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September 29, 2014

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 29426

Jodi M. McDonald, Chief Regulatory Officer
Army Corps of Engineers
Jacob Javits Building
26 Federal Plaza
New York, NY 10278

*CWCWC Comments on the Draft Environmental Impact Statement
Algonquin Gas Transmission, LLC; FERC Docket No. CP14-96-000; and*

*Application for 401 Water Quality Certification;
Army Corps of Engineers Public Notice Number NAN-2014-00402-EYA*

Dear Mses. Bose and McDonald,

I represent the Community Watersheds Clean Water Coalition, Inc. (CWCWC) and submit the following comments on the Draft Environmental Impact Statement (DEIS)¹ prepared by the Federal Energy Regulatory Commission (FERC) pursuant to the National Environmental Policy Act (NEPA) concerning the proposed pipeline expansion (project) by Algonquin Gas Transmission, LLC (Algonquin).

These comments are also directed to the Army Corps of Engineers (ACOE) in relation to Algonquin's application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

¹ Application of Algonquin Gas Transmission, LLC for a Certificate of Public Convenience and Necessity authorizing the expansion of the AIM Pipeline under CP14-96.

As set forth herein, the DEIS is insufficient in its disclosure of impacts to wetlands, endangered species, water quality and is deficient in addressing cumulative impacts and identifying practicable alternatives.

CWCWC is a not-for-profit corporation which includes 50 affiliated groups representing over 120,000 individuals. Over the last fifteen years, CWCWC has worked to protect and improve New York's surface and groundwater supplies through education and advocacy² with emphasis on rehabilitation of the Croton Watershed (Croton). Since 1840 the Croton has been a drinking water source for New York City and it continues to provide 10% of the water for 9 million New Yorkers, including approximately 1 million residents in Westchester County.

CWCWC submitted comments on the above FERC application on January 31, 2014 and by motion dated April 8, 2014 gained intervenor status and is therefore an official party in this proceeding. (See 18 CFR 385.214 and 18 CFR 157.10).

In preparing these comments, CWCWC retained Dr. Erik Kiviat,³ director of Hudsonia, Ltd., an endangered species expert and certified wetlands scientist. Dr. Kiviat examined the wetlands and rare flora and fauna between MP 10.0 and 12.3. CWCWC also retained the engineering services of Rahul Verma, P.E. former Executive Director for the East of Hudson Watershed Corporation (EOHWC), charged with identifying problem areas and installing, on behalf of 19 Croton municipalities, stormwater retrofits to reduce the amount of the pollutant phosphorus entering the reservoirs.

I. Project Components

Algonquin owns an approximate 50' wide right of way extending east from its compressor station in the Town of Stony Point in Rockland County approximately 29 miles to its compressor station in the Town of Southeast. Within that right of way Algonquin operates two pipelines, one 26' diameter and one 30

² CWCWC's mission statement states: "[t]he Coalition strives to protect and improve the waters of NYC's Croton Watershed as well as all New York State watersheds. We are an alliance of individuals and groups who believe that safe, clean and affordable drinking water is a basic human right."

³ Dr. Kiviat "has studied the plants and animals of the region for 40 years and has authored or co-authored 80 publications and 200 technical assistance reports on wetland ecology, rare species conservation, habitat ecology, introduced species, the Hudson River, and other subjects. Erik is the author of *The Northern Shawangunks: An Ecological Survey*; *Hudson River East Bank Natural Areas*; and *Hackensack Meadowlands, New Jersey, Biodiversity: A Review and Synthesis*. He is a Certified Wetland Scientist." See: <http://hudsonia.org/about/people/>.

inch diameter pipe through which it transports natural gas at a pressure of 672 psig.⁴ In order to deliver more natural gas to markets in New England and Canada, Algonquin proposes to replace its existing 26 inch diameter pipeline with a 42 inch diameter pipeline for a distance of 12.3 miles extending east from the Stony Point compressor station. Gas will be compressed within the new gas line by a single 15,000⁵ horsepower (hp) gas turbine⁶ replacing four existing compressor units which had less power (10,800 hp). At mile post (MP) 12.3 adjacent to Stoney Street in the Town of Yorktown, the new 42 inch line will dovetail into the existing 26 inch line. There, Algonquin proposes to construct and operate a “new launcher/receiver and pressure regulating facility.” DEIS 4-157.⁷

Algonquin plans to expand its right of way in certain areas to 75 feet in width and disturb a total of approximately 17,000 cubic yards of wetlands and hydric soils in New York. In the two miles of pipeline expansion planned in the Croton watershed (between MPs 10.0 and 12.3), Algonquin states 5.08 acres of wetlands will be excavated.⁸ And, specifically, in that 2.3 mile segment a total of 3,142.18 cubic yards of wetlands will be excavated along with 38.22 cubic yards of soils from stream crossings.⁹

CWCWC is principally concerned with the 10.0 to 12.3 MP segment of the project which impacts the water quality and flora and fauna within the Croton.

As discussed below, the DEIS is incomplete in several critical respects. The DEIS fails to comprehensively identify and disclose impacts to wetlands and identify and assess compliance with state water quality standards and New York’s anti-degradation policy as implemented by the Clean Water Act (CWA).

⁴ PSI and PSIG-- Pounds per Square Inch, and Pounds per Square Inch Gauge. Both are units of measure to indicate the pressure on a surface. Technically, PSI starts at zero relative to a true vacuum. PSIG is the technically correct term to use when referring to a pressure gauge which has been calibrated to read zero at sea level. At sea level, the earth’s atmosphere actually exerts a force of 14.7 psi on all surfaces. See for example: http://www.turnfast.com/refc_glossary/glossary/psig.

⁵ See for example: <https://mysolar.cat.com/cda/layout?m=35503>.

⁶ “The Mars 100 is the preferred unit model for the replacement because it would meet the horsepower requirements of the mainline system as well as the air emissions thresholds required in the existing air permits for the Stony Point Compressor Station.” DEIS 3-15.

⁷ DEIS Table 2.1.2-1 identifies this project component as “Install 42-inch receiver barrel and 26-inch launcher barrel and install mainline regulators and associated cross over piping.”

⁸ 401 Application to the ACOE at Table D-1.

⁹ See Algonquin’s 6/3/14 response to the ACOE’s data request.

Surveys for rare and endangered species are severely deficient having failed to identify multiple species in those categories. Further, there is no examination of reasonable alternatives that avoid impacts to wetlands in the Croton (presumed to be available under the CWA). Finally, the DEIS provides only a cursory explanation of another Algonquin proposal, the Atlantic Bridge expansion project which would more than double the project's impacts upon wetlands and water quality in the Croton with a cumulative replacement of 6.4 miles of pipeline within the Croton.

II. Wetlands

The Croton's wetlands are critical resources preventing and mitigating flooding impacts and serving as filters of pollutants such as phosphorus, while providing habitat to a multitude of flora and fauna.

The Environmental Protection Agency (EPA) recently issued proposed rules to clarify the definition of "waters of the United States" which detail the pivotal role wetlands play in maintaining water quality.¹⁰

¹⁰ Wetlands also act as sinks and transformers for pollutants, including excess nutrients, through such processes as denitrification, ammonia volatilization, microbial and plant biomass assimilation, sedimentation, sorption and precipitation, biological uptake, and long-term storage of plant detritus...

Specifically, wetlands reduce phosphorus, nitrate, and ammonium by large percentages...

Throughout the stream network, but especially in headwater streams and their adjacent wetlands, chemicals are sequestered, assimilated, transformed, or lost to the atmosphere by microbes, fungi, algae, and macrophytes present in riparian waters and soils...

These chemical processes reduce or eliminate pollution that would otherwise enter streams, rivers, lakes and other waters and subsequently downstream traditional navigable waters, interstate waters, or the territorial seas. The removal of the nutrients nitrogen and phosphorus is a particularly important role for riparian waters. Nutrients are necessary to support aquatic life, but the presence of excess nutrients can lead to eutrophication and the depletion of oxygen nearby waters and in waters far downstream.

The removal of nitrogen is an important function of all waters, including wetlands, in the riparian areas. Riparian areas regularly remove more than

Despite proposing to excavate nearly 17,000 c/yds of wetlands, the DEIS contains no pollutant loading analysis. In the Croton, there is no recognition that the nutrients released as a result of the excavation of these hydric soils will impact water quality. There is no identification of the receiving waters' existing nutrient levels, pH, DO, temperatures or discussion of impacts to trout habitat. All that the DEIS and related ACOE filings indicate is that Algonquin plans to segregate the wetlands spoils in a pile and surround it with filter fabric. However, filter fabric does not remove dissolved phosphorus or nitrogen. (See herewith comments from

half of dissolved nitrogen found in surface and subsurface water by plant uptake and microbial transformation...

Denitrification in surface and subsurface flows is highest where there is high organic matter and/or anoxic conditions....

Denitrification occurs in wetland soils where there is high organic matter, low oxygen, denitrifying microbes, and saturated soil conditions, and rates increase with proximity to streams.

The vegetation associated with riparian waters also removes nitrogen from subsurface flows. Therefore, the conservation of riparian waters helps protect downstream waters from influxes of dissolved nitrogen. Phosphorus is another potentially harmful nutrient that is captured and processed in riparian waters.

Biogeochemical processes, sedimentation, and plant uptake account for high rates of removal of particulate phosphorus in riparian areas...

The amount of contact the water has with nearby soils determines the ability of the riparian area to remove phosphorus...

This function of upstream riparian waters is crucial for maintaining the chemical and biological integrity of the waters to which they are adjacent, and for preventing eutrophication in downstream traditional navigable waters, interstate waters, and the territorial seas.

Pollutants can be attenuated or retained in such adjacent waters through processes including denitrification, ammonia volatilization, microbial and plant biomass assimilation, sedimentation, sorption and precipitation reactions, biological uptake, and long-term storage in plant detritus...

Through retention and mitigation of pollutants and other chemical compounds, adjacent waters with a surface hydrologic connection to jurisdictional waters can substantially improve water quality downstream. Federal Register / Vol. 79, No. 76 / Monday, April 21, 2014 / Proposed Rules.

Verma Engineering). The filter fabric is also highly prone to failure as demonstrated by the photographs included with Dr. Kiviat's report herewith.

Dr. Kiviat reviewed the Algonquin application and its wetlands maps and conducted a preliminary site investigation between MPs 10.0 and 12.3.

Significantly, Kiviat pin-pointed seven locations where wetlands were either under-delineated or not identified. (Hudsonia Report at page 3). Kiviat reports that the "wetland field data sheets in the delineation report (TRC 2014a)" fail to identify many sedges which are "important wetland indicator species" "despite the abundance and diversity of sedges on upland and wetland habitats of the ROW." Hudsonia Report pg. 3.

Kiviat also notes that "[t]he wetland field data sheets reproduced [by Algonquin's consultant] TRC (2014a) contain many misspelled plant names. The inaccuracies in spelling (which could have been corrected following field work) suggest there might also be incorrect plant identifications or other errors."

Consequently, the Hudsonia report recommends:

The entire ROW should be re-checked for small wetlands. All wetlands on the ROW should be delineated (and prior delineations checked) and assessed by an independent wetland scientist, and the federal status of all wetlands determined or re-determined. It is the responsibility of the applicant (AIM) to accurately address the federal jurisdictional status of these wetlands.

III. Rare and Endangered Species

In his short investigation, Kiviat identified several rare and endangered species including two locations harboring the endangered Narrow-leaved sedge (*Carex amphibola*; NYNHP rank S1), the rare Bush's sedge (*Carex bushii*; New York Natural Heritage Program rank S3), the rare New Jersey tea (*Ceanothus americanus*; regionally-rare) and the butterfly-weed (orange milkweed; *Asclepias tuberosa*, also regionally-rare).

Kiviat discovered an unidentified dodder species relating that it "may be one of several rare dodder species that occur in the Hudson Valley. (Several native dodders of meadows or shrublands could occur here, including *Cuscuta campestris* [S1, State Endangered], *Cuscuta compacta* [S3], *Cuscuta pentagona* [S3], and *Cuscuta polygonorum* [S1, State Endangered] [NEWFS 2013, Weldy et al. 2014].)"

None of the above species were identified in the DEIS.

And, while TRC identified one *Carex* species, Kiviat reports:

The diversity of true sedges (*Carex* species), all of which are native to the region, is a noteworthy feature of the pipeline ROW. Although we did not identify them all, I estimate there were 15 or more species on the ROW. This is a notable component of the diverse native flora of the ROW. In addition to the plants discussed above, several other rare native plant species could occur on the ROW.

In examining Algonquin's filings, Kiviat notes "[a]lthough common and a few rare plants are referenced in TRC (2014b), it is unclear how comprehensive a flora survey or rare plants survey was conducted by the Applicant's consultants in Westchester County."

Thus, Kiviat recommends:

A thorough survey of vascular flora (higher plants) should be conducted throughout the ROW and all adjacent areas that may be disturbed by siltation or other impacts. This work should be conducted by experienced, independent botanists. The purpose is to identify and record the locations of all the flora so that construction and restoration can be managed successfully with minimal impact on native plant populations and minimal facilitation of the spread of nonnative plants.

Regarding rare animals, Kiviat states "[t]he existing ROW contains potential or actual habitat for certain rare animals of conservation concern" such as the small-footed bat, the "very rare" butterfly Northern metalmark and the endangered bog turtle.

Regarding DEC Wetland A-10, Kiviat states it "not only contains potential bog turtle habitat and spotted turtle (State Special Concern) habitat, but also suitable habitat for a wide diversity of birds, other herpetofauna (reptiles and amphibians), dragonflies, damselflies, and other animals." Kiviat concludes:

Under the federal bog turtle recovery plan, because a portion of the [A-10] wetland meets the criteria for potential habitat, the entire wetland, including the portion on and adjoining the ROW, must be considered potential bog turtle habitat (Klemens 2001 and subsequent U.S. Fish and Wildlife Service policy guidance).

Kiviat further recommends:

Thorough surveys should be conducted of butterflies and dragonflies using the ROW since there is evidence of potentially important diversity and abundance in these groups of organisms. There may also be rare species that I did not detect in my limited field time. These surveys should be conducted by experienced independent biologists.

And, finally:

AIM funds should be put into escrow for a full-time independent environmental monitor administered by, e.g., the town CACs or the New York City Department of Environmental Protection. This individual would monitor siltation control, equipment (to make sure it stays on the ROW), the appropriate procedures for salvaging and restoring native plants, and other environmental practices. It is not adequate for construction and restoration to be monitored only by the Applicant's consultants.

In sum, Kiviat's report indicates fundamental deficiencies in the DEIS relating to wetlands identification and endangered flora and fauna. Dr. Kiviat makes clear that his site visit did "not constitute a comprehensive survey of rare species, which should be conducted before planning of the pipeline upgrade is completed."

A fundamental legal requirement of NEPA is that agencies assure that wetlands resources are accurately mapped and impacts to rare and endangered species disclosed. "[T]o the fullest extent possible" "presently unquantified environmental amenities and values" must be identified in order that they "may be given appropriate consideration in decisionmaking." 42 USC §4332. (See also *Kleppe v. Sierra Club*, 427 U.S. 390, 409, [1976] "Title 42 U.S.C. §4332[2][C] is 'one of the 'action-forcing' provisions intended as a directive to 'all agencies to assure consideration of the environmental impact of their actions in decisionmaking.'"') And, specifically:

As part of an agency's determination of the intensity of the impact, numerous factors should be considered, including the "[u]nique characteristics of the geographic area such as proximity to ... prime farmlands, wetlands, ... or ecologically critical areas.

Churchill County v. Norton, 276 F. 3d 1060 (9th Circuit 2001) citing 40 CFR. § 1508.27(b)(3).

In fact, an agency cannot be said to have taken the requisite “hard look” in the absence of accurate wetlands identification which relies in part upon the plant species encountered. (See *Or. Natural Res. Council v. Lowe*, 109 F.3d 521, 526 [9th Cir.1997]).

Here, TRC’s misspelled plant names and Hudsonia’s identification of under-delineated or missed wetlands and existing rare and endangered species not identified by Algonquin are reasons to support supplementing the DEIS. Similarly, the project’s stormwater analysis and mitigation plans require amendment because the DEIS underreports the amount of wetland soils to be excavated.

The DEIS’s deficiencies are similar to the flawed EIS rejected in *Center for Biological Diversity v. U.S. Forest Service*, 349 F.3d 1157, (9th Cir. 2003) where the Court ruled the NEPA process to be inadequate because the Forest Service’s EIS failed to discuss and respond to 7 scientific studies casting doubt on the Forest Service’s conclusion regarding a certain hawk species. The Forest Service’s DEIS did not specifically mention or discuss the scientific opposition.

Therefore, Algonquin must submit additional information in order that FERC and the ACOE may make an informed judgment as to the project’s wetlands and rare/endangered species impacts.

IV. The Clean Water Act

To achieve the CWA’s goal of protecting and rehabilitating the nation’s waters, three primary initiatives are implemented by the states - waterbody use classifications, water quality standards (WQS) and antidegradation.

As a drinking water source, the New Croton receives New York’s highest water classification – AA. The New York State Department of Environmental Conservation (DEC) and New York City Department of Environmental Protection (DEP) have developed numeric and narrative WQS to protect that classification.

New York’s narrative WQS for phosphorus permit “[n]one in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.”¹¹

Numerical WQS for the New Croton require that the “[t]otal phosphorus concentrations shall be equal to or less than 15 micrograms per liter” (µg/l).¹²

¹¹ 6 NYCRR §703.2.

However, concentrations of phosphorus in the New Croton regularly violate both the narrative and numerical WQS for phosphorus.¹³

To comply with the CWA, DEC and DEP worked to develop Total Maximum Daily Loads (TMDLs) for the Croton's impaired reservoirs. The Croton's watershed communities, (including Cortlandt and Yorktown) signed the 1997 Watershed Memorandum of Agreement (MOA) which initiated watershed protection programs, *e.g.*:

The water quality management goal of the TMDL program is to assure that the total phosphorus loading from point and non-point

¹² RCNY §18-48(b)(1). "Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources" Chapter 18, Title 15 as amended April 4, 2010. Available at <http://www.nyc.gov/html/dep/pdf/recrules/regulations.pdf>.

¹³ As explained by the NYS Attorney General's office:

"Each year during the summer and fall, phosphorus in the New Croton sets off a biological chain reaction. It promotes algae blooms that result in poor water taste, odor and color. Phosphorus-induced algae blooms also reduce dissolved oxygen in the bottom waters (due to increased bacteria ingesting dead algae), cause increased levels of the heavy metal pollutants iron and manganese, and increase levels of organic carbon. The chlorine-based disinfection of waters that are high in organic carbons results in the formation of chemicals that are suspected of having a number of serious adverse health impacts.

These water quality problems at the New Croton have created an 'operational nightmare' for DEP. As water quality degrades each summer (with a corresponding increase in customer complaints), DEP has to shut down the flow from the New Croton or blend New Croton waters with higher quality waters from the Catskills to dilute the pollutants. These reservoir shut downs often occur for months at a time. Such actions by DEP support a finding that the New Croton water quality often does not meet its New York State classification and best use as a source of drinking water. This problem, if unaddressed, could significantly worsen under drought conditions, flooding scenarios, operational failures in other portions of the water supply system, or increased demand for water in the New York metropolitan area over time." "Reducing Harmful Phosphorus Pollution in the New York City Reservoirs through the Clean Water Act's 'Total Maximum Daily Load' requirements: a Case-study of the New Croton Reservoir and Recommendation to EPA." (7/5/00 Press Release and Report at www.oag.state.ny.us/press/2000/jul/jul05a_00.html).

sources into a reservoir does not cause a contravention of the water quality standard for phosphorus. MOA¹⁴ at 162.

The TMDL implementation¹⁵ plan includes targeted reductions for non-point source phosphorus loadings. The annual phosphorus reduction for the New Croton is 1356 kilograms (2989 lbs).¹⁶ Yorktown's allotted annual reduction amount is 443 kg/yr (975 lbs/yr) and Cortlandt's is 105 kg/yr (231 lbs/yr).¹⁷

The Hunter Brook north of Mill pond (the area where Algonquin proposes to excavate wetlands), is overloaded with nutrients.^{18 19} And, DEP's most recent watershed report (2013) identifies the Hunter Brook as discharging concentrations of phosphorus into the New Croton between 20 and 40 µg/l far exceeding the New Croton's 15 µg/l WQS.²⁰

Each pound of phosphorus may produce more than 10,000 lbs of algae growth.²¹ As noted above (footnote 13), algae (as an organic material) in drinking water sources, when mixed with chlorine as a disinfectant, produce by-products (trihalomethanes) that can be a health hazard.²²

¹⁴ <http://www.dos.ny.gov/watershed/nycmoa.html>.

¹⁵ Croton Watershed Phase II Phosphorus TMDL Implementation Plan," (January 14, 2009), Available at: http://www.dec.ny.gov/docs/water_pdf/jan09crotontmdl.pdf.

¹⁶ Nonpoint Source Implementation of the Phase II TMDLs, (April 2001) at Table 2.1, available at: http://www.dec.ny.gov/docs/water_pdf/npsource.pdf.

¹⁷ Id. at Table 4.1.

¹⁸ Westchester County Croton Watershed Water Quality Conditions Report (February 2004) available at: <http://planning.westchestergov.com/crotonplan> last accessed 9/28/14.

¹⁹ See also *Waterbody Inventory for Lower Hudson River Watershed* "A biological (macroinvertebrate) assessment of Hunter Brook near Yorktown (at Crompond Road) was conducted in 2002 and 2003. Sampling results indicated slightly impacted water quality conditions. Urban runoff and nonpoint nutrient enrichment was indicated." Available at http://www.dec.ny.gov/docs/water_pdf/pwllhudlhud.pdf at page 50.

²⁰ "2013 Watershed Water Quality Report" Figure 3.9, Boxplot of annual medians showing the Hunter Brook phosphorus discharge ranges between 20 to 40 ug/l. Available at: http://www.nyc.gov/html/dep/html/watershed_protection/fad.shtml.

²¹ The formula for algae mass is 12C106 1H263 16O110 14N15 31P1 with TP being the limiting factor. Source Dr. Jack Smith. See also <http://www.cleanwatermn.org/learn/pdfs/Algae.pdf>). Studies in the State of Maine show 1 lb. of TP producing 10,000 lbs. of algae.

<http://www.maine.gov/dep/land/watershed/fert/article.htm>.

²² See footnote 3 above and EPA's web site "Basic Information about Disinfection Byproducts in Drinking Water: Total Trihalomethanes, Haloacetic Acids, Bromate, and Chlorite" at:

<http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm>.

In order to reduce health impacts, EPA recommends “no net increase in [phosphorus] loadings over pre-existing construction conditions” in the NYC watershed. And, EPA recommends that agencies ensure that stormwater management plans “include as much site-specific data as possible and that the most conservative measures are utilized to reduce stormwater loadings.”²³

Efforts to implement the Croton TMDLs have been costly. Cortlandt and Yorktown have joined the EOHWC to use \$38 million dollars in ratepayers’ money to reduce existing phosphorus loads through retrofits. CWCWC’s engineer, Rahul Verma, P.E., former EOHWC Executive Director, advises that stormwater retrofits implemented by EOHWC cost over \$80,000 to remove just *one* kilogram of phosphorus from stormwater runoff, and this does not include operation and maintenance costs.

However, even were all the retrofits completed as contemplated by the 2009 Plan, Cortlandt and Yorktown would still need to reduce non-point source phosphorus by approximately 183 k/yr (402 lbs/yr).

Further, brook trout inhabit Hunter Brook. DEC classifies the Hunter Brook as C(TS) - a trout spawning stream. Any discharge causing changes in pH, reductions in DO or increases in nutrient levels and temperature are prohibited.²⁴

Here, the DEIS merely asserts, with no empirical support whatsoever, that pipeline construction within 5.1 acres of wetlands and over three thousand cubic yards of dredged wetland spoils will result in no water quality impacts downstream because Algonquin will surround the excavated areas and mounded spoils with filter fabric.

However, filter fabric does not retain fine sediment particles (clay and silt) even when properly installed and maintained and again, does not filter phosphorus, nitrogen or prevent changes in dissolved oxygen (DO), pH or stream temperature.

Moreover, as shown by the Dr. Kiviat’s photograph of the sediment wash which completely inundated the filter fabric fence in or adjacent to the pipeline ROW, more often than not these sediment control practices fail to be installed and maintained properly.

²³ “Assessing New York City’s Watershed Protection Program” (May 2000) at pg. 192; Available at: <http://www.epa.gov/region2/water/nycshed/fadmidrev.pdf>.

²⁴ 6 NYCRR §§703-704.

The DEIS's failure to include a nutrient loading analysis prevents assessment as to whether compliance with state WQS can be achieved.

The issue is critical because the CWA requires Cortlandt and Yorktown to significantly reduce phosphorus loads to the New Croton. And, particularly relevant to the antidegradation inquiry, the Hunter Brook already violates WQS.

Furthermore, FERC must assess phosphorus to comply with the CWA's antidegradation policy. Again, that policy requires that:

Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.²⁵

It is well-settled that FERC cannot issue an approval where the project results in a contravention of water quality standards or an existing TMDL. That is exactly what occurred in *Islander East Pipeline Co., LLC v. McCarthy*, 525 F. 3d 141, 144 (2nd Cir. 2008) where in affirming Connecticut's denial of a state water quality permit for a natural gas pipeline proposed to cross Long Island Sound the Court explained:

[P]ursuant to the Clean Water Act's "antidegradation policy," a state's water quality standards must "be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation." Id. at 705, 114 S.Ct. 1900 (citing 33 U.S.C. § 1313(d)(4)(B)). The mandate's broad reach is reflected in 40 C.F.R. § 131.12(a)(2), which provides that states "shall assure water quality adequate to protect existing uses fully." Thus, no activity that would "partially or completely eliminate any existing use" is permitted, even if it would leave the majority of a given body of water undisturbed.

Regarding antidegradation in the Croton, the National Research Council²⁶ (NRC) advised that "waterbodies cannot be allowed to sustain pollutant loadings that will prevent them from meeting their specific use classification and associated water quality criteria." Thus, NRC recommended:

An explicit consideration of a receiving water's assimilative capacity should be required as part of draft environmental impact statements.

²⁵ http://www.dec.ny.gov/docs/water_pdf/togs139.pdf.

²⁶ "Watershed Management for Potable Water Supply: Assessing the New York City Strategy (2000)" available at http://www.nap.edu/openbook.php?record_id=9677&page=360.

Consideration of assimilative capacity should be stated clearly to facilitate understanding by the public in written guidance documents, within draft EISs, and during public hearings. The stated purpose of antidegradation is for communities, regulators, and dischargers to consider the assimilative capacity of waterbodies.²⁷

Here, studies conducted on the NYC watershed (including tributaries to the New Croton) indicate that phosphorus readily travels downstream in a process known as “nutrient spiraling.”²⁸ Unlocking trapped nutrients in 5 acres of dredged and disturbed wetlands along the 2.3 mile pipeline route could release several pounds of phosphorus into the Hunter Brook and spur the growth of thousands of pounds of algae²⁹ in the New Croton.

Again the DEIS contains absolutely no data concerning the assimilative capacity of the Hunter Brook or even recognition that it is overladen with phosphorus and exacerbates violations of WQS in the New Croton. And, the DEIS’s failure to assess nutrient loads leaves unanswered how the trout population in Hunter Brook may be impacted by increased nutrients. As indicated by the attached report from Trout Unlimited (TU), brook trout in the Hunter Brook are sensitive to silt deposition, increased nutrient levels and changes in temperature.

In sum, the project is within the watershed for the Croton’s terminal reservoir - New Croton reservoir basin and the Hunter Brook sub-drainage basin – both of which are impaired by phosphorus. Despite the extensive network of rules and regulations designed to stem the increase of phosphorus in these water bodies, the DEIS utterly fails to disclose the quantity of the project’s phosphorus loadings and impacts to those important resources.

V. Cumulative Impacts

NEPA requires examination of cumulative impacts. “[A]gencies shall consider 3 types of actions... which may be:

²⁷ *Id.* at pg. 373.

²⁸ See “Uptake of nutrients and organic C in streams in New York City drinking-water-supply watersheds” Stroud Water Research Center (2006), available at: http://www.stroudcenter.org/nyproj_pics/pdfs/newbold2006_jnabs_nyprojectspiraling.pdf.

²⁹ One pound of TP produces approximately 500 lbs. of algae. (The formula for algae mass is 12C106 1H263 16O110 14N15 31P1 with TP being the limiting factor. Source Dr. Jack Smith and see <http://www.cleanwatermn.org/learn/pdfs/Algae.pdf>). Maine studies show 1 lb. of TP producing 10,000 lbs. of algae. <http://www.maine.gov/dep/land/watershed/fert/article.htm>.

Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. An agency may wish to analyze these actions in the same impact statement. It should do so when the best way to assess adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement.

40 CFR §1508.25. Case law is replete where matters were remanded in order for an agency to properly address cumulative impacts. For instance, in *Defenders of Wildlife v. North Carolina Department of Transportation*, 44 ELR 20181, (4th Cir. 8/6/14) the court advised:

“[A]gencies must measure the indirect and cumulative environmental effects of proposed actions. ... Conclusory statements that the indirect and cumulative effects will be minimal or that such effects are inevitable are insufficient under NEPA.” N.C. Wildlife Fed'n, 677 F.3d at 602 (citation omitted).

Agencies may not engage “in segmentation, which involves ‘an attempt to circumvent NEPA by breaking up one project into smaller projects and not studying the overall impacts of the single overall project.’” *Webster v. U.S. Dep’t of Agric.*, 685 F.3d 411, 426 (4th Cir. 2012) (quoting *Coal. on W. Valley Nuclear Wastes v. Chu*, 592 F.3d 306, 311 (2d Cir. 2009)).

Specifically, “[p]roposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement.” 40 C.F.R. § 1502.4(a).

Proposed projects are considered “connected” if they:

- (i) Automatically trigger other actions which may require environmental impact statements[;]
- (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously[; or]
- (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.” Id. § 1508.25(a)(1).

Agencies must also assess “[c]umulative actions,” and “[s]imilar actions” with “common timing or geography” in the same impact statement. 40 CFR §1508.25(a)(2)-(3).

Here, scrutiny of the AIM project’s design parameters proves it is only a segment of a larger plan to increase natural gas delivery to New England and Canada. Specifically, the proposed 42-inch diameter pipeline to be installed from Stony Point to MP 12.3 has as a Maximum Allowable Operating Pressure (MAOP) of 1440 psig.³⁰ However, Algonquin says it will only increase the psig from 674 to 850. 850 psig is only 59% of the 42 inch pipeline’s MAOP and thus the DEIS provides no justification as to why such an over-sized diameter is proposed.

It appears the 12.3 mile segment is only the first phase in replacing the entire 28-mile segment of existing 26-inch diameter pipeline between Stony Point and Southeast in order to increase the pressure within the entire length of pipeline to 1440 psig (as is the case with the Constitution Pipeline in Upstate New York).

Interestingly, pipeline data from the gas industry shows that 850 psig exceeds the MAOP of the existing 26-inch line installed over 50 years ago.³¹ The DEIS fails to consider whether this increase is a safety concern. If there is a safety concern, Algonquin will undoubtedly argue in the near future that with its new infrastructure in place (the 15,900 hp turbine and 42 inch pipe) it should proceed to replace the remaining 26-inch pipeline located between Stoney Street and its compressor station in Southeast.

Indeed, that appears to be precisely what is planned by Algonquin with its plan to use the AIM project as a springboard to achieving its ultimate goal of expanding the delivery of natural gas to New England and Canada. Algonquin’s new project is known as the Atlantic Bridge (AB) project. Specifically, Algonquin announced on its website months ago that:

Algonquin and Maritimes recently executed an agreement with Unifil Corporation to participate as an anchor shipper in the [Atlantic Bridge] project.

Algonquin further conducted an “open season” “for customers in early 2014 to submit requests for additional natural gas service.” Algonquin reports that

³⁰ “Interstate Natural Gas Pipeline Efficiency” Interstate Natural Gas Association of America (October 2010).

³¹ *Id.* at Table 1.

“[t]he response from the market was both positive and favorable, in line with expectations, and we plan to move forward with the [AB] Project.”

With regard to impacts upon the Croton, Algonquin’s website includes a map showing extension of the 42” diameter pipeline expansion east from Stoney Street in the Town of Yorktown another 4.1 miles into the Town of Somers – almost double the existing impact to the Croton.

According to USGS maps of the pipeline and DEC’s environmental resource mapper, that 4.1 mile segment would cross 1.8 miles of wetlands and wetland buffers and likely result in the excavation of thousands of additional cubic yards of hydric soils. The AB project would dredge several significant state designated wetlands including A-34, A-4, A-39, A-2, and ML-10. Potential impacts to state wetland A-2’s stream and wetland buffer are most noteworthy as the AB extension would traverse more than 3000 feet of the wetland.

Thus, AB presents a new, significant and certain impact to the Croton that has progressed beyond the planning stage. Algonquin has notified both the Towns of Yorktown and Somers of the AB project and identified the tax lots to be impacted.³² It has scheduled informational hearings on the new project in both Yorktown and Suffern, New York. Curiously, Algonquin scheduled its first AB informational meeting on September 29, 2014, at 5:30pm, only thirty minutes after the comment period on this project expires.³³ Thus, Algonquin’s scheduling prevents the public from identifying potentially significant cumulative impacts from the combined AIM/AB projects and submitting timely comments to FERC and the ACOE.

As defined by 40 CFR §1508.25(a)(1)(iii), the AIM and AB projects are “connected” and require simultaneous review. Indeed, it is well settled that “NEPA requires that the agency evaluate a project’s environmental consequences early in the planning process.” *Friends of the Earth, Inc. v. Coleman*, 518 F.2d 323, 327 (9th Cir. 1975). As above, Algonquin has gone far beyond merely planning for the AB project.

Due to the AIM/AB common impacts to the exact same resource – the Croton - and presentation of the exact issues regarding water quality impacts, a cumulative impact analysis is required. (See *Churchill County v. Norton*, 276 F. 3d 1060, [9th Cir. 2001] citing 40 C.F.R. §1502.4 in stating that agencies should examine actions “[g]eographically, including actions occurring in the same general location, such as body of water, region, or metropolitan area.”)

³² See attached Algonquin notice to the Town of Somers dated 9/3/14.

³³ See attached Algonquin notice dated 9/6/14.

Clearly, FERC's failure to consider the AIM/AB's cumulative impacts contravenes the plain language of 40 CFR 1508.25(a)(1)-(3) as well as NEPA's "hard look" standard. Indeed, as the Supreme Court ruled in *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976):

[W]hen several proposals ... that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental impacts must be considered together....

Only through comprehensive consideration of pending proposals can the agency evaluate different courses of action.

Similarly, in *Natural Resources Defense Council v. U.S. Forest Service* No. 04-35868, 35 ELR 20160 (9th Cir. Aug. 5, 2005) the U.S. Court of Appeals for the 9th Circuit reversed the lower court in part because the EIS did not consider the cumulative impacts of past and reasonably foreseeable future nonfederal logging in the Tongass forest. Most recently, in a case directly on point, the Court advised that FERC had violated NEPA by allowing the segmented review of expansion phases for a natural gas pipeline and failing to conduct a meaningful review of the cumulative impact resulting from all phases of the expansion. *Delaware Riverkeeper Network, et al. v. Federal Energy Regulatory Commission*, No. 13-1015, slip op. at 2-3 (D.C. Cir. June 6, 2014). Again, no matter how a project is split up for development purposes, it is incumbent on FERC to examine it for possible reasonably foreseeable and certain cumulative impacts when considered in light of other existing or pending projects.

Again, for example, in *Thomas v. Peterson*, 753 F.2d 754 (9th Cir.1985), the court found sufficient evidence mandating review of cumulative effects, "including sediment deposits in the Salmon River (detrimental to fish) and destruction of critical habitat for the endangered Rocky Mountain gray wolf." (*Cf.* *Sierra Club North Star Chapter v. LaHood*, 693 F. Supp.2d 958 [D. Minn. 2010] where meaningful cumulative impact analysis was conducted where the agency set forth the geographic and time boundaries, summarized the existing condition of each potentially affected resource, summarized the impacts of the proposed project on each resource, identified other current and reasonably foreseeable future actions and their possible impacts on those resources, and discussed the potential for cumulative impacts on the resources and mitigation measures.)

Consequently, FERC must conduct a supplemental review to examine the AIM/AB's cumulative impact to the Croton from the disturbance of a total of 6.4 miles of pipeline replacement. The impact is substantial as construction within the

pipeline's 75 foot right of way for 6.4 miles would disturb 75 acres within the Croton.

VI. Alternatives

A robust alternatives analysis is critical to a proper NEPA review.

An agency's comparative evaluation of alternatives to the proposed action "is the heart of the environmental impact statement" because it "sharply defin[es] the issues and provid[es] a clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14. Therefore, agencies must "[r]igorously explore and objectively evaluate all reasonable alternatives[.]" Id. § 1502.14(a). The assessment of the environmental impacts is the "scientific and analytic basis for the comparison[]" of alternatives. 40 C.F.R. § 1502.16.

Defenders of Wildlife v. North Carolina Department of Transportation. 44 ELR 20181. No. 13-2215, (4th Cir. 08/06/2014). Additionally, regarding wetlands impacts, the CWA presumes alternatives avoiding such impacts exist.³⁴

³⁴ Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

(1) For the purpose of this requirement, practicable alternatives include, but are not limited to:

(i) Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters...

(2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose -of the proposed activity may be considered.

(3) Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not 'water dependent'), **practicable alternatives that do not involve special aquatic sites are presumed to be available,**

Here, the DEIS includes no alternative where the junction point of the 42 and 26 diameter pipelines is not in the Croton. In fact, no justification whatsoever is given for the Stoney Street location.

Additionally, the use of Horizontal Directional Drilling (HDD) in the Croton would significantly reduce impacts upon the watershed. CWCWC's engineer has examined Algonquin's HDD Feasibility Report determining that it is deficient in several critical respects. (See comments of Verma Engineering).

Therefore, the DEIS is deficient in taking a hard look at justifying the Stoney Street junction point and eliminating HDD as an alternative to avoid wetlands impacts in the Croton.

VII. Supplemental Analysis

The CEQ's regulations provide:

If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.

40 CFR 1502.9(a). Similarly: Agencies:

Shall prepare supplements to either draft or final environmental impact statements if ...

There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

40 C.F.R. §1502.9(c)(1)(ii). The comments herewith by Hudsonia, Verma Engineering and Trout Unlimited indicate the DEIS is deficient in addressing impacts concerning amount of wetlands to be disturbed, endangered and rare

unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.

40 C.F.R. §230.10(B); emphasis added.

species and impacts upon water quality. To correct these oversights and omissions supplemental review should include:

- Updated wetlands mapping to include the seven instances of under-delineated or missed wetlands identified by Dr. Kiviat.
- Comprehensive rare and endangered species surveys for the species and potential species identified by Dr. Kiviat.³⁵
- Examination of avoiding impacting rare and endangered species identified by Dr. Kiviat. 40 CFR 230.75 (c).
- A pollutant loading analysis for discharges to the Croton.
- Discuss baseline and future levels of phosphorus, pH, DO and temperature in all receiving waters especially the Hunter Brook.³⁶
- A Waste Assimilative Capacity analysis of the Hunter Brook above Mill Pond.
- Assessment of the AIM and Atlantic Bridge's cumulative impacts upon the Croton watershed, WQS, the Hunter Brook, wetlands and flora and fauna, including completing thorough rare and endangered species surveys.
- Examination of alternatives that avoid the Croton watershed.
- Explanation of why Algonquin chose Stoney Street as the point for the 42 inch to 26 inch pipeline connection

VIII. Conclusion

For all of the above reasons, FERC must prepare and issue a supplemental EIS (SEIS). The incomplete water quality impact data in the DEIS is insufficient to support issuance of a 401 water quality certification. Without such a certification, the federal agency may not issue the license or permit *See Islander E.Pipeline Co.v.McCarthy*, 525 F.3d 141 (2d Cir.2008) (upholding denial of state certification for natural gas pipeline on ground that backfill discharge would violate state's antidegradation policy). Failure to prepare an SEIS would be contrary to the plain language of the CEQ's regulations, the purposes of NEPA as well as NEPA case law and would therefore be subject to judicial remand.

Respectfully submitted,



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³⁵ See 40 CFR 230.30 - Threatened and endangered species.

³⁶ See 40 CFR Part 230, Subpart C - Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem.