



*Submitted via email, return receipt requested*

December 1, 2017

Commissioner John M.R. Bull  
Tony Watkinson, Chief of Habitat Management  
Virginia Marine Resources Commission (VMRC)  
2600 Washington Ave., 3rd Floor  
Newport News, VA 23607

Re: Mountain Valley Pipeline, LLC, Request for Authorization To Install Natural Gas Pipeline Beneath 18 Streams and Rivers With Drainage Areas Greater Than 5 Square Miles in Giles, Montgomery, Franklin, Roanoke and Pittsylvania Counties (VRC#17-1609)

Dear Commissioner Bull and Mr. Watkinson,

On behalf of the Center for Biological Diversity and the Sierra Club, we submit these comments on the Mountain Valley Pipeline (“Pipeline”) request for authorization to install natural gas pipeline beneath 18 streams and/or rivers in five counties in Virginia. Our primary concern is that authorizing this pipeline will take endangered species, possibly risking extinction or extirpation of Virginia’s native fauna. Scientific surveys to assess the occurrence and county abundance of endangered species within the pipeline’s disturbance area are underway, but have not been completed or publicly released for comment. VMRC’s granting an application for stream and river crossings before review of that information recklessly risks irreparably changing these ecosystems. In addition, VMRC must analyze the Pipeline’s climate change impacts as a contributing factor in the continuing decline of Virginia’s endangered species.

Virginia’s stream biodiversity is superlative in terms of number of species and vulnerability to extinction. Virginia has 77 species of mussels, making the State one of the most diverse in the United States; and 39 species, or 51%, are listed as federally endangered, state

endangered, or state threatened.<sup>1</sup> The South Atlantic ecoregion has the highest number of imperiled (endangered, threatened, vulnerable, and extinct) freshwater and diadromous fish taxa.<sup>2</sup> The number of imperiled North American freshwater and diadromous fish has dramatically increased since 1989.<sup>3</sup> Virginia's great biodiversity and the threat of extinction give urgency and moral importance to VMRC's review of the Pipeline application.

Threats to these species from the Pipeline include diminished water quality from construction activities, the conversion of upland forest to herbaceous cover, and permanent forest fragmentation from maintaining the right-of-way that can increase fine sedimentation. A significant portion of the proposed route of the MVP is characterized by steep slopes and highly erodible soils that would contribute to such long-term impacts in rivers and streams. Therefore VMRC should not authorize the stream crossings for the Pipeline.

**I. VMRC must reject the application to install a fossil fuel pipeline beneath 18 streams and rivers in order to maintain State-owned bottomlands for the benefit, enjoyment and general welfare of the people.**

Construction, maintenance, and operation of the pipeline across 18 river and stream crossings plus the surrounding habitat directly conflicts with the public's interest in maintaining the native fish, mussels, and insects in and around those streams. Because those conflicts are unavoidable and possibly irreversible, VMRC must reject the Pipeline application.

Impacts from the Pipeline construction and maintenance will occur to the watersheds through which the pipeline traverses, not just the particular points at which the pipeline crosses rivers and streams. When reviewing the application for a permit to build the Mountain Valley Pipeline on state-owned, subaqueous land, VMRC "shall be guided in its deliberations by" the Constitution, Article XI, section 1<sup>4</sup>:

To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution,

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<sup>1</sup> Jones, J.W., 2015. Freshwater Mussels of Virginia (Bivalvia: Unionidae): An Introduction to Their Life History, Status and Conservation. *Virginia Journal of Science*, 66(3), p.6.

<sup>2</sup> Jelks, H.L., Walsh, S.J., Burkhead, N.M., Contreras-Balderas, S., Diaz-Pardo, E., Hendrickson, D.A., Lyons, J., Mandrak, N.E., McCormick, F., Nelson, J.S. and Platania, S.P., 2008. Conservation status of imperiled North American freshwater and diadromous fishes. *Fisheries*, 33(8), pp. 372-407.

<sup>3</sup> *Id.*

<sup>4</sup> Virginia Code § 28.2-1205(A)

impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.<sup>5</sup>

This means that VMRC has a duty to protect and safeguard the subaqueous lands of the Commonwealth and prevent destruction. In the case of the Pipeline's impacts to native wildlife, VMRC must ensure the continued existence of native mussels, fish, and salamanders that are critical for maintaining rivers and streams' ecosystem functions and dependent themselves on high quality habitat in rivers and streams. VMRC's granting of a permit for construction of a Pipeline that degrades habitat and results in extirpation or extinction of endangered species would violate the mandate to protect lands and waters for the benefit, enjoyment, and general welfare of the people of the Commonwealth.

Virginia law also requires VMRC to consider water quality, among other criteria, when granting a permit for the use of state-owned bottomlands.<sup>6</sup> In the case of the Pipeline, this demands a holistic view of the impacts of the Pipeline in time and space. Both short-term and long-term water quality impacts of the Pipeline are likely: short-term impacts will result from construction activity; long-term increases in runoff and erosion will result from land cover change within the pipeline right-of-way. In terms of the spatial scale of VMRC's decision, the Pipeline's water quality impacts will occur on a watershed basis, not at each stream and river crossing. Thus, VMRC should look at each watershed affected and the priority species in those watersheds.<sup>7</sup>

## **II. VMRC must assess the risk of mortality of endangered species resulting from approval of the fossil fuel pipeline route.**

VMRC must not issue the permit for the Pipeline's 18 river and stream crossings until it has completed surveys to verify the occurrence and abundance of federally endangered species and other vulnerable wildlife. Threats to the existence of these species include sedimentation, disturbance, pollutants, all of which will be caused by construction of the Pipeline. The data from all outstanding biological surveys for federally listed species should be provided to the public for comment before VMRC takes action on the permit request.

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<sup>5</sup> Va. Const. Art. XI, § 1.

<sup>6</sup> Virginia Code § 28.2-1205(A); *see also Palmer v. Commonwealth Marine Res. Comm'n*, 48 Va. App. 78, 628 S.E.2d 84 (2006) (noting that the state is responsible for protection of all appropriate current and potential future uses by the public of land lying beneath public waters).

<sup>7</sup> Exh. A, Excel workbook including a worksheet for each watershed crossed by the Pipeline and the watershed's priority species from the "2015 Wildlife Action Plan Interactive Tool," Priority Species, by Watershed, <http://vafwis.dgif.virginia.gov/WAP2/> (listing priority species by watershed).

Federally endangered species that live along the Pipeline route include the James spiny mussel<sup>8</sup> and Roanoke logperch.<sup>9</sup> The U.S. Fish and Wildlife Service last month proposed to list the candy darter as threatened.<sup>10</sup> Species currently under review for endangered or threatened listing include the orangefin madtom,<sup>11</sup> green floater, the Atlantic pigtoe<sup>12</sup> and the eastern hellbender.<sup>13</sup> Because these species are at risk of extinction or possible extirpation, VMRC cannot authorize stream and river crossings without a thorough risk analysis that includes recent occurrence data.

The Virginia Department of Inland Fish and Game recently revised its Wildlife Action Plan and ranked all of the above species as either in “Critical Conservation Need,” where species face an extremely high risk of extinction or extirpation, or “Very High Conservation Need,” indicating that species have a high risk of extinction or extirpation, populations are at low levels, face real threats, or occur within a very limited distribution; and “[i]mmediate management is needed for stabilization and recovery.”<sup>14</sup> For some of the species, such as eastern hellbender, Atlantic pigtoe, James spiny mussel and Roanoke logperch, managers have already identified species or habitat management strategies to benefit the species and have a reasonable chance of improving the species.<sup>15</sup> These are species that Virginia could prioritize in terms of recovery and expect to achieve some level of recovery success. For other species, such as the candy darter and orangefin madtom, managers have identified only research needs or conservation actions that cannot be implemented due to lack of personnel, funding, or other circumstance.<sup>16</sup> This is worrisome because for these species, any declines due to the Pipeline installation are unlikely to

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<sup>8</sup> U.S. Fish and Wildlife Service 1990, James Spiny mussel (*Pleurobema collina*) Recovery Plan, at Fig. 1, [https://efotg.sc.gov.usda.gov/references/Public/WV/James\\_Spiny\\_mussel\\_Recov\\_Plan.pdf](https://efotg.sc.gov.usda.gov/references/Public/WV/James_Spiny_mussel_Recov_Plan.pdf).

<sup>9</sup> U.S. Fish and Wildlife Service 2007, Roanoke Logperch (*Percina rex*) 5-Year Review: Summary and Evaluation, [https://ecos.fws.gov/docs/five\\_year\\_review/doc1113.pdf](https://ecos.fws.gov/docs/five_year_review/doc1113.pdf).

<sup>10</sup> *Endangered and Threatened Wildlife and Plants; Proposed Threatened Species Status for the Candy Darter*, Proposed Rule, 82 Fed. Reg. 46197 (Oct. 4, 2017).

<sup>11</sup> *Endangered and Threatened Wildlife and Plants; Partial 90-Day Finding on a Petition To List 404 Species in the Southeastern United States as Endangered or Threatened With Critical Habitat*; Notice of petition finding and initiation of status review, 76 Fed. Reg. 59835, 59841 (Sept. 27, 2011); *see also Endangered and Threatened Wildlife and Plants; Findings on Petitions and Initiation of Status Review*, 50 Fed. Reg. 29238 (July 18, 1985) (finding orangefin madtom warranted for listing but precluded by other efforts to revise the list).

<sup>12</sup> 76 Fed. Reg. 59835, 59842 (Sept. 27, 2011) (including Atlantic pigtoe and green floater in the list of mussels that may be warranted for listing).

<sup>13</sup> Center for Biological Diversity, 2013. “New Agreement Will Speed Endangered Species Act Protection for North America’s Largest Salamander,” [https://www.biologicaldiversity.org/news/press\\_releases/2013/hellbender-09-24-2013.html](https://www.biologicaldiversity.org/news/press_releases/2013/hellbender-09-24-2013.html).

<sup>14</sup> Department of Game and Inland Fisheries, 2015, Virginia’s 2015 Wildlife Action Plan, <http://www.bewildvirginia.org/wildlife-action-plan/>.

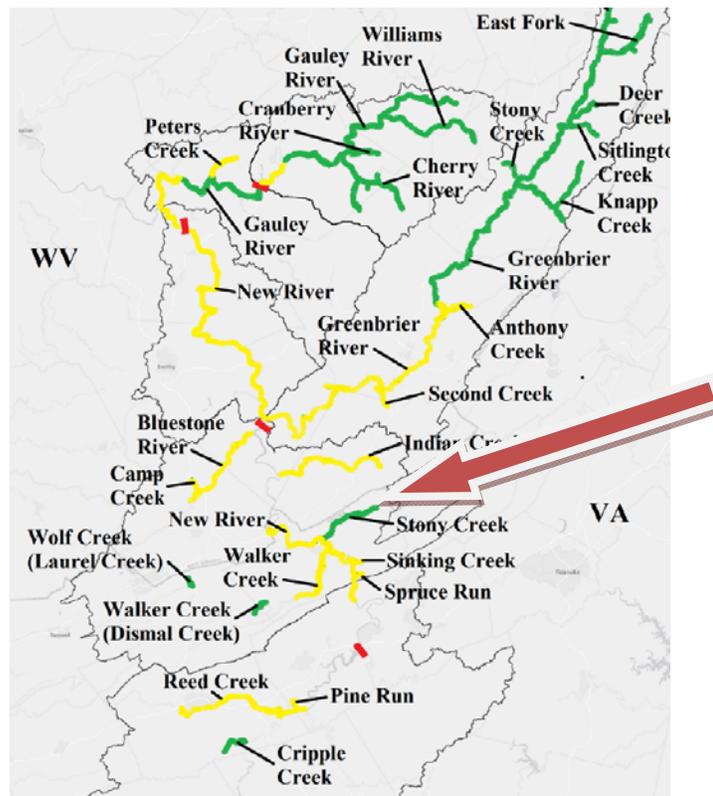
<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

be recoverable due to a complete lack of resources to implement “on the ground” conservation actions. In other words, Virginia currently lacks actions that can recover these populations.

*Example: The Candy Darter*

For the candy darter, impacts from the Pipeline will affect the remnants of a historically larger population. Extirpation of the population in Stony Creek, Virginia, could prevent recovery in the larger water system including the New River, Walker Creek, Sinking Creek and Spruce Run (fig. 1).<sup>17</sup> To maintain hope of repopulating these historical habitats, it is critical that habitat in Stony Creek remain undisturbed by construction activity lest this population be lost as well.



**Fig. 1.** Current and historical distribution of the candy darter; the Pipeline would traverse Stony Creek in Virginia (red arrow). Green indicates extant candy darter populations. Yellow indicates historical or extirpated populations. Red lines are major dams that present barriers to fish movement. (Source: FWS 2017)

<sup>17</sup> U.S. Fish and Wildlife Service. 2017. Species Status Assessment Report for the Candy Darter (*Etheostoma osburni*), Version 1.4. September 2017. Hadley, MA.  
<https://www.regulations.gov/document?D=FWS-R5-ES-2017-0056-0002>.

The candy darter, like the eastern hellbender, requires clean streams and rivers with rocky substrates;<sup>18</sup> consequently preserving this habitat requires planning on a watershed basis to prevent sedimentation and water quality degradation. The candy darter lives in the New River Valley region, within four watersheds that the pipeline traverses: Clendennin Creek-Bluestone Lake; Sugar Run-Walker Creek; Little Stony Creek-New River; and Bear Spring Branch-New River.<sup>19</sup> The Virginia Department of Game and Inland Fisheries identified actions to restore candy darter and eastern hellbender habitat: “Establish/ restore forest corridors around streams and rivers; decrease nutrient, sediment, and pollution runoff through better management of agriculture and livestock waste and stormwater; control invasive species; and improve connectivity.” The Pipeline would hinder all of these identified actions. VMRC cannot conclude that granting the application for a permit to build the Mountain Valley Pipeline on state-owned, subaqueous land is consistent with its responsibilities to safeguard the natural resources of the Commonwealth.

### **III. The Federal Energy Regulatory Commission (FERC) has identified threats to Virginia’s wildlife from the Pipeline, but not required mitigation.**

The Federal Energy Regulatory Commission (FERC) acknowledges the impacts to waterbodies as a result of construction activities in and around streams would include sedimentation, increased turbidity, and decreased dissolved oxygen concentrations.<sup>20</sup> Specifically, 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.<sup>21</sup>

These potential impacts can have an irreversible effect on vulnerable populations like the candy darter or the eastern hellbender. FERC found that the worst impacts would be avoided or mitigated by best management practices, using the dry open-cut crossing methods, and plans for

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<sup>18</sup> Department of Game and Inland Fisheries, 2015, Virginia’s 2015 Wildlife Action Plan, <http://www.bewildvirginia.org/wildlife-action-plan/>.

<sup>19</sup> *Id.*; see esp. the “2015 Wildlife Action Plan Interactive Tool,” Priority Species, by Watershed, <http://vafwis.dgif.virginia.gov/WAP2/> (listing priority species by watershed).

<sup>20</sup> FEIS at 4-136.

<sup>21</sup> *Id.* at 4-137.

erosion and sediment control submitted to Virginia.<sup>22</sup> Unfortunately, this method of pollution control does not ensure that sedimentation does not occur; indeed, reviews of those plans and associated analyses indicate that they will not reduce sedimentation impacts to the extent claimed by the Pipeline and FERC.<sup>23</sup> As a result, VMRC must weigh the risk of unavoidable sedimentation, accidental construction catastrophes, and the long-term effects of forest fragmentation and disturbance against the public's vested interest in supporting endangered species' recovery. Pipeline construction not only conflicts with the public goal of maintaining native wildlife, because it could cause or contribute to extinction, VMRC must recognize it as completely incompatible.

#### **IV. VMRC should consider the Pipeline's costs relative to decades of state and federal investments to restore Virginia's native fish and wildlife.**

Research and grant funding from public sources to recover the native wildlife that depend on the Pipeline-impacted watersheds is one measure of the value of these lands and the potential costs of degradation. For example Virginia, through the Southeastern Association of Fish and Wildlife Agencies, sought funding for "A Multistate Effort to Conserve and Manage the Eastern Hellbenders."<sup>24</sup> This resulted in a federal-state cost share grant (Federal Funds \$500,000; Non-Federal Match: \$335,963) to help states focus on reversing eastern hellbender population declines before restoration becomes more difficult and costly.<sup>25</sup> The project enables states and

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<sup>22</sup> *Id.* at 4-149. *See also id.* at 4-143 ("Mountain Valley would minimize impacts on first-order streams by adhering to its Procedures and its project-specific *Erosion and Sediment Control Plans* and *Stormwater Pollution Prevention Plans* for West Virginia and Virginia including mitigation measures such as reducing the construction corridor, implementing dry-crossing methods, limiting the timeframe allowed to complete the crossing, restoring bank and contours, and limiting the maintained areas of the right-of-way in the riparian zone.")

<sup>23</sup> *See, e.g.,* Appalachian Mountain Advocates DEIS Comments at 49 n.159 (citing Kirk Bowers, P.E., *Draft Environmental Impact Statement review comments on behalf of the Virginia Chapter of the Sierra Club* (hereinafter "Bowers Report") at 5-7); *see also* Virginia Department of Game and Inland Fisheries, Letter re Mountain Valley Pipeline FEIS (July 20, 2017) ("... we are nonetheless concerned regarding potential for serious events including slope failures, instream sedimentation, washout of fill materials, and compromise or contamination of sensitive biological or hydrogeological features such as trout streams, Endangered or Threatened Species Waters, major stream crossings, publically-owned conservation lands, or sensitive karst resources. Construction accidents, unanticipated geological conditions, or severe weather can, and have, precipitated catastrophic impacts upon sensitive fish and wildlife resources in the past: it is the applicant's responsibility to ensure that they not only are prepared to minimize adverse environmental impacts under anticipated construction conditions, but that they have seriously considered and prepared for 'unanticipated' severe weather or other project conditions that may be encountered.").

<sup>24</sup> Wildlife Management Institute, "Southeast At-Risk Species (SEARS) Program 2016 Round of Funding Complete," (Apr. 14, 2016), <https://wildlifemanagement.institute/outdoor-news-bulletin/april-2016/southeast-risk-species-sears-program-2016-round-funding-complete>

<sup>25</sup> U.S. Fish & Wildlife Service, "Service Announces More Than \$5.5 Million in Grants to Help Protect Imperiled Species," (May 20, 2016), [https://www.fws.gov/news/ShowNews.cfm?ref=service-announces-more-than-\\$5.5-million-in-grants-to-help-protect-&\\_ID=35672](https://www.fws.gov/news/ShowNews.cfm?ref=service-announces-more-than-$5.5-million-in-grants-to-help-protect-&_ID=35672);

universities to evaluate the relative vulnerability of eastern hellbender populations to projected climate change and the effectiveness of measures to enhance refuge, breeding, and larval habitat. VMRC must evaluate the Pipeline's application in the larger context of its impacts to joint federal and state initiatives to research and recover species like the eastern hellbender.

Similarly for mussels, the Pipeline threatens to unwind decades of research funded by various federal and multi-state partners to support recovery of wild populations. To reverse the population declines of native mussels, two mussel propagation facilities exist in Virginia: VDGIF's Aquatic Wildlife Conservation Center and Virginia Tech's Freshwater Mussel Conservation Center.<sup>26</sup> The mussels produced are used to replenish and recover wild stocks. The goal is "regaining our freshwater mussel heritage," thereby meeting the responsibility to protect Virginia's wildlife resources.<sup>27</sup> The research and funding for these efforts should be respected and protected by VMRC as public investments in improvements to the subaqueous state-owned lands. Granting the Pipeline permit would come at a cost that may not be recoverable if it results in irreversible population declines, extirpations, or extinctions.

#### **V. VMRC Must Consider Climate Change Impacts to the Commonwealth of Virginia and Endangered Species Before Authorizing the Installation of Fossil Fuel Pipelines**

A report, prepared by the Sierra Club Virginia Chapter, estimates total carbon dioxide gas equivalent from each of the two pipelines over the natural gas fuel cycle, including fugitive emissions of methane from fracking in the gas fields, leakage during transmission and storage, and combustion of the delivered gas.<sup>28</sup> In addition to emitting large amounts of CO<sub>2</sub> when burned, natural gas is a major contributor to climate change in the extraction and transmission stages, where significant amounts of methane escape from wells and pipeline leaks. If both the Atlantic Coast and Mountain Valley pipelines were to be built, their combined climate disrupting pollution would total a minimum increase of 192%, of the emissions from Virginia's existing power plants and other stationary sources. Climate change impacts should be considered as a contributing factor to the continuing decline of endangered species.

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<sup>26</sup> Department of Game and Inland Fisheries, *Freshwater Mussel Restoration*, <https://www.dgif.virginia.gov/wildlife/freshwater-mussels/restoration/>

<sup>27</sup> Pinder, M. *Regaining our Freshwater Mussel Heritage: Biologists with the Virginia Department of Game and Inland Fisheries embark on a unique recovery program to reverse the decline of freshwater mussels in southwestern Virginia*, <https://www.dgif.virginia.gov/wp-content/uploads/freshwater-mussel-heritage.pdf>.

<sup>28</sup> Ball, R.H., Penniman, W., and Bowers, K. 2016. GHG Emissions Associated with Two Proposed Natural Gas Transmission Lines in Virginia, [http://www.ourenergypolicy.org/wp-content/uploads/2016/02/GHG-Emissions-Associated-with-Proposed-Natural-Gas-Transmission-Lines-in-Virginia\\_Final-edit5-1.pdf](http://www.ourenergypolicy.org/wp-content/uploads/2016/02/GHG-Emissions-Associated-with-Proposed-Natural-Gas-Transmission-Lines-in-Virginia_Final-edit5-1.pdf).

## **VI. Conclusion**

The VMRC must reject the Pipeline application to install the Pipeline beneath 18 streams and rivers because of the Pipeline's immediate and long-lasting impacts to the watershed, the inadequate state or federal agency analysis of its impacts to endangered species, and the Pipeline's contributions to climate change. The interconnectedness of streams, rivers, and the surrounding habitat require a broad analysis of impacts across watersheds and time frames. Most importantly, the irreversible population declines, extirpations or extinctions resulting from the Pipeline installation will violate VMRC's statutory mandate to protect its lands from destruction for the benefit, enjoyment and general welfare of the people of the Commonwealth. For these reasons, we urge you to reject the permit application.

Please feel free to contact us with any questions.

Sincerely,

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