

**Delaware Riverkeeper Network ∞ NJ Sierra Club  
Catskill Citizens for Safe Energy ∞ Guardians of the Brandywine  
Delaware Chapter of the Sierra Club ∞ Protecting Our Waters ∞ Earthworks  
Brandywine Conservancy ∞ Pipeline Safety Coalition ∞ Berks Gas Truth  
Clean Water Action ∞ Pennsylvania Alliance for Clean Water and Air  
CWA Local 1081 ∞ Physicians for Social Responsibility Philadelphia  
GreenFaith ∞ Aquashicola / Pohopoco Watershed Conservancy  
Catskill Mountainkeeper ∞ Responsible Drilling Alliance ∞ Stop the Pipeline  
Cross County Clean Air Coalition ∞ Lakeland Unitarian Universalist Fellowship  
NYH2O, Inc. ∞ NJ Environmental Federation ∞ ClimateMama  
The Mothers Project, Mothers for Sustainable Energy ∞ Food & Water Watch  
Raritan Headwaters Association ∞ Citizens United for Renewable Energy (CURE)  
Brandywine Watershed Regeneration Initiative ∞ North Jersey Pipeline Walkers  
Grassroots Coalition for Environmental & Economic Justice  
The Raymond Proffitt Foundation ∞ Save Cummins Hill ∞ Clean Ocean Action  
Lehigh Valley Gas Truth ∞ Genesis Farm ∞ Dryden Resource Awareness Coalition  
Pennsylvania Forest Coalition ∞ Transition Newton & Northwest NJ  
Stewart Park and Reserve Coalition - SPARC ∞ Clean Air Council  
Sanford Area Concerned Citizens (S-OACC) ∞ Allegheny Defense Project  
Ramapough Lunapee Nation (Munsee) ∞ American Littoral Society  
Damascus Citizens for Sustainability ∞ Residents of Crumhorn  
Coalition Against the Rockaway Pipeline (CARP) ∞ Milford Doers  
Upper Unadilla Valley Association ∞ Citizens for a Clean Pompton Lakes  
Westchester for Change ∞ United for Action ∞ Riverkeeper, Inc.  
Audubon Pennsylvania ∞ New Jersey Conservation Foundation ∞ WATERSPIRIT  
Sullivan Area Citizens for Responsible Energy Development (SACRED)  
Natural Resources Defense Council ∞ The Shalom Center ∞ Frack Action  
Green Umbrella – NY Youth for a Just and Sustainable Future  
Otsego 2000, Inc. ∞ M.U.S.T. (Mothers United for Sustainable Technologies)  
Crumhorn Lake Association ∞ New Jersey Highlands Coalition ∞  
North Jersey Public Policy Network ∞ Environment New Jersey**

March 1, 2013

Commissioners &  
Carol Collier, Executive Director  
Delaware River Basin Commission  
P.O. Box 7360  
West Trenton, NJ 08628-0360

Re: Second Petition to the Delaware River Basin Commission to Exercise  
Jurisdiction Over All Natural Gas Pipeline Projects

Dear Commissioners and Ms. Collier,

The Delaware Riverkeeper, the Delaware Riverkeeper Network (collectively, DRN), NJ Sierra Club, Guardians of the Brandywine, Protecting Our Waters, Brandywine Conservancy, Berks Gas Truth, Earthworks, Pennsylvania Alliance for Clean Water and Air, Physicians for Social Responsibility Philadelphia, Pipeline Safety Coalition, Aquashicola / Pohopoco Watershed Conservancy, Catskill Mountainkeeper, Responsible Drilling Alliance, Stop the Pipeline, Cross County Clean Air Coalition, Clean Water Action, Lakeland Unitarian Universalist Fellowship, NYH20, Inc., NJ Environmental Federation, The Mothers Project, Mothers for Sustainable Energy, Raritan Headwaters Association, Citizens United for Renewable Energy (CURE), CWA Local 1081, Brandywine Watershed Regeneration Initiative, GreenFaith, the Delaware Chapter of the Sierra Club, North Jersey Pipeline Walkers, Grassroots Coalition for Environmental and Economic Justice, Food & Water Watch, The Raymond Proffitt Foundation, Save Cummins Hill, Clean Ocean Action, Lehigh Valley Gas Truth, Genesis Farm, Dryden Resource Awareness Coalition, Pennsylvania Forest Coalition, Transition Newton & Northwest NJ, Stewart Park and Reserve Coalition – SPARC, Sanford Area Concerned Citizens (S-OACC), Ramapough Lunapee Nation (Munsee), Damascus Citizens for Sustainability, Coalition Against the Rockaway Pipeline (CARP), ClimateMama, Clean Air Council, Catskill Citizens for Safe Energy, Residents of Crumhorn, Milford Doers, Upper Unadilla Valley Association, Citizens for a Clean Pompton Lakes, Allegheny Defense Project, Otsego 2000, Inc., United for Action, Riverkeeper, Inc., American Littoral Society, Westchester for Change, New Jersey Conservation Foundation, Sullivan Area Citizens for Responsible Energy Development (SACRED), WATERSPIRIT, Frack Action, Natural Resources Defense Council, Green Umbrella – NY Youth for a Just and Sustainable Future, Crumhorn Lake Association, The Shalom Center, New Jersey Highlands Coalition, North Jersey Public Policy Network, Environment New Jersey, M.U.S.T. (Mothers United for Sustainable Technologies) hereby submit this petition requesting that the Delaware River Basin Commission (DRBC): 1) exercise its jurisdiction under the Compact and the current Rules of Practice and Procedure (RPP) over natural gas pipeline projects crossing any portion of or any waterway of the Delaware River Watershed (Watershed); and 2) amend the RPP to promulgate regulations requiring that **all** natural gas pipeline construction projects within the Delaware River Watershed be submitted for DRBC review for a determination as to whether such projects will impair or conflict with the Comprehensive Plan.

With the rapid expansion of the unconventional shale gas development industry, there has also been a proliferation of natural gas transmission line construction and expansion projects that cross the Delaware River Watershed. If the DRBC promulgates final regulations establishing a system for permitting shale gas extraction operations in the Delaware River Watershed, there will be a massive proliferation of gathering lines servicing the well pads and connecting them to the natural gas transmission and distribution pipeline network. Whether considered individually or cumulatively, these pipeline projects demonstrably have had substantial effects and will continue to have substantial effects to the water resources of the Watershed, and the frequency and intensity of adverse impacts will increase as the number of pipeline projects increases, thus obligating the DRBC to take jurisdiction under the Compact.

There are currently thirteen natural gas pipeline projects that are planned to cross over or within portions of the Delaware River Watershed, in addition to the four that have already been constructed in the Watershed since 2011. The impending projects include projects in the Watershed communities of:

- Berks, Chester, Delaware, Lebanon, Monroe, Montgomery, Pike, Schuylkill, and Wayne Counties in Pennsylvania;
- Gloucester, Hunterdon, and Sussex Counties in New Jersey;
- New Castle and Kent Counties in Delaware; and
- Broome County in New York.

There is no indication that this pace of development for these construction projects will decrease in the foreseeable future. Rather, it is almost certain that large scale natural gas transmission pipeline projects designed to transport shale gas will only further increase in size, scope, and frequency.<sup>1</sup>

Since the beginning of this year alone (the year 2013 which began just two months ago), plans have been finalized that will result in two major transmission projects crossing the basin. On January 14, 2013, Williams initiated its pre-filing process before the Federal Regulatory Energy Commission to initiate the certification process under the Natural Gas Act for its Leidy Southeast Expansion Project on the Transco Line. Williams submitted detailed maps that show no fewer than eleven miles of the project will take place within the Basin in Monroe County, Pennsylvania. The functional design of the project further indicates that Williams will be constructing additional expansion projects in the Watershed along that same pipeline as future shale gas development occurs. Additionally, on January 11, 2013, a new primary route for the Constitution Pipeline was proposed to the Federal Energy Regulatory Commission that includes construction of a significant portion of the pipeline within the Watershed in Broome County, New York. Together these two projects will result in roughly 30 miles of new large-scale transmission pipeline in the Basin.

On January 30, 2013, the Commission provided to DRN an Amended Letter of Determination for the Tennessee Gas Pipeline 300 Line Upgrade Project and the Columbia 1278 Replacement Project. This letter indicated that the DRBC would exercise jurisdiction pursuant to RPP 2.3.5 A.12 and require each project sponsor to submit a docket application because each of the projects involved construction within a recreation area incorporated into the Comprehensive Plan. The letter itself, as well as the underlying supporting staff memorandum, not only articulates a basis for reviewing projects that pass through recreation areas and reservoirs, but also provides further evidence that, by the DRBC's own standards, pipeline construction activities involve a "significant disturbance" of ground cover affecting water resources.

Currently, no federal, state, or local regulatory agency other than the DRBC is tasked with evaluating the cumulative impacts of natural gas pipeline projects and associated infrastructure construction, including access roads and compressor stations, in the Delaware River Basin. The DRBC must take a strong leadership position on natural gas pipeline construction to meet its obligations under the Compact and the Water Code to ensure all approved projects are consistent with the Comprehensive Plan and that they meet the strict anti-degradation requirements applicable to Special Protection Waters.

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<sup>1</sup> See, e.g., "In New England, a Natural Gas Trap," New York Times, February 15, 2013, *available at* <http://www.nytimes.com/2013/02/16/business/electricity-costs-up-in-gas-dependent-new-england.html>

## **Applicable Compact, Water Code, and RPP Provisions**

Section 3.8 of the Compact provides in relevant part:

No project having a substantial effect on the water resources of the basin shall hereafter be undertaken by any person, corporation, or governmental authority unless it shall have been first submitted to and approved by the commission, subject to the provisions of Sections 3.3 and 3.5. The commission shall approve a project whenever it finds and determines that such project would not substantially impair or conflict with the comprehensive plan and may modify and approve as modified, or may disapprove any such project whenever it finds and determines that the project would substantially impair or conflict with such plan. The commission shall provide by regulation for the procedure of submission, review and consideration of projects, and for its determinations pursuant to this section.

The Comprehensive Plan is established by Article 13.1 of the Compact:

The commission shall develop and adopt, and may from time to time review and revise, a comprehensive plan for the immediate and long range development and use of the water resources of the basin. The plan shall include all public and private projects and facilities which are required, in the judgment of the commission, for the optimum planning, development, conservation, utilization, management and control of the water resources of the basin to meet present and future needs.

In 1992, in response to a petition filed by DRN, the DRBC launched the Special Protection Waters (“SPW”) program, which established regulations to “keep the clean water clean” in the upper and middle sections of the non-tidal Delaware River, portions of which had been designated by the federal government as part of the National Wild and Scenic Rivers System in 1978. Following the federal designation of an additional 38.9 miles of the Delaware in the National Wild and Scenic Rivers System in 2000, and again in response to a petition filed by DRN, in 2008 the DRBC expanded SPW coverage to include the River from the Delaware Water Gap National Recreation Area downstream to the head of tide at Trenton, New Jersey. The entire 197-mile non-tidal river is now included under the SPW regulations, which is believed to be the longest stretch of anti-degradation policy established on any river in the nation.

Special Protection Waters are waters designated by the DRBC, pursuant to the Water Quality Regulations, that have exceptionally high scenic, recreational, ecological, and/or water supply values and are subject to stricter control of non-point pollution control, wastewater discharges, and reporting requirements to prevent degradation.

Article 3 of the Water Code, Section 3.10.3.A.2, establishes the strict anti-degradation standard that the DRBC applies to Special Protection Waters of the Watershed: “It is the policy of the Commission that there be no measurable change in existing water quality except towards natural conditions. . . .” Water Code Article 3, Section 3.10.3.A.2.e, requires that “[p]rojects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan that controls the new or increased non-point source loads generated within the portion of the project’s service area which is also located within the drainage area of Special Protection Waters.”

The RPP classifies projects for review under Section 3.8 of the Compact into two categories, those deemed not to have a substantial effect on the water resources of the Basin and therefore not required to be submitted for DRBC review, and those deemed to have substantial effects on water resources of the Basin and therefore required to be submitted for Commission review. See RPP Article 3, Section 2.3.5.

With respect to natural gas pipeline projects, the RPP categorizes them as projects that presumptively do not have a substantial effect on the water resources of the Watershed and that therefore do not automatically require DRBC review:

Electric transmission or bulk power system lines and appurtenances; major trunk communication lines and appurtenances; **natural and manufactured gas transmission lines and appurtenances**; major water transmission lines and appurtenances; unless they would pass in, on, under or across an existing or proposed reservoir or recreation project area as designated in the Comprehensive Plan; unless such lines would involve significant disturbance of ground cover affecting water resources;

RPP Article 3, Section 2.3.5.A(12) (emphasis added).

This section contains two independent exceptions to the exemption that, if the stated conditions are met, trigger DRBC review: first, if the project in question crosses an existing or proposed reservoir or recreation area that has been incorporated into the Comprehensive Plan; and second, if the project involves a significant disturbance of ground cover affecting water resources.

The RPP includes multiple other provisions that also can and do provide the DRBC jurisdictional authority over natural gas pipeline projects and require that such projects be reviewed prospectively for consistency with the Comprehensive Plan. Other sources of jurisdictional authority over natural gas pipeline projects include the following RPP sections:

- Article 3, Section 2.3.5.B(5) (“Deepening or widening of existing stream beds . . . or the dredging of the bed of any stream or lake and the disposal of the dredged spoil, where the nature or location of the project would affect the quantity or quality of ground or surface waters, or fish and wildlife habitat”);
- Article 3, Section 2.3.5.B(6) (“Discharge of pollutants into surface or ground waters of the Basin”);
- Article 3, Section 2.3.5.B(7) (“[P]ipelines and electric power and communication lines”);
- Article 3, Section 2.3.5.B(9) (“Projects that substantially encroach upon the stream or upon the 100-year flood plain of the Delaware River or its tributaries”);
- Article 3, Section 2.3.5.B(10) (“Change in land cover on major ground water infiltration areas”);

- Article 3, Section 2.3.5.B(13) (“Draining, filling, or otherwise altering marshes and wetlands”);
- Article 3, Section 2.3.5.B(18) (“Any other project that the Executive Director may specially direct by notice to the project sponsor or land owner as having a potential substantial water quality impact on waters classified as Special Protection Waters”).

The current version of the DRBC’s draft Natural Gas Development Regulations (dated November 8, 2011) does not amend the current RPP scheme whereby pipeline projects are exempt from review unless one or both of the independent exceptions are met, and therefore provides no additional level of regulatory authority beyond what already exists; i.e., the only provision included in the draft regulations that applies to pipelines reads:

(ii) Project location. For a natural gas well pad, location information must include the municipality, the geographic coordinates of the center of the natural gas well pad, the proposed size of the well pad, and the proposed gas extraction area. For a natural gas gathering or transmission pipeline project, location information must include a site plan showing locations of the natural gas gathering lines and/or transmission lines. Pipelines that will pass in, on, under or across an existing or proposed reservoir or recreation project area that has been included in the Comprehensive Plan or involve significant disturbance of ground cover affecting water resources are subject to full Commission review pursuant to Article 3, Sections 2.3.5A.12. and B.7 of the RPP.

Draft Regulations, Article 7, Section 7.4(e)(4)(ii).<sup>2</sup>

**I. The DRBC is Obligated Under the Compact, and Has Ample Authority Under the RPP, to Take Jurisdiction Over All Natural Gas Pipeline Projects Currently Being Proposed.**

The DRBC should grant this petition to meet its Compact obligations and exercise its existing authorities under the Compact and the RPP to take jurisdiction over all natural gas pipeline projects currently being proposed to cross portions of the Delaware River watershed and/or its waterways for four reasons. First, these projects meet the exception to the exemption articulated in the RPP in that both individually and cumulatively they involve significant disturbance of ground cover affecting water resources. Second, these projects may meet the exception to the exemption articulated in the RPP in that they may pass in, on, under or across an existing or proposed reservoir or recreation project area as designated in the Comprehensive Plan. Third, other sections of the RPP that enumerate types of projects that must automatically be submitted to the DRBC for review provide the DRBC with authority to take jurisdiction over natural gas pipeline projects. Finally, the National Park Service has already referred natural gas pipeline projects to the DRBC for action under the RPP.

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<sup>2</sup> Available at <http://www.nj.gov/drbc/library/documents/naturalgas-REVISEDdraftregs110811.pdf>

**A. Existing and Currently Proposed Natural Gas Pipeline Projects Involve Significant Disturbance of Ground Cover Affecting Both Surface and Ground Water Resources.**

Pipeline construction results in the loss of riparian vegetation as well as the clearing and maintaining of rights-of-way through forested lands; these significant disturbances of ground cover affect both surface and ground water resources within the meaning of RPP Article 3, Section 2.3.5.A(12). Accordingly, the DRBC must take jurisdiction over currently proposed pipeline projects for review under the Compact for consistency with the Comprehensive Plan.

Currently proposed pipeline projects in the Delaware River Watershed must cross waterways both large and small; most projects must cross many waterways. No matter what pipeline construction technique is used, there is vegetation loss associated with clearing stream banks. This reduction in foliage increases stream temperature and reduces its suitability for fish incubation, rearing, foraging and escape habitat. The loss of vegetation also makes the stream more susceptible to erosion events, as the natural barrier along the stream bank has been removed.

Forest fragmentation and habitat loss is a serious and inevitable consequence of pipeline construction activity and associated infrastructure construction (including access roads and compressor stations). While the right-of-way for a pipeline construction zone ranges from 25-200 feet, on average, the right-of-way extends about 100 feet.<sup>3</sup> The Nature Conservancy has determined that “[t]he expanding pipeline network could eliminate habitat conditions needed by ‘interior’ forest species on between 360,000 and 900,000 acres as new forest edges are created by pipeline right-of-ways.” In addition, the right-of-way will need to be maintained and kept clear throughout the lifetime of the pipeline, which can be up to 80 years.

A report released by the U.S. Geological Survey, titled “Landscape Consequences of Natural Gas Extraction in Bradford and Washington Counties, Pennsylvania, 2004-2010” (Open-File Report 2012-1154), documents the significant impacts on forest cover resulting from the construction of unconventional fossil fuel extraction infrastructure, particularly pipelines.<sup>4</sup> Taking Bradford and Washington Counties as the basis for its study, this report documents the massive landscape changes that are reshaping forest and farm lands in Pennsylvania through the construction of gas wells, impoundments, roads, and pipelines. The report documents the overall loss of forest habitat as well as the increase in forest fragmentation that shale gas and coalbed methane development has caused over a very short time period. In Bradford County, 0.12% of the county’s forest was lost to gas development, contributing to a 0.32% loss of interior forest and a gain of 0.11% in edge forest. In Washington County, the USGS report documented a 0.42 percent forest loss, contributing to a 0.96 percent loss of interior forest and a gain of 0.38 percent in edge forest. USGS Report at 28-29.

According to the USGS data, pipeline construction and associated road construction had the greatest effect on the increase in forest fragmentation, patchiness, and forest edge. *Id.* Of particular concern, “[t]his type of extensive and long-term habitat conversion has a greater impact on natural ecosystems than activities such as logging or agriculture, given the great dissimilarity between gas-

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<sup>3</sup> Nels Johnson, et al., *Natural Gas Pipelines*, THE NATURE CONSERVANCY, 1 (December 2011) at 6.

<sup>4</sup> Available at <http://pubs.usgs.gov/of/2012/1154/of2012-1154.pdf>

well pad infrastructure and adjacent natural areas and the low probability that the disturbed land will revert back to a natural state in the near future (high persistence).” *Id.* at 10.

Forests play an essential role in water purification.<sup>5</sup> The relationship between forest loss, degraded water quality, and increased runoff is well-established in the scientific literature, as the USGS Report recognizes. *Id.* at 8. The DRBC is well aware of the links between forest cover and water quality, as summarized by Drs. Jackson and Sweeney in the expert report submitted on the DRBC’s behalf in the exploratory wells administrative hearing process.<sup>6</sup> The Jackson and Sweeney report shows that reductions in forest cover are directly correlated with negative changes in water chemistry, such as increased levels of nitrogen, phosphorus, sodium, chlorides, and sulfates as well as reduced levels of macroinvertebrate diversity. Reducing forest cover decreases areas available for aquifer recharge, increases erosion, stormwater runoff, and flooding, and adversely affects aquatic habitats.<sup>7</sup> In Pennsylvania, researchers have correlated areas of high natural gas well density with decreased water quality, as indicated by lower macroinvertebrate density and higher levels of specific conductivity and total dissolved solids.<sup>8</sup>

In addition to direct impacts to surface water quality associated with natural gas pipeline projects that cross multiple streams and rivers, pipeline projects often cause significant impacts to marshes and wetlands, whether contiguous to waterways crossed by pipeline construction or not. These impacts implicate RPP Article 3, Section 2.3.5 B.13 (“Draining, filling, or otherwise altering marshes and wetlands”). Pipeline construction projects may block surface water flows or change surface water flow direction in wetlands and marshes through dredging, sedimentation and spoil deposition, and soil compaction during construction.<sup>9</sup> Pipeline construction projects may also adversely affect groundwater flows and the hydrologic regime, leading to dewatering and other changes; these effects are likely to persist well beyond the project construction stage.

As with rights-of-way through forest habitat, maintaining rights-of-way through wetlands areas can cause issues of invasive species and a shift in vegetation from native to non-native species. Given the recognized importance of protecting wetlands and marshes to ensure water quality protection as well as to protect recharge areas that help ameliorate flooding, it is vital that the DRBC take jurisdiction over natural gas pipeline projects not only because of the loss of forest cover and the

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<sup>5</sup> Robert A. Smail & David J. Lewis, Forest Service, U.S. Dep’t of Agric., Forest Land Conversion, Ecosystem Services, and Economic Issues for Policy: A Review 12 (2009), available at <http://www.fs.fed.us/openspace/fote/pnw-gtr797.pdf>

<sup>6</sup> “Expert Report on the Relationship Between Land Use and Stream Condition (as Measured by Water Chemistry and Aquatic Macroinvertebrates) in the Delaware River Basin,” November 2010, available at <http://www.nj.gov/drbc/library/documents/Sweeney-Jackson.pdf>

<sup>7</sup> State of N.J. Highlands Water Prot. and Planning Council, Ecosystem Management Technical Report 39 (2008).

<sup>8</sup> Academy of Natural Sciences of Drexel University, “A Preliminary Study of the Impact of Marcellus Shale Drilling on Headwater Streams,” available at <http://www.ansp.org/research/pcer/projects/marcellus-shale-prelim/index.php>

<sup>9</sup> *See, e.g.*, “Effects of Pipeline Construction on Wetland Ecosystems: Russia-China Oil Pipeline Project (Mohe-Daqing Section), Xiaofei Yu *et al.*, *Ambio*, July 2010, available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3357716/>; *see also* Lucie Levesque *et al.*, Review of the effects of in-stream pipeline crossing, *Environ. Monit. Assess.* 123: 395-409 (2007).

direct impacts of stream crossings but also because of impacts to wetlands and marshes from pipeline construction.

Furthermore, attached to the Commission's January 30, 2013 letter was a memorandum from William Muszynski to Carol Collier, titled "Reviewability of Columbia 1278 Replacement Project and TGP 300 Line." On page seven of that memorandum it states:

In determining whether a "significant disturbance" would occur, the Project Review staff is guided by two other land disturbance thresholds established by section 2.3.5 A: those that, respectively, exclude from review projects involving "[a] change in land cover on major ground infiltration areas when the amount of land that would be altered is less than three square miles" (RPP 2.3.5 A.6); and projects that involve "[d]raining, filling or otherwise altering marshes or wetlands when the area affected is less than 25 acres" (RPP 2.3.5 A.15). In our view, these thresholds indicate the general magnitude of disturbance that the Commission decided warrants basin-wide review. Neither project exceeds either of these thresholds.

However, in neither RPP Section 2.3.5 A.6 nor A.15 is the term "significant disturbance" defined, or even referenced. Therefore, those sections have, at most, limited applicability in providing direction for interpreting the breadth and scope of RPP Section 2.3.5 A.12. Further, the DRBC cannot point to a single project where a jurisdiction has been exercised pursuant to the "significant disturbance" language in RPP Section 2.3.5 A.12, and consequently cannot point to a single project where a determination was made that implicated RPP Sections 2.3.5 A.6 or A.15 in that context. Lastly, to the extent that these sections are relevant to RPP Section 2.3.5 A.12, many of the pipeline projects in the Basin actually meet or exceed the 25 acre wetland standard in RPP Section 2.3.5.A.15. For example, the Northeast Upgrade Project involved the altering of over 29 acres of wetlands in the Basin. The last sentence in the statement above implies that if one of those two thresholds were in fact surpassed, that would indeed trigger the "significant disturbance" language in RPP Section 2.3.5 A.12. Therefore, even the Commission's limited post-hoc explanation for how its staff interprets the term "significant disturbance" supports the requirement of the DRBC to take jurisdiction over these pipeline projects pursuant to RPP Section 2.3.5 A.12.

**B. Pipeline Projects May Pass In, On, Under, or Across an Existing or Proposed Reservoir or Recreation Project Area as Designated in the Comprehensive Plan.**

Any pipeline projects that pass in, on, under or across an existing or proposed reservoir or recreation project area as designated in the Comprehensive Plan must be submitted to the DRBC for review under the RPP. Given the number of planned and proposed pipeline projects for which routing alternatives have been considered that would meet this criterion, the DRBC must be vigilant in ensuring that pipeline project proponents are fully aware of the RPP's requirements for prospective DRBC review of such projects. Additionally, it must be clear that this regulatory requirement is in addition to any other provisions that may require DRBC review and docketing; its application, or lack thereof, does not displace, nor can it be displaced by, other provisions and requirements of the RPP.

**C. Other Sections of the RPP Provide the DRBC with Authority to Assert Jurisdiction over Natural Gas Pipeline Projects.**

The provisions of RPP Article 3, Section 2.3.5.A(12) notwithstanding, a number of other RPP provisions defining projects that are presumed to have or potentially have substantial effects on the water resources of the Delaware River Watershed support the DRBC's assuming jurisdiction over all natural gas pipeline projects to determine whether such projects impair or conflict with the Comprehensive Plan.

Natural gas pipeline construction projects implicate many of the impacts enumerated in RPP Article 3, Section 2.3.5.B covering projects that must by default be submitted for DRBC review. For example, stream crossings, whether via open cut or dry ditch methods, involve actions that may deepen or widen stream beds and/or require dredging and the disposal of dredged spoil materials. Either individually or cumulatively, such stream crossings may have impacts on the quantity or quality of ground or surface waters and on fish and wildlife habitat. *See* RPP Article 3, Section 2.3.5.B(5) (“Deepening or widening of existing stream beds . . . or the dredging of the bed of any stream or lake and the disposal of the dredged spoil, where the nature or location of the project would affect the quantity or quality of ground or surface waters, or fish and wildlife habitat”).

The discharge of pollutants from pipeline construction clearly implicates RPP Article 3, Section 2.3.5.B(6) (“Discharge of pollutants into surface or ground waters of the Basin”). Pipeline construction projects discharge pollutants both in the routine course of construction as well as through accidents. Studies documenting the effects of stream crossing construction on aquatic ecosystems identify pollution discharges of sediment as the primary stressor from pipeline construction on river and stream ecosystems.<sup>10</sup> During construction of pipeline stream crossings, discrete peaks of high suspended sediment concentration occur during activities such as blasting, trench excavation, and backfilling.<sup>11</sup> The excavation of streambeds can generate persistent plumes of sediment concentration and turbidity.<sup>12</sup> In addition to the stream crossing construction activity itself, new road construction associated with pipeline construction also increases the risk of erosion and sedimentation.<sup>13</sup> Pollutant discharges may also result from unintended discharges of drilling muds such as when blowouts occur during horizontal directional drilling to install pipelines under streambeds.<sup>14</sup>

This sedimentation has serious consequences for the benthic invertebrates and fish species whose vitality is crucial for healthy aquatic ecosystems. Pipeline construction projects have been documented to cause reductions in benthic invertebrate densities, changes to the structure of aquatic

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<sup>10</sup> Scott Read, *Effects of Sediment Released During Open-cut Pipeline Water Crossings*, Canadian Water Resources Journal, 1999, 24: (3) 235-251.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *En Banc* Hearing of the Pennsylvania Public Utility Commission on Jurisdictional Issues Related to Marcellus Shale Gas Development, Docket No. I-2010-2163461.

<sup>14</sup> *See, e.g.*, “1,500 gallons of drilling mud spills into Pa. waterways: 3 accidents in 3 weeks during construction of pipeline,” Aug. 10, 2011, available at [http://www.pressconnects.com/article/20110810/NEWS01/108100412/1-500-gallons-drilling-mud-spills-into-Pa-waterways?nclick\\_check=1](http://www.pressconnects.com/article/20110810/NEWS01/108100412/1-500-gallons-drilling-mud-spills-into-Pa-waterways?nclick_check=1)

communities, changes in fish foraging behavior, reductions in the availability of food, and increases in fish egg mortality rates.<sup>15</sup> Heavy rains during two tropical storms in August and September 2011 caused extensive failures to erosion and sediment controls on pipelines under construction in north central Pennsylvania, resulting in sedimentation plumes in nearby waterbodies.<sup>16</sup> Deposited sediment from construction activities can also fill in the interstitial spaces of the streambed, changing its porosity and composition, and thereby increasing embeddedness and reducing riffle area and quality.<sup>17</sup> Furthermore, deposited sediment has the potential to fill in pool areas and reduce stream depth downstream of the construction area.<sup>18</sup>

It is not clear how the RPP can be read to reconcile the provisions of RPP Article 3, Section 2.3.5.B(7), requiring submission of projects including “pipelines and electric power and communication lines” with the generalized exemption of RPP Article 3, Section 2.3.5.A(12). Nevertheless, given that individually and cumulatively all existing and proposed natural gas pipelines in the Watershed satisfy the exception to the exemption stated in RPP Article 3, Section 2.3.5.A(12), we believe that Article 3, Section 2.3.5.B(7) confirms and reinforces that the DRBC has jurisdiction under the current RPP to require pre-construction review of all natural gas pipeline projects, in light of these pipelines’ substantial effects on the water resources of the Delaware River Watershed whether through significant disturbance of ground cover affecting water resources or otherwise.

It is very clear, however, that both existing and proposed natural gas pipeline projects fall within the scope of RPP Article 3, Section 2.3.5.B(9) (“Projects that substantially encroach upon the stream or upon the 100-year flood plain of the Delaware River or its tributaries”). **All** of the natural gas pipeline projects listed above that are already constructed, planned for construction, or in the early stages of planning for construction in whole or in part within the Delaware River Watershed substantially encroach upon the stream or 100-year floodplain of one or more tributaries to the Delaware River. In some cases, these projects substantially encroach upon the stream or the 100-year floodplain of the Delaware River itself.

As detailed above, the recent USGS report studying land use changes resulting from shale gas extraction (as well as coal bed methane extraction) demonstrates that pipeline construction is responsible for the lion’s share of the loss of forest cover and conversion of forest and farm lands to industrial uses in areas that have experienced intensive unconventional fossil fuel development. This loss of forest cover implicates the DRBC’s jurisdiction under RPP Article 3, Section 2.3.5.B(10) (“Change in land cover on major ground water infiltration areas”).

In addition to direct impacts to surface water quality associated with natural gas pipeline projects that cross multiple streams and rivers, pipeline projects often cause significant impacts to marshes and wetlands, whether contiguous to waterways crossed by pipeline construction or not. These impacts implicate RPP Article 3, Section 2.3.5.B(13) (“Draining, filling, or otherwise altering marshes

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<sup>15</sup> James Norman, et al., *Utility Stream Crossing Policy*, ETOWAH Aquatic Habitat Conservation Plan, July 13, 2008, 9-10.

<sup>16</sup> Craig R. McCoy and Joseph Tanfani, *Similar Pipes, Different Rules*, PHILADELPHIA INQUIRER, available at, [http://articles.philly.com/2011-12-12/news/30507185\\_1\\_hazardous-materials-safety-administration-pipeline-safety-rules](http://articles.philly.com/2011-12-12/news/30507185_1_hazardous-materials-safety-administration-pipeline-safety-rules)

<sup>17</sup> Read at 235-251.

<sup>18</sup> Norman at 9-10.

and wetlands”). Pipeline construction projects may block surface water flows or change surface water flow direction in wetlands and marshes through dredging, sedimentation and spoil deposition, and soil compaction during construction.<sup>19</sup> Pipeline construction projects may also adversely affect groundwater flows and the hydrologic regime, leading to dewatering and other changes; these effects are likely to persist well beyond the project construction stage. As with rights-of-way through forest habitat, maintaining rights-of-way through wetlands areas can cause issues of invasive species and a shift in vegetation from native to non-native species.

Given the recognized importance of protecting wetlands and marshes to ensure water quality protection as well as to protect recharge areas that help ameliorate flooding, it is vital that the DRBC takes jurisdiction over natural gas pipeline projects, not only because of the loss of forest cover and the direct impacts of stream crossings, but also because of impacts to wetlands and marshes from pipeline construction.

Finally, pipeline construction projects that occur in or cross through the portions of the Delaware River Watershed that have been designated as Special Protection Waters areas, subject to the anti-degradation requirements of the Water Code, implicate Article 3, Section 2.3.5.B(18) (“Any other project that the Executive Director may specially direct by notice to the project sponsor or land owner as having a potential substantial water quality impact on waters classified as Special Protection Waters”). The Executive Director has the authority under this section of the RPP to require pipeline projects in Special Protection Waters areas to be submitted for DRBC review.

Furthermore, the January 30, 2013, letter from the DRBC made a finding of fact with regard to the 300 Line Upgrade Project that because “[p]roject sponsors do not propose to have direct connections to natural gas extraction wells...it is not subject to the EDD for natural gas projects.” However, this finding misstates the scope of the 300 Line Upgrade Project, and likely represents a misunderstanding of the way in which transmission pipelines are constructed. Large scale natural gas pipelines are designed to have the capacity to receive direct connections from producing gas wells. For example, the following paragraph can be found in the Environmental Assessments that were submitted to the Federal Energy Regulatory Commission for both the 300 Line Upgrade Project and the Northeast Upgrade Project:

As an open access pipeline, TGP’s FERC Gas Tariff, consistent with Commission policy, provides a process by which shippers may request an interconnection with TGP’s pipeline system. TGP has had numerous requests from producers in the Project area for interconnections on TGP’s system. Several of these interconnections have already been completed, while other requests are being processed. This effort is ongoing and TGP expects additional interconnection requests from producers.

In other words, these large scale natural gas pipeline projects are *specifically designed* to accept “direct connections to natural gas extraction wells.” And while the DRBC has yet to promulgate regulations for natural gas drilling in the Watershed, if such regulations are

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<sup>19</sup> See, e.g., “Effects of Pipeline Construction on Wetland Ecosystems: Russia-China Oil Pipeline Project (Mohe-Daqing Section), Xiaofei Yu *et al.*, *Ambio*, July 2010, available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3357716/>; see also Lucie Levesque *et al.*, Review of the effects of in-stream pipeline crossing, *Environ. Monit. Assess.* 123: 395-409 (2007).

issued, it is a certainty that such direct connections will be made to these types of pipelines. This provides yet more evidence that the DRBC should take jurisdiction over all natural gas transmission lines that will traverse the Delaware River Watershed.

#### **D. The National Park Service Has Already Referred Natural Gas Pipeline Projects to the DRBC for Action.**

RPP Article 3, Section 2.3.5.A specifies two independent methods by which a project may be taken out of Category A (no DRBC review required) and placed into Category B (DRBC review required). First, the Executive Director may specially direct by notice to the project owner or sponsor that a project must undergo DRBC review. Second, RPP Article 3, Section 2.3.5.A specifies that state or federal agencies may refer projects otherwise exempted from review to the DRBC for action, pursuant to RPP Article 2.3.5.C: “Whenever a state or federal agency determines that a project falling within an excluded classification (as defined in paragraph A. of this section) may have a substantial effect on the water resources of the Basin, such project may be referred by the state or federal agency to the Commission for action under these Rules.”

In a May 26, 2010 letter to Ms. Collier, Superintendent Sean McGuiness of the National Park Service referred to the DRBC, under RPP Article 3, Section 2.3.5.C, “all projects that involve drilling of natural gas wells that are not already subject to project review under the Commission’s regulations” and the EDD. The project referral letter states: “This referral includes both ‘exploratory’ or ‘test’ wells, and wells completed in geologic strata other than shale, and it extends to all aspects of natural gas development that involves land disturbance or water use from the proposed construction of exploratory wells to gas distribution pipelines” (emphasis added). The letter further states: “It is important to understand all the potential and cumulative impacts of large scale changes in land use associated with natural gas development, from test wells to pipelines, throughout the watershed on the water resources of the Basin” (emphasis added).

That letter is an explicit referral by the National Park Service of pipeline projects to the DRBC for review. Accordingly, the DRBC must act on this referral to take jurisdiction over natural gas pipeline projects. RPP Article 3, Section 2.3.5C does not give either the Executive Director or the DRBC the discretion to accept or decline the referral; rather, it clearly states that a project may be referred “to the Commission for action under these Rules” (emphasis added). The plain language of RPP Article 3, Section 2.3.5A gives both the Executive Director and a state or federal agency equal power to determine that a project otherwise exempt from review must be submitted to the DRBC under Section 3.8. Accordingly, the DRBC is already obligated by the National Park Service referral letter to take jurisdiction over and review natural gas pipeline projects under the Compact and the RPP.

#### **II. The DRBC Must Amend the RPP to Remove the Exemption for Natural Gas Pipeline Projects and Require that All Natural Gas Pipeline Projects Be Submitted for DRBC Review**

The DRBC’s primary and overriding obligation under the Compact is to ensure that, under Article 3.8, projects with the potential for substantial effects on the water resources of the Basin are submitted for DRBC review for consistency with the Comprehensive Plan. As shown above, the

DRBC is obligated by Article 3.8 of the Compact, and has ample authority under the Compact and the current RPP, to take jurisdiction over all proposed natural gas pipeline projects within the Delaware River Watershed.

Nevertheless, to avoid ambiguity and to provide for the appropriate review and oversight of all natural gas pipeline projects (both gathering and transmission) proposed within the Delaware River Watershed, the DRBC should revise the RPP to remove natural gas pipeline projects from the list of projects otherwise exempt from DRBC review, and provide that all natural gas pipeline projects by default are required to be submitted for DRBC review. This revision is necessary to ensure that the DRBC's review is consistent with its obligations under Compact Article 3.8 to ensure that projects with substantial effects on the water resources of the Delaware River Watershed do not substantially impair or conflict with the Comprehensive Plan. The DRBC must grant this petition and its request to revise the RPP for two reasons.

First, natural gas pipeline projects have substantial effects on the water resources of the Delaware River Watershed during their construction and maintenance, including through land disturbance, change in forest cover and land use, waterway crossings, and wetlands impacts. The DRBC must take jurisdiction over such projects and undertake a careful review of each project's consistency with the Comprehensive Plan in order to meet the requirements of Section 3.8 of the Compact. Second, because natural gas pipeline projects have the ability to degrade Special Protection Waters (SPW), the DRBC must revise the RPP to provide for automatic review of such projects to ensure that the anti-degradation standards applicable to SPW are met.

#### **A. Natural Gas Pipeline Projects Have Substantial Effects On Water Resources**

As detailed above, natural gas pipeline projects both at the individual project level and when considered cumulatively have the potential to cause substantial effects to the water resources of the Watershed. These effects include impacts to surface water and ground water quality resulting from the direct effects of pipeline construction on both terrestrial and aquatic ecosystems as well as the longer-term effects of right-of-way maintenance. Among other impacts, pipeline projects cause direct pollution through sedimentation and accidental releases of drilling muds; exacerbate erosion; result in the removal of riparian vegetation and the loss of forest lands; contribute to forest fragmentation; and adversely affect wetlands and marshes. Given the scope and scale of such impacts, the DRBC is obligated under Article 3.8 of the Compact to take jurisdiction over natural gas pipeline projects to consider whether these projects may be approved as consistent with the Comprehensive Plan; approved only as modified to ensure no impairment to the Comprehensive Plan; or disapproved where such projects would substantially impair or conflict with the Comprehensive Plan. The DRBC should revise the RPP to provide for the clear assertion of DRBC authority to approve or disapprove natural gas pipeline projects.

#### **B. Natural Gas Pipeline Projects May Degrade Special Protection Waters**

The entire non-tidal Delaware River is designated as Special Protection Waters and is subject to the strict anti-degradation requirements of the Water Code. As detailed above, natural gas pipeline projects will have both individual and cumulative impacts that are highly likely to degrade water quality in Special Protection Waters portions of the Watershed. Given the DRBC's mandate to ensure that Special Protection Waters are protected from degradation – a mandate not shared by

state or federal agencies – the DRBC must revise the RPP to ensure that all natural gas pipeline projects that may affect SPW are subject to DRBC review to ensure that the strict anti-degradation standards of the Water Code are met.

Thank you for your attention to this Petition. Please do not hesitate to contact us with any questions.

Respectfully submitted,

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