for why past projects, which were subject to the very same sorts of Best Management Practices in FERC's Procedures and the Project-specific ES&C Plan, led to significant water quality impacts but the MVP Southgate Project will not. FERC's conclusions are thus arbitrary and capricious.

Pipeline construction has a long, unacceptable track record of causing severe water quality problems in this region. In particular, Mountain Valley and its contractors have caused severe adverse impacts to water quality during construction of the MVP mainline in Virginia and West Virginia. In light of these past problems, FERC may not reasonably rely on its standard mitigation measures, particularly for erosion and sedimentation control, to conclude that impacts to aquatic resources will not be significant. *Nat'l Parks Conservation Ass'n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001), abrogated on other grounds by *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 157 (2010) ("A perfunctory description, or mere listing of mitigation measures, without supporting analytical data, is insufficient to support a finding of no significant impact.") (citations and internal quotation marks omitted). Nor may it dismiss past problems as simply matters of improper implementation of those controls. FERC knows that implementation is never perfect and that, with this particular project applicant, it has been anything but.

FERC's assurances that its standard mitigation measures can effectively minimize aquatic impacts have unfortunately proven hollow in experience. For example, on the MVP Mainline the U.S. Forest Service's compliance monitoring firm, Transcon Environmental, cited Mountain Valley for causing sediment pollution in Jefferson National Forest and noted that the company's

sediment control measures were "failing" and "not functioning properly," resulting in sedimentation impacts as far as 300 feet downstream from a Project stream crossing. Transcon Environmental, Non-Compliance Report (April 17, 2018).[9]

Likewise, the West Virginia Department of Environmental Protection (WVDEP) on April 3, 2018, cited Mountain Valley for violations at the construction sites of two compressor stations, noting that the erosion control measures had failed to contain sediment and sediment-laden water from leaving the work site. WVDEP, Notice of Violation No. W18-52-021-RDD. WVDEP issued another Notice of Violation on May 9, 2018, for an incident where sediment controls at a stream crossing "failed and were breached allowing sediment laden water to enter stream. … Sediment deposits were observed in stream causing conditions not allowable" under West Virginia's water quality standards. WVDEP, Notice of Violation No. W18-52-001-CP at 1-2. Additionally, separate WVDEP inspections on June 6, 2018, resulted in two Notices for failure of control measures leading to sediment and sediment-laden water leaving the pipeline right-of-way, noting that MVP's plans were inadequate and that additional mitigation measures were required. WVDEP, Notice of Violation No. W18-17-065-TJC at 2; WVDEP, Notice of Violation No. W18-52-002. More recently, a July 6, 2018, WVDEP inspection led to yet another notice for failing to prevent sediment and sediment laden water from leaving the right-of-way.[10] WVDEP, Notice of Violation No. W18-09-076-TJC.

The Virginia Department of Environmental Quality (VADEQ) issued a Notice of Violation on July 9, 2018 for widespread sedimentation impacts identified in citizen-complaint driven

[9] All notices of violation referenced in these comments are available in Mountain Valley's status reports to FERC in Docket No. 16-10-000.

[10] Mountain Valley's violations on the MVP Mainline have slowed due to construction on the project being halted because of numerous required federal permits being vacated by the U.S. Court of Appeals for the Fourth Circuit. *See* Certificate, ¶¶4–8.

investigations conducted on May 21, May 23, May 24, May 30, June 6, June 13, June 26, and June 27, 2018. VADEQ, Notice of Violation No. 2018-CO-0001 at 2. Those impacts occurred along the project route in Craig, Franklin, Giles, Montgomery, Pittsylvania and Roanoke Counties. *Id.* at 1. VADEQ noted that many of Mountain Valley's erosion and sedimentation controls were ineffective and that the company did not repair failing controls within the required timeframe. *Id.* at 3–4, 6–7. In one instance, "[c]ombined impacts to the two stream channels covered a distance of approximately 2,800 linear feet. This unauthorized fill ranged in depth up to eleven inches of sediment, which was released from MVP's construction right of way due to overwhelmed and damaged erosion and sediment controls." *Id.* at 4. Failing controls at another site led to 6,009 linear feet of impacts with sediment depositions up to seven inches deep. *Id.* at 7. Mountain Valley itself has identified numerous sedimentation events, including events not cited in the above notices, in its weekly status reports to FERC. See, e.g., Weekly Status Report No. 34 (July 10, 2018), Appendix B. Those failures continued despite the state enforcement actions, right up to FERC's issuance of a stop-work order in October 2019. *See, e.g.*, Weekly Status Report No. 97 (September 16, 2019), Appendix B (identifying numerous slips and erosion and sediment control failures, many of which led to sedimentation of waterbodies).

Such failures are not simply a result of faulty implementation, but in many cases inadequacy of the chosen mitigation measures. Indeed, following a severe event that resulted in the deposition of eight inches of sediment outside the pipeline right-of-way, Mountain Valley asserted that its "controls were installed properly." Laurence Hammack, "Construction Halted at Mountain Valley Pipeline Work Site Following Severe Erosion in Franklin County," The Roanoke Times, May 20, 2018, *available at* https://www.roanoke.com/business/construction-halted-at-mountain-valley-pipeline-work-site-following-severe/article_2eeebd3a-5007-56b0-9469-

3e381b09b668.html. The fact that FERC has not taken a single enforcement action or issued a stop work order for violations of its own Plans and Procedures on which it relied further demonstrates that the mitigation measures themselves, not just Mountain Valley's implementation, are inadequate.

FERC's attempts to counter this overwhelming evidence of the inadequacy of Mountain Valley's E&SC measures are not persuasive. FERC primarily blames record precipitation in 2018 for Mountain Valley's repeated inability to control project sedimentation. FEIS at 1-12. FERC, however, ignores the effects that climate change is having on precipitation patterns in the region, causing a much greater percentage of precipitation to come in heavy storm events, despite annual levels increasing only slightly. *See* Defenders of Wildlife, Climate Change in the Southeast: Impacts on Lands and Wildlife at 2, *available at* https://defenders.org/sites/default/files/publications/climate_change_in_the_southeast.pdf. FERC thus cannot dismiss the heavy storms of 2018 that caused the most severe sedimentation events as an aberration. Nor does FERC's argument address the numerous sedimentation violations that occurred outside of those heavy rain events or the numerous violations that occurred in 2019.

FERC also seeks to dismiss these concerns by claiming that "Mountain Valley has continually upgraded or revised ESC implementation to meet changing weather conditions and to address controls during severe storm events," but cites to no specific upgrades or measures that have proven successful, much less a commitment by Mountain Valley to utilize such measures from the start of Project construction. *Id.* FERC in its response to Intervenors' detailed DEIS comments on this issue simply states that "[e]ach proposal reviewed by the Commission is considered on its own merits irrespective of other projects. FERC's professional judgement, based on decades of experiences on hundreds of projects is that the Plan and

Procedures are sufficient to minimize impacts to resources." *See* FEIS, Appx. I.2 at I.2-3; *id.* at CO-24i, CO-24j. But such general boilerplate statements are insufficient in light of the substantial evidence of sedimentation impacts from not only the MVP Mainline but also numerous other FERC-regulated pipeline projects. *See* DEIS Comments at 28–31 (describing numerous severe sedimentation episodes associated with construction of Section 7 pipelines of various sizes). FERC's choice to evaluate the potential impacts of the Project on aquatic resources "irrespective of other projects" equates to willful disregard of relevant information that should inform the agency's NEPA analysis. FERC's analysis is thus arbitrary and capricious. *See State Farm*, 463 U.S. at 43.

2. FERC's Temporal and Geographic Restrictions on Its Consideration of Cumulative Impacts to Aquatic Resources Are Not Rational

FERC claims that the "Project would contribute little to the long-term cumulative impacts on waterbodies." FEIS at 4-243. FERC is able to reach this conclusion only because it wrongfully assumes that the water quality impacts of both the Project and other reasonably foreseeable activities will not substantially overlap in either time or space. Despite acknowledging that "[t]urbidity plumes may travel downstream for a few miles," FEIS at 4-242, and that impacts from such sedimentation events "could be additive, if turbidity plumes settled within common stream segments," *id.* at 4-243, FERC nonetheless concludes that "[g]iven the spatial separation of the projects, this is unlikely." *Id.*; *see also id.* at 4-49 (explaining that "the density and downstream extent of the turbidity plume" would be determined by "sediment loads, stream velocity, turbidity, bank composition, and sediment particle size" but failing to meaningfully analyze any of those factors to determine actual impacts). FERC's offers no support for this conclusory statement and, indeed, it is contradicted by broadly accepted science.

In contrast to FERC's determination that sediment transport will be limited in scope, research shows that sediment, especially fine sediment, can travel up to hundreds of miles downstream depending on conditions. *See* Fondriest Environmental, Inc., "Sediment Transport and Deposition," Fundamentals of Environmental Measurements (December 5, 2014), *available at* https://www.fondriest.com/environmental-measurements/parameters/hydrology/sediment-transport-deposition/. Of particular concern are the cumulative impacts of Project sedimentation together with sedimentation impacts from the MVP Mainline, all of which are upstream of the Kerr Reservoir, which sits at the confluence of the Roanoke and Dan Rivers.[11] A briefing issued by City of Roanoke on September 5, 2017, much of which was based on analyses by Mountain Valley's contractors, estimates that the sedimentation from the MVP's massive construction project through mountain streams in Roanoke County would flow many miles downstream and deposit an additional 1,039 tons of sediment per year into the Roanoke River, costing the city $36 million annually for removal from the city's drinking water supply. *See* City of Roanoke, Mountain Valley Pipeline: Risks for the City of Roanoke (September 2017), **attached as Exhibit B**. FERC dismisses the concerns that these impacts will be cumulative with the Project's impacts by stating that the two project's crossing locations would be "at least 3.5 miles apart." FEIS at 4-243. Given that sediment can travel and have adverse downstream impacts at much greater distances from the source than 3.5 miles, FERC's conclusion is not rational. Indeed, FERC

[11] The Kerr Reservoir is downstream of hundreds of stream crossings from both the MVP Mainline and Southgate Project. The crossings are in the watersheds of the North and South Forks of the Roanoke River and tributaries in Roanoke County, VA; North Fork of the Blackwater and Pigg Rivers and their tributaries in Franklin County, VA; the Bannister and Sandy Rivers and their tributaries in Pittsylvania County, VA; White Oak Creek and 1.5 miles of associated wetlands in Pittsylvania County; the Dan River in Pittsylvania County, VA, which has been critically impaired by the 2014 coal ash spill in Eden, only 2.75 miles upstream from where the Project will cross. *See* FEIS, Appx. B.5, B.6.

acknowledges that sediment plumes can travel "downstream for a few miles" before settling onto the stream bed. *Id.* at 4-242.

Additionally, FERC's claim that impacts from the Project and MVP Mainline construction will be distant in time is not supported. *See* FEIS at 4-243. FERC acknowledges that the Project and the MVP Mainline would cross a number of the same waterbodies, but concludes that "the stream crossings would not occur within the same time frame due to the construction schedules for both projects." *Id.* at 4-243. But such schedules are far from set in stone, as the numerous delays and schedule adjustments on the MVP Mainline demonstrate. FERC does not provide any detail on when the projects' respective in-stream work or disturbance of upland areas that would cause increased sedimentation would occur. It certainly does not mandate that construction from the two projects not occur within a timeframe that could have additive impacts. And, contrary to FERC's conclusion, construction on both projects seems likely to occur within the same time frame, given that the commencement of construction on the Southgate Project is contingent on the lifting of the stop-work order and recommencement of construction on the MVP Mainline if and when Mountain Valley re-obtains necessary federal authorizations. *See* Certificate, ¶9.

Even assuming that construction activities on the respective projects did not occur at the same time, FERC's conclusion that their impacts would not overlap is not supported. That is because sediment can have long-term adverse impacts on aquatic life once it settles onto the beds of streams, rivers, and lakes. As FERC acknowledges, impacts from increased sedimentation and turbidity "could be additive, if turbidity plumes settled within common stream segments." FEIS at 4-243. But FERC fails to analyze any of the factors it states would determine the persistence of sediment plumes and the distances at which and degrees to which turbidity settling in

waterbodies could have adverse impacts. *See id.* at 4-49; Fondriest Environmental, Inc., "Sediment Transport and Deposition" ("Too much sediment deposition can also bury habitats and even physically alter a waterway. . . . If a body of water is continually exposed to high levels of sediment transport, it may encourage more sensitive species to leave the area, while silt-tolerant organisms move in."). Without this sort of analysis, FERC cannot rationally conclude that the projects' impacts will not overlap to cause significant impacts to aquatic resources.

Finally, FERC's conclusion that sedimentation and other impacts from the other projects analyzed would not be significant because "FERC projects and most other projects would be required (by permit) to install erosion and stormwater control devices to minimize runoff" is not supported. As explained above, the E&SC measures on which FERC relies have proven ineffective to prevent major sedimentation events in real world applications. FERC's reliance on such measures to conclude that cumulative impacts to aquatic resource swill not be significant is thus arbitrary and capricious. *State Farm,* 463 U.S. at 43.

D. FERC's EIS Failed to Meet NEPA's "Hard Look" Standard in its Analysis of Project Impacts on Special Status Species

NEPA requires agencies to take a "hard look" at the environmental impacts of a proposed major federal action. *See Nat'l Audubon Soc'y v. Dep't of the Navy*, 422 F.3d 174, 185; 42 U.S.C. § 4332(2)(C). In doing so, a federal agency must consider the direct, indirect, and cumulative effects of the proposed project. *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 763–64 (2004); 40 C.F.R. § 1508.8 ("Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources . . .), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative."). "The hallmarks of a 'hard look' are thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms." *Nat'l Audubon Soc'y*, 422 F.3d at 187.

Compliance with the procedures in "NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct." *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371 (1989). NEPA requires the government to emphasize "clarity and transparency of process," so the statute can serve its role as a "democratic decisionmaking tool." *N.C. Wildlife Fed'n v. N.C. Dep't of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) (citation omitted).

If an agency seeks to justify a Finding of No Significant Impact (FONSI) based on mitigation measures, which in turn are projected to keep project impacts below the threshold of significance, then the EIS need not explicate the proposed mitigation measures to the finest detail, but what is required is something more than a "purely perfunctory or conclusory" listing. *Ohio Valley Envtl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177, 206 (4th Cir. 2009) (citing *O'Reilly v. U.S. Army Corps of Engr's*, 477 F.3d 225, 231 (5th Cir. 2007)).

Unfortunately, FERC delivered to the public a DEIS and a Final Environmental Impact Statement (FEIS) that was riddled with factual holes and saturated with incomplete analysis. Not only did FERC deny the public an opportunity to comment on the project with the benefit of a proper environmental analysis in the DEIS, but FERC failed to respond to the glaring inadequacies of the DEIS that were highlighted in public comments by issuing a supplemental DEIS, so that comment could be taken on a completed and corrected record from a fully-informed public. 40 C.F.R. § 1502.9(a); *N.C. Wildlife Fed'n v. N.C. Dep't of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) (citation omitted); *Burkey v. Ellis*, 483 F. Supp. 897, 915 (N.D. Ala. 1979); *Habitat Educ. Ctr. v. U.S. Forest Servs*., 680 F. Supp. 2d 996, 1005 (E.D. Wis. 2010) (emphasis added), *aff'd sub nom. Habitat Educ. Ctr., Inc. v. U.S. Forest Serv*., 673 F.3d 518 (7th

Cir. 2012). What's more, FERC denied itself the opportunity to make an informed decision about whether to grant the Certificate for the Southgate project. *Marsh*, 490 U.S at 371.

1. FERC Never Completed its Analysis of Special Status Species Impacts

FERC issued its DEIS and FEIS with conclusory statements about impacts to special status species without completing species surveys or Endangered Species Act (ESA) Section 7 consultations with the United States Fish and Wildlife Service. As a preliminary matter, FERC thusly violated NEPA by failing to include sufficient information in its draft EIS to permit meaningful public review and comment. 40 C.F.R. § 1502.9(a). The DEIS was so lacking in information and analysis about the below-described species that neither the public, nor FERC, nor the United States Fish and Wildlife Service (FWS) could properly assess the project's impacts or critique FERC's assessment thereof. FERC's deficient DEIS and its refusal to provide a revised or supplemental EIS for public review and comment thus violates NEPA's public participation requirements. *Burkey v. Ellis*, 483 F. Supp. 897, 915 (N.D. Ala. 1979); *Habitat Educ. Ctr. v. U.S. Forest Servs*., 680 F. Supp. 2d 996, 1005 (E.D. Wis. 2010) (emphasis added), *aff'd sub nom. Habitat Educ. Ctr., Inc. v. U.S. Forest Serv*., 673 F.3d 518 (7th Cir. 2012).

a. FERC did not Complete Consultation on Listed Species Before Reaching its Conclusions on Impacts to Listed Species

NEPA requires that "[t]o the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analysis and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders." 40 C.F.R. § 1502.25(a). The concurrency requirement for the NEPA and ESA process is essential for public involvement; since there is no opportunity for public

comment on the development of a Biological Assessment or Biological Opinion, it is only through the NEPA process that the public may comment on impacts to listed species.

Likewise, FWS' ESA Consultation Handbook states that "[a]t 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." U.S. Fish and Wildlife Service, *Endangered Species Consultation Handbook* (March 1998) at 4-11. Also significant to the satisfaction of FERC's NEPA duties is its mandated cumulative impacts assessment, which requires fully vetting species impacts in the DEIS and FEIS. FERC may not undermine that analysis by segmenting the impacts to listed species and ignoring them in the DEIS or FEIS. 40 CFR § 1508.8.

FERC did not complete ESA Section 7 consultation for all relevant species with the FWS before issuing its FEIS for this project. Certificate, ¶52. After FERC issued its DEIS, FWS warned FERC that neither agency was capable of assessing impacts to listed species given the paltry information that FERC collected prior to the issuance of the DEIS. FWS stated:

> "the Service does not believe there is sufficient information for the FERC to make a determination regarding effects to listed species . . . due to the lack of information regarding . . .stream crossings, lack of completed surveys for listed species and the absence of important information regarding the project such as the Erosion & Sedimentation Control plan."

FWS' September 16, 2019 Letter. FWS also highlighted the crippling lack of information in the record regarding aquatic impacts mitigation, which also prevented FERC and FWS from assessing impacts to listed aquatic species and their habitat. FWS pointed out that, although FERC's FONSIs for aquatic species and aquatic species habitat were based on provisions of Mountain Valley's (MV) Erosion and Sediment Control plan (E&SC plan), Mountain Valley had never, in fact, provided said plan, nor the provisions thereof. FWS clarified that this information was integral to assessing the impacts of the proposed action. Furthermore, FWS indicated that FERC's failure to obtain a clear answer from Mountain Valley regarding their water intake site

for project-related water needs prevented adequate impacts assessment and consultation on listed aquatic species. Due to these inadequacies in the record, FWS indicated to FERC that its Biological Assessment was deemed insufficient. FWS' letter closes with the apt observation that above-mentioned missing essential information should be provided to FERC and FWS with adequate time to properly evaluate impacts prior to release of the FEIS so that consultation can be completed & included in FEIS. *Id.*

Significantly, FWS made clear that it based its ultimate concurrence with FERC's determination of no significant impacts to migratory bird species on a false assumption. FWS writes that it assumes that Mountain Valley would avoid clearing vegetation during the migratory bird nesting season in Virginia, from March 15 through August 15. *Id.* However, this assumption is not borne out by the project details as presented in the DEIS or FEIS. In fact, both reveal that Mountain Valley plans to clear vegetation during the nesting season in Virginia, from March 15 through March 31. FEIS at 4-83.

FWS' ultimate concurrence letter, which was issued subsequent to FERC's issuance of its FEIS, did not provide concurrence with FERC's "not likely to adversely affect" determination for the federally-Threatened northern long-eared bat (NLEB). FWS' March 19, 2020 Letter. The letter also clarified that additional consultation would be required to address MV's plans to withdraw water from Roanoke logperch habitat in the Dan River. *Id.* The letter did not reflect that any of the above-mentioned deficiencies in MV's and FERC's analysis had been remedied since the date of FWS' September 16, 2019 letter.

To the extent that the above deficiencies represent failures to complete Section 7 consultation pursuant to the ESA, they also embody in equal measure violations of NEPA. FERC failed to conduct Section 7 consultation concurrently with NEPA analysis, and to incorporate the

impacts analysis required under Section 7 into its DEIS and FEIS. 40 C.F.R. § 1502.25(a). These glaring omissions also constitute a failure to take a "hard look" at impacts to protected species. *Nat'l Audubon Soc'y*, 422 F.3d at 187.

b. FERC did not Complete Surveys for Special Status Species Throughout the Project Area

As FWS' concurrence letters highlighted, FERC issued its DEIS and FEIS without the benefit of data from completed species surveys for a wide variety of special status species. FWS' September 16, 2019 Letter; FWS' March 19, 2020 Letter.

For example, the FEIS acknowledges that project activities can destroy federally-Threatened NLEB roosting and hibernacula habitat and "take" individual bats via harassment during roosting and hibernating activities, in part by removing roost trees during vegetative clearing. FEIS at 4-97. Additionally, FERC's FEIS disingenuously states that there are no "known" NLEB hibernacula or roost trees. FEIS at 4-98. However, surveys were not completed for NLEB hibernacula along 3.2 miles of the project route, and no surveys were conducted for NLEB roost trees. *Id.*

While no results of acoustic bat surveys are disclosed by FERC in the FEIS, the document does disclose that a tri-colored bat, state listed as endangered in Virginia, was captured during field surveys. *Id.* at 4-106. FERC's FEIS disingenuously states that there are no "known" tri-colored bat roost trees in the Project Area, however no survey was conducted to determine whether or not this habitat is present and at risk of destruction from the construction of the project. *Id.*

Likewise, the FEIS presumes the federally-Endangered Roanoke logperch to be present at three water crossings where the species is already documented to occur, but no surveys were

conducted to determine whether this imperiled fish was also present at any of the hundreds of other stream crossings impacted by the project. *Id.* at 4-99.

A variety of freshwater mussels of conservation concern are found throughout the general vicinity of the Project Area. The James spineymussel is a federally-Endangered aquatic species known to exist in the general vicinity of the Project Area, and which requires clean water and silt-free aquatic habitat to survive. *Id.* at 4-100. The Atlantic pigtoe is a freshwater mussel documented to occur in silt-free aquatic habitat throughout the general vicinity of the project area which has been proposed by FWS to be listed as Threatened pursuant to the ESA. *Id.* The green floater is federal species of concern known to inhabit clean streams throughout the general vicinity of the Project Area, and is listed as state threatened in Virginia and endangered in North Carolina. *Id.* at 4-101. Finally, the yellow lampmussel is known to inhabit one creek crossed by the project, and is a federal species of concern and is listed as a state species of very high conservation need in Virginia and endangered in North Carolina. *Id.* FERC bases its findings that the pipeline is unlikely to adversely affect or significantly impact any of these imperiled mussel on the fact that no individuals were found during stream surveys. *Id.* at 4-103. However, only 19 out of 223 water crossings for the project were surveyed for mussels. *Id.* at 4-101. Not only did that leave 204 of the project's water crossings unexamined for the presence of these mussels, 2 of the 21 perennial water bodies crossed by the pipeline and containing fisheries of special concern went unsurveyed, unexamined, and unanalyzed as well. *Id.* at 4-33.

The Project Area is rich with freshwater crayfish diversity. *Id.* at 4-87. The Carolina ladle crayfish, listed as "significantly rare" in North Carolina, is one such species that was found at 13 stream crossings that would be impacted by the proposed project. *Id.* at 4-109. Although the FEIS acknowledges that potential killing and habitat destruction via direct crushing and

smothering with sedimentation from the construction right of way are potential projects impacts for this species, only 17 out of 223 water crossings were surveyed for this species, leaving 206 water crossings unexamined. *Id.* The Greensboro burrowing crayfish, listed as "significantly rare" in North Carolina, is known to inhabit the general vicinity of the Project Area. *Id.* However, in spite of the fact that Mountain Valley did not even determine whether North Carolina Wildlife Resources Commission (NCWRC) will require Mountain Valley to conduct surveys for the species, FERC proceeded to issue its DEIS and FEIS, with attendant species impacts determinations, without the benefit of any survey data for this crayfish. *Id.*

The four-toed salamander, a federal species of special concern, and the mole salamander, listed as a species of significant concern in North Carolina, are known to exist in the general vicinity of the Project Area. *Id.* at 4-107. Furthermore, Mountain Valley identified 109 wetlands, 24 ponds, 63 streams that would be impacted by the project as potential breeding habitat for the two species. *Id.* However, in spite of the fact that Mountain Valley did not even determine whether North Carolina Wildlife Resources Commission (NCWRC) will require Mountain Valley to conduct surveys for the species, FERC proceeded to issue its DEIS and FEIS, with attendant species impacts determinations, without the benefit of any survey data for these salamanders.

The small whorled pogonia is a plant that is federally listed as Threatened, and vulnerable to being killed and having its habitat destroyed by the construction of the proposed project. *Id.* at 4-103. Mountain Valley identified 271 acres of potentially suitable habitat for this species within the Project Area, however Mountain Valley only properly surveyed 183.3 acres of this potential habitat before FERC issued its FEIS, identifying 45 acres of suitable habitat within the Project Area. FERC issued its impact determination for this species although 87.7 acres of potentially

suitable habitat was never surveyed within the impact zone of the proposed project. *Id.* Mountain Valley has no plans to survey 73 of these unexamined acres in the future. *Id.*

The smooth coneflower is a plant that is federally listed as Endangered, and vulnerable to being killed and having its habitat destroyed by the construction of the proposed project. *Id.* at 4-103. Mountain Valley identified 88.3 acres of potentially suitable habitat for this species within the Project Area, however Mountain Valley only surveyed 64.7 of these acres before FERC issued its impact determination for this species. *Id.* at 4-104. Mountain Valley has no plans to survey 21.5 of these unexamined acres in the future. *Id.*

FERC's mandate to take a "hard look" at impacts to special status species includes the requirement that the agency perform a "thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms" to special status species in the DEIS and FEIS. *Nat'l Audubon Soc'y*, 422 F.3d at 187. The agency is incapable of thoroughly investigating impacts to the aforementioned listed species and forthrightly acknowledging potential harms to those species when it does not know whether such species are present in the Project Area, and by extension, what the impacts the Southgate pipeline would inflict on those species. Because of the aforementioned species' nonexistent or incomplete occurrence surveys, FERC issued the DEIS and FEIS without taking the requisite "hard look" at impacts to these species, in violation of NEPA. *Id.*

2. FERC's Impacts Determinations for Listed Species Rely on Undefined, Unspecified, and Unexamined Mitigation Measures

If an agency seeks to justify a FONSI or NLAA determination based on mitigation measures, which in turn are projected to keep project impacts below the threshold of significance, then the NEPA analysis needs not explicate the proposed mitigation measures to the finest detail, but what is required is something more than a "purely perfunctory or conclusory"

listing. *Ohio Valley Envtl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177, 206 (4th Cir. 2009) (citing *O'Reilly v. U.S. Army Corps of Engr's*, 477 F.3d 225, 231 (5th Cir. 2007)). A mitigated FONSI based on a purely perfunctory or conclusory listing of mitigation measures−or less−is arbitrary and capricious agency action "so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

FERC bases its NLAA determination for the federally Endangered Roanoke logperch in part on unspecified sedimentation mitigation measures attributed to a report the FEIS refers to as the E&SC plan. FEIS at 4-100. However, as FWS pointed out in its concurrence letter, Mountain Valley never provided the E&SC plan. FWS' September 16, 2019 Letter. As such, FERC's reference to the plan does not even rise to the level of a "purely perfunctory or conclusory listing." On the contrary, FERC relies on completely undefined, hypothetical mitigation measures in order to reach its impacts determination for the Roanoke logperch, providing no substantive basis for its determination, in violation of NEPA. *Ohio Valley,* 556 F.3d at 206.

FERC's blasting impacts analysis indicates that shockwaves from the project's contemplated blasting through water crossings could injure or kill fish or freshwater mussels. However, FERC finds no significant blasting impacts to aquatic species based on a requirement that Mountain Valley "would prepare and implement Project-specific blasting plans, in coordination with federal and state agencies…" FEIS at 4-95. FERC's mitigated FONSI is based on speculative mitigation measures that have yet to be defined. FERC can not base its impacts determination on the efficacy of mitigation measures which are completely undefined, hypothetical and speculative, in violation of NEPA. *Ohio Valley,* 556 F.3d at 206.

While the small whorled pogonia can be killed and have its habitat destroyed by construction of the project, FERC's NLAA determination for this species is based on speculative and unspecified mitigation measures which have yet to be determined, in violation of NEPA. FEIS at 4-103; *Ohio Valley*, 556 F.3d at 206.

Likewise, while the small whorled pogonia can be killed and have its habitat destroyed by construction of the project, FERC's NLAA determination for this species is based on speculative and unspecified mitigation measures which have yet to be determined, in violation of NEPA. FEIS at 4-104; *Ohio Valley*, 556 F.3d at 206.

3. FERC Flagrantly Refused to Analyze Cumulative Impacts to Federally Listed Species

FERC's FEIS contains no analysis whatsoever of specific cumulative effects to federally listed species. While the document does contain a section discussing cumulative effects on federally listed species, it contains no specific analysis regarding cumulative effects. Instead, FERC seems intent on ascribing its responsibilities to analyze the cumulative effects of the instant project along with other foreseeable activities to other agencies, other analyses, and other permitting processes. FERC attempts to pass off its cumulative effects analysis duties on outside parties by suggesting that future Section 7 consultations for other projects and "various state permitting processes or resource reviews" will compensate for FERC's refusal to examine these cumulative impacts and ensure that impacts will remain below the threshold of significance through unspecified mitigation measures, to be determined in the future by unnamed third parties. FEIS at 4-248. In reasoning that seems designed for satire, FERC expresses its expectation that while it is entirely unwilling to comply with NEPA's requirement to examine cumulative impacts, other agencies will find sufficient quantities of that same willpower to compensate for FERC's abdications. By refusing to examine cumulative effects to federally

listed species, FERC runs afoul of NEPA's mandate to take a "hard look" at the impacts of the proposed action, including a cumulative effects analysis. *Dep't of Transp. v. Pub. Citizen,* 541 U.S. 752, 763–64 (2004); 40 C.F.R. § 1508.8. This is a textbook example of agency action that is arbitrary, capricious, an abuse of discretion, or not otherwise in accordance with law." 5 U.S.C. § 706(2)(A).

4. FERC's EIS Entirely Fails to Analyze a Myriad of Acknowledged Direct Impacts to Protected Species

FERC's analysis of impacts to migratory birds claims that Mountain Valley will avoid impacting migratory birds during nesting season by instituting a vegetative clearing season of October 16 through March 31. FEIS at 4-83. However, this plan in fact would in fact disturb species protected under the Migratory Bird Treaty Act during their nesting season in Virginia, threatening these species with unlawful "take" during their nesting season. As stated in FERC's FEIS, the peak migratory bird nesting season in Virginia begins March 15 and ends August 15. *Id.* FERC also leaves the door open to allowing Mountain Valley to mow during the peak nesting season for ground-nesting migratory birds, Consequently, Mountain Valley would be clearing vegetation during peak migratory bird nesting season in Virginia between March 15 and March 31. Cutting trees and mowing during peak nesting season would directly kill protected migratory bird species by destroying their nesting habitat (for example, by dropping the trees in which they are nesting to the ground, or by crushing them by dropping trees onto ground-nesting bird species). This killing via habitat destruction constitutes unlawful "take" of protected migratory birds, per the Migratory Bird Treaty Act. 16 U.S.C. § 703(a); *Sierra Club v. Martin,* 933 F. Supp. 1559, 1563 (N.D. Ga. 1996). *United States v. FMC Corp.,* 572 F.2d 902 (2d Cir. 1978). Consequently, FERC's FONSI for migratory birds is arbitrary and capricious, as it fails to examine direct impacts, "entirely fail[ing] to consider an important aspect of the problem," and

offers "an explanation for its decision that runs counter to the evidence before the agency." 40 CFR § 1508.8; *Motor Vehicle Mfrs.*, 463 U.S. at 43.

FERC similarly ignores species impacts hiding in broad daylight when it examines blasting impacts to aquatic species. While the FEIS describes how blasting shockwaves can severely injure or kill fish and freshwater mussels, FERC makes no mention of the potential for harm to the abundant salamander and crayfish species which also call the same waterways home. FEIS at 4-95. For example, many crayfish species inhabit streams in the Project Area, including the significantly rare Carolina ladle crayfish and the Greensboro burrowing crayfish. *Id.* at 4-87. However, the FEIS completely ignores direct blasting shockwave impacts to crayfish, failing to take a "hard look" at blasting impacts, and rendering the analysis arbitrary and capricious, as it "entirely fail[s] to consider an important aspect of the problem." *Nat'l Audubon Soc'y*, 422 F.3d at 187; *Motor Vehicle Mfrs.*, 463 U.S. at 43.

5. FERC's Impacts Determinations for Special Status Species Rely on Arbitrary and Capricious Reasoning

Compliance with NEPA is reviewed under the judicial review provisions of the APA, which requires a court to "hold unlawful and set aside agency action, findings and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or not otherwise in accordance with law." 5 U.S.C. § 706(2)(A). A decision is arbitrary and capricious if the agency has "relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfrs.*, 463 U.S. at 43.

In Motor Vehicle Manufacturers, the Supreme Court clarified that a reviewing court may not defer to an agency decision that is not supported by the facts in the record, but instead "the

agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'" *Id.*

As mentioned above, FERC issued a NLAA determination for the federally Endangered Roanoke logperch without determining whether Mountain Valley would be withdrawing vast amounts of water from logperch habitat in the Dan River. FWS' September 16, 2019 Letter. This constitutes arbitrary and capricious agency action, as it "entirely failed to consider an important aspect of the problem." 5 U.S.C. § 706(2)(A); *Motor Vehicle Mfrs.*, 463 U.S. at 43.

Likewise, FERC's NLAA determination for the Roanoke logperch was issued in part on the basis that the nearest upstream crossing of a waterway inhabited by the logperch is 1,350 feet upstream from the population. FERC states that sedimentation impacts from construction would only last up to four days, and that the crossing is too far upstream to impact the Endangered fish. FEIS at 4-100. However, this rationale is contradicted by FERC's own prior analysis, which finds long-term increases in erosion and sedimentation of streams, causing degradation of aquatic habitat as a result of upstream development in a given watershed:

> The watersheds contain forests, open land, agriculture, silviculture, and residential development. Development in the watersheds results in some degradation of water quality. For instance, agricultural runoff or runoff from cleared areas in a typical rain event will cause short-term turbidity in streams. We expect that the water quality and biota within the Project area streams is largely reflective of the degree of upstream development.

Id. at 4-33. As FERC emphasized, upstream development has a long-term determinative influence on the species that are able to persist in the downstream aquatic environment over the long-term. The more upstream development there is, the fewer sensitive species that will be able to persist downstream in the same water body. The Roanoke logperch is clearly imperiled by the development of its upstream habitat by the Southgate pipeline. FERC's impacts analysis for the logperch is arbitrary and capricious, as it "offered an explanation for its decision that runs

counter to the evidence before the agency." 5 U.S.C. § 706(2)(A); *Motor Vehicle Mfrs.*, 463 U.S. at 43.

FERC also argues that no significant impacts will be suffered by imperiled four-toed salamanders and mole salamanders. FERC admits that these imperiled species may be killed and have their habitat destroyed by construction of the project, but the agency concludes that no significant impacts will occur "due to the short duration of construction activities in any one area." FEIS at 4-108. This analysis misses the mark, as it overlooks the fact that a salamander only need be killed–or have its habitat destroyed–once for the impact to be significant. There is no quantification of mortality or habitat destruction anticipated by construction impacts, relative to the size of the population or amount of overall habitat. FERC's impacts analysis for these amphibians is arbitrary and capricious, in that it "entirely failed to consider an important aspect of the problem," and "offered an explanation for its decision that runs counter to the evidence before the agency." 5 U.S.C. § 706(2)(A); *Motor Vehicle Mfrs.*, 463 U.S. at 43.

In a similarly inadequate vein, FERC acknowledges the risk of killing and destroying the habitat of the significantly rare Carolina ladle crayfish and Greensboro burrowing crayfish via direct crushing and smothering through sedimentation, yet discounts the chance of significant impacts to the species due to the use of a narrow construction corridor through the streams. FEIS at 4-109. Much as with the imperiled amphibians above, FERC offers no quantification of the mortality or habitat destruction anticipated to these species from construction of the project, relative to the population size and amount of habitat. The agency simply summarily issues its FONSI in reliance on the size of the impact zone by construction equipment in the crayfishes' habitat. FERC's impacts analysis for these amphibians is arbitrary and capricious in that it "entirely failed to consider an important aspect of the problem," and "offered an explanation for

its decision that runs counter to the evidence before the agency." 5 U.S.C. § 706(2)(A); *Motor Vehicle Mfrs.*, 463 U.S. at 43.

Lastly, FERC determines that the project is not likely to significantly impact the Virginia state endangered tri-colored bat. However, Mountain Valley caught a tri-colored bat during field surveys in the project area. FEIS at 4-106. Also, FERC bases its FONSI for the species in part on mitigation measures for the species that focus on re-vegetation of the project area after construction. These mitigation measures are an implicit acknowledgement that the clearing of vegetation from the bat's habitat will detrimentally affect the species, presumably primarily due to the removal of roost tree habitat. However, FERC turns a blind eye to these clear significant impacts, offering no quantification of mortality and habitat destruction relative to the overall population size and amount of habitat available. FERC's impacts analysis for the tri-colored bat is arbitrary and capricious in that it "entirely failed to consider an important aspect of the problem," and "offered an explanation for its decision that runs counter to the evidence before the agency." 5 U.S.C. § 706(2)(A); *Motor Vehicle Mfrs.*, 463 U.S. at 43.

CONCLUSION AND REQUESTED RELIEF

For the foregoing reasons, Intervenors respectfully request the following relief:

1. Grant Intervenors' Request for Rehearing;

2. Immediately stay the Applicants from taking any action authorized by the Certificate Order including, but not limited to, any construction of the projects (including tree clearing) and any attempt to use the power of eminent domain pending final action on the Request for Rehearing;

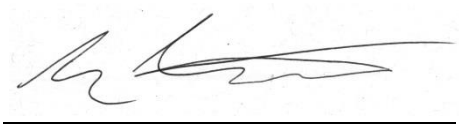
3. Upon completion of the rehearing process, rescind the Certificate Order;

4. Before making any new certificate ruling, conduct a NEPA analysis that fully assesses the direct, indirect, and cumulative impacts of the Projects, as set out in this request and Intervenors' previous comments in these dockets;

5. Grant any and all other relief to which Intervenors are entitled.

Dated: July 20, 2020.

Respectfully submitted on behalf of all parties to this request,



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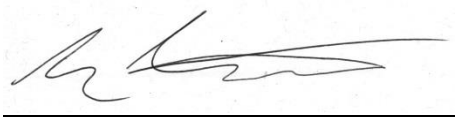
On behalf of Appalachian Voices, Blue Ridge Environmental Defense League, Center for Biological Diversity, Chesapeake Climate Action Network, Haw River Assembly, and the Sierra Club

CERTIFICATE OF SERVICE

I hereby certify that I have on July 20, 2020, caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Sincerely,



Benjamin A. Luckett
Appalachian Mountain Advocates

EXHIBIT A

Declaration of Mark Barker

1. I am a staff member of the Blue Ridge Environmental Defense League ("BREDL"). I have been on the BREDL staff since April 2018. Prior to that, I had been a volunteer with BREDL serving as either a chapter representative, a webmaster (manually coding our website) and/or executive committee member since 1992. I also volunteered, until 2018 when the group disbanded, for the Roanoke Valley Asthma and Air Quality Coalition, which worked to educate the public about the effects of air pollution on asthma and other lung disorders. I track regional air quality and have been for about two decades. I gather and make available air quality information because I care about the well-being of my family members and community and want people to be able to protect themselves from air pollution.

2. I am 58 years old. I have a Bachelor of Science degree from James Madison University. I live and work in Roanoke, VA.

3. On May 7, 2020 my colleague Ann Rogers, per her request, received the Lambert Natural Gas Compressor Station (LCS) air modeling files from Mike Kiss who works at the Virginia Department of Environmental Quality (VA DEQ). Ann Rogers downloaded those files from VA DEQ then made those available for me to download.

4. On May 8, 2020 I began learning about EPA's dispersion air modeling system known as AERMOD. AERMOD is the system that was used for the LCS air modeling.

5. I watched seventeen training videos offered by aermodtraining.com. While the company that produced these videos is no longer in business, the training videos remain online.

6. By watching the videos and reading the EPA online documentation, I was able to understand the various components and programs that make up AERMOD.

7. By May 15, 2020 I was able to run air modeling files through the AERMOD system to the post-processor program AERPLOT. AERPLOT plots the receptors and their modeled pollutant concentration on a Google Earth Map.

8. During this learning time, I was also documenting how to run AERMOD and creating a spreadsheet that will generate a receptor network for AERMOD.

9. I finished my analysis of the LCS air modeling on June 3, 2020. During my analysis, I discovered two "fatal flaws" with the LCS air modeling.

10. I discovered that (1) the LCS air modeling excluded receptors on the adjacent Transco property and (2) the air modeling was not anchored (centered) on the LCS property, but instead was centered on the Transco property.

11. I researched EPA policy on air modeling and verified that the LCS air modeling should have included modeling receptors on the Transco property, which is not owned by MVP.

12. EPA memos and policy documents regarding air modeling dating back to 1980 were examined. This included an April 1987 EPA letter which states, “Note, however, that one source’s property-regardless of whether it is fenced-is the “ambient air” relative to another source’s emissions.” The same letter, in reference to another case, stated, “we feel that present policy does require that receptors be placed over another source's property to measure the contribution of the outside source to its neighbor's ambient air. To reiterate, Plant A's property is considered "ambient air" in relation to Plant B's emissions.”

13. Furthermore, on December 2, 2019, EPA Administrator Andrew Wheeler revised the EPA policy regarding “ambient air”. However, this revision only applied to further defining the physical barriers which preclude public access to a company’s property.

14. The December 2019 letter stated, “The limited exclusion in this upland ambient air policy continues to apply only to property ‘owned or controlled’ by the source…” This is in keeping with “nearly 40 years” of EPA policy as referenced in this letter.

15. As a final check, I emailed EPA to inquire if this long-standing policy was still in place. On June 5, 2020, Tim Leon-Guerrero, EPA Region 3 Meteorologist, responded, “The short answer to your question regarding EPA’s ambient air policy with respect to neighboring company properties is that the Model Clearinghouse memos you included in your email are still relevant.”

16. In addition, I ran several modeling runs for several pollutants using the input files provided by VA DEQ. The results of those runs matched the results submitted by MVP in their LCS Air Modeling Report submitted on the FERC docket in January 2020. The AERPLOT maps of these runs showed that the Transco property was excluded from modeling.

17. Then, I ran the modeling with receptors included on the Transco property. My results showed: Over 10% higher concentrations of NO2 for I-hour and nearly 15% higher for annual; Nearly 2% less concentrations of CO for 1-hour and over 11% higher concentrations for

annual; Over 15% higher concentrations for PM 2.5 24-hour and 50% higher for annual; Over 22% higher concentrations for PM 10 24-hour; and Nearly 2% less concentrations for Formaldehyde 1-hour and over 13% higher for annual.

18. On June 8, 2020, I submitted comments on the FERC MVP-Southgate docket and emailed the comments to VA DEQ and US EPA Region 3. In my letter, I point out the issues as outlined in this Declaration. I requested that the air modeling be redone to include modeled receptors on the adjacent Transco property with the modeling anchored on the LCS property, per decades-long EPA protocol. As of this Declaration, I have not received a response from FERC, VA DEQ or US EPA.

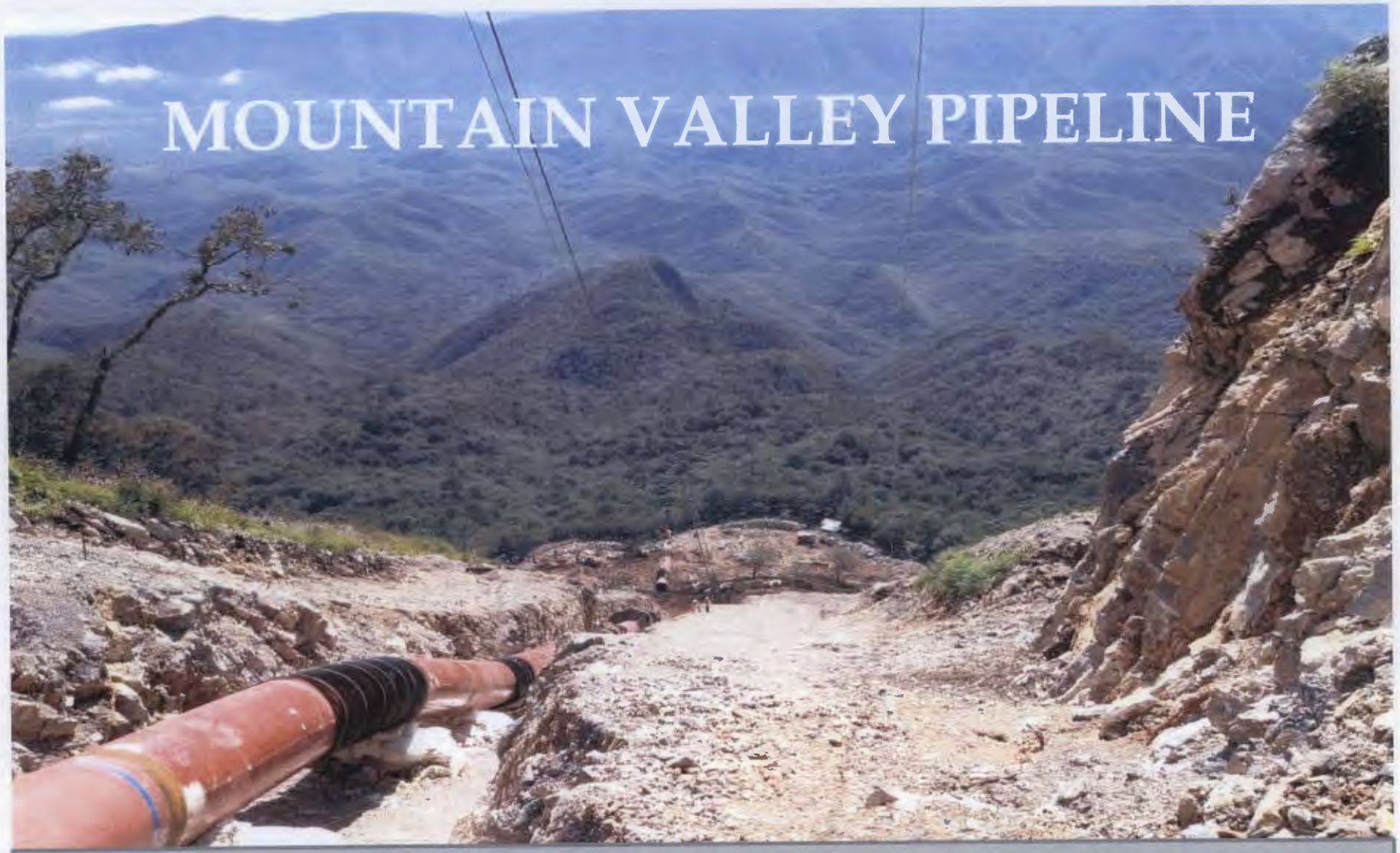
I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 7/19/2020

Mark E. Barker

EXHIBIT B

Briefing No. 2



Risks for the City of Roanoke

PRIMARY CONCERNS

- Soil erosion and sediment downstream
- Impact to City achieving Total Maximum Daily Load (TMDL) requirements
  - Sediment
  - Bacteria
  - PolyChlorinated Biphenols (PCBs)
- Roanoke Logperch population

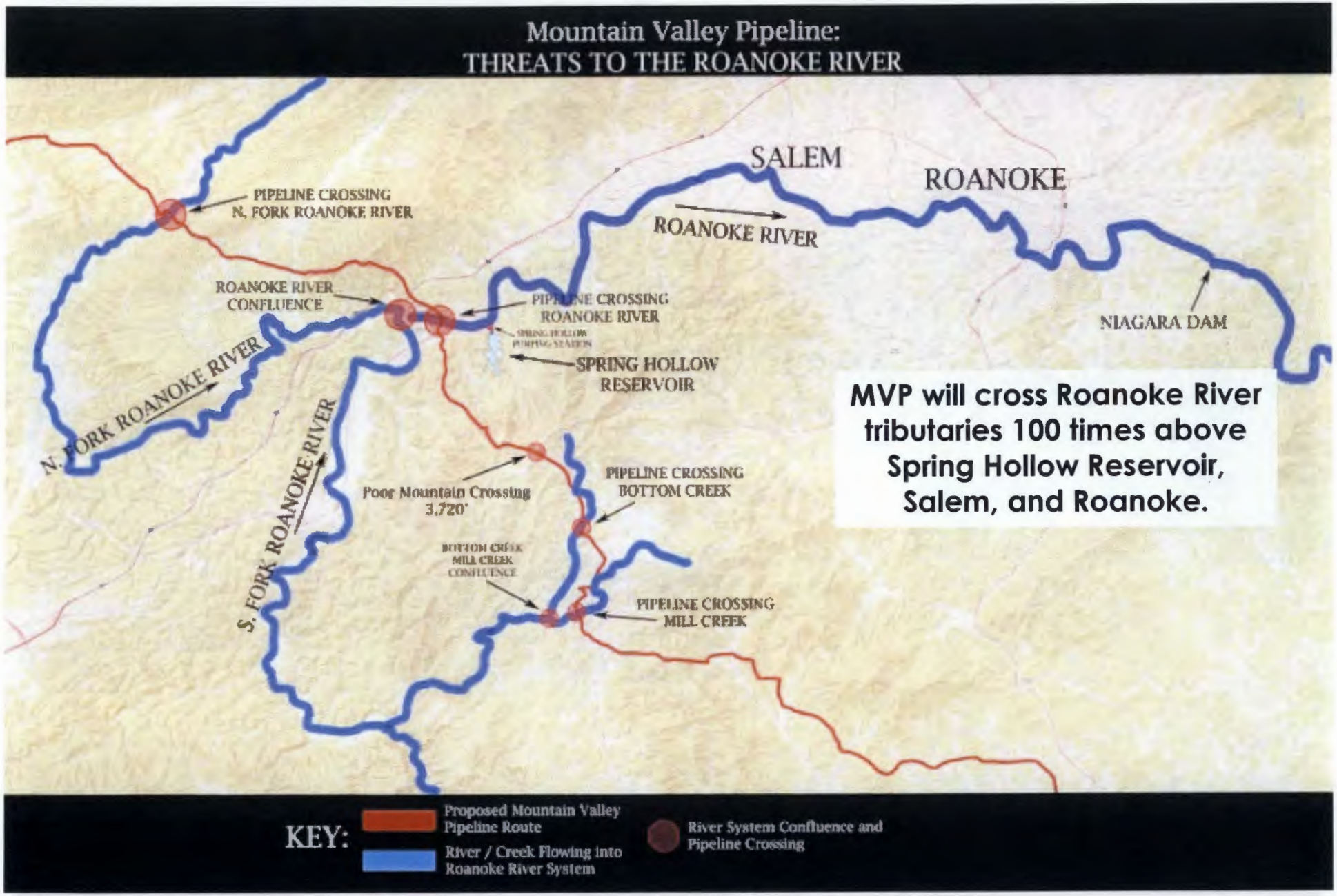
CONSTRUCTION DOCUMENTS

QUANTIFYING PROJECT RISK

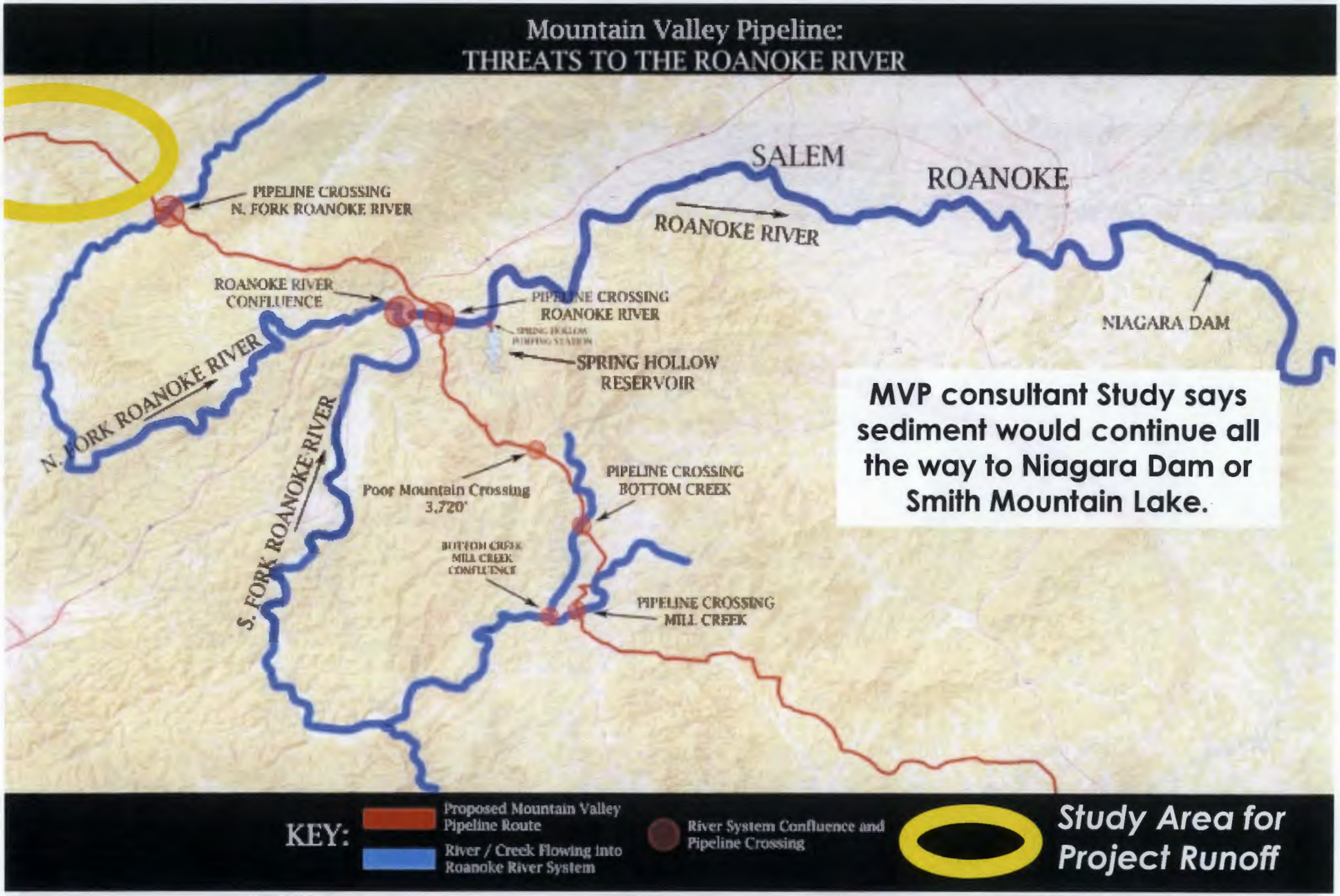
- City needs:
  - Construction Plans for Upper Roanoke River Watershed portion of project
  - Drainage Area Delineations
  - Engineering Calculations
  - Erosion & Sediment Controls
  - Stormwater Management BMPs

- Request 60 days after public release to review and make comment

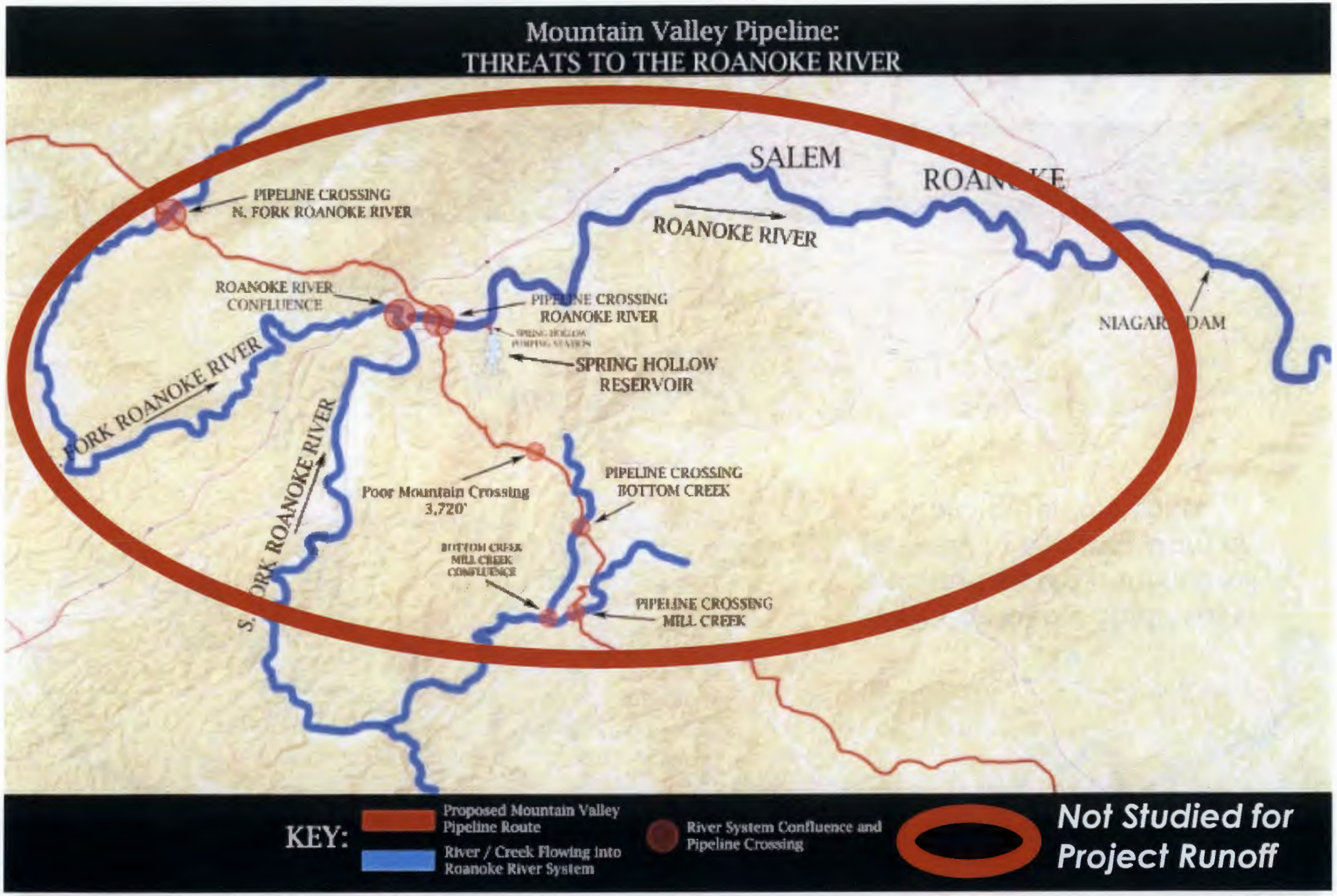
SEDIMENTATION



Map by Matthew Pickett.
Sources: USGS (Roanoke River), Mountain Valley Pipeline (pipeline route)



Map by Matthew Pickett.
Sources: USGS (Roanoke River), Mountain Valley Pipeline (pipeline route)



Map by Matthew Pickett.
Sources: USGS (Roanoke River), Mountain Valley Pipeline (pipeline route)

QUANTIFYING SEDIMENTATION

- Sediment #1 Risk to achieving TMDL
  - City Sediment Reduction 2,883 Tons/Year
  - DEQ Cost Est Apx $100M to achieve
  - Cost apx $34,500 per Ton/Year
  - MVP Consultant (Small Study Area): Additional 1,039 Tons Sediment/Year
  - At $34,500 per Ton/Year = $36M

- Requests:
  - Comprehensive Modeling for Sediment
  - To allow City VSMP Comment/Review

WATER QUALITY

MONITORING FOR SEDIMENT

- Sediment Monitoring Before, During, & After
  - MVP agrees to Pre-Construction Monitoring
  - FERC recommends Post-Construction Monitoring
  - DEQ may conduct before, during, & after monitoring, but details not clear

- Requests:
  - Comprehensive Monitoring for Sediment
  - Clarity of how sediment will be tracked before, during and after project

STREAM INCISION & RIPARIAN BUFFERS

QUANTIFYING OTHER RISKS

- Pipeline could be exposed in stream over time
  - Additional Runoff = Stream Incision
  - 2-4 ft of cover may not be sufficient
  - Exposed pipelines problematic
- Riparian Buffers critical to Stream Health
  - Riprap ≠ Riparian Buffer
  - Native Vegetation vs Invasives
- Requests:
  - Rosgen classification for erosion potential
  - Detail each Stream crossing to ensure long-term riparian vegetation restored

ROANOKE LOGPERCH

ENDANGERED SPECIES RISK

- Negative Impacts Acknowledged
  - Physical Stream Crossings
  - Habitat Sedimentation
- Habitat Restoration
  - General recommendations vs Detailed specifics
- Requests:
  - Detail and implement solution to mitigate negative Roanoke Logperch impacts

Document Content(s)