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September 11, 2013

Mr. Kent Sanders
Deputy Chief Permit Administrator
NYS Department of Environmental Conservation
Division of Environmental Permits, 4th Floor
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By Email: kpsander@gw.dec.state.ny.us
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Comments on Water Withdrawal Permit Application ID 2-634-00024/00054
Filed by Trans Canada Ravenswood LLC for a water withdrawal permit for
1.5 Billion GPD from the East River for the Ravenswood Generating Station

Dear Mr. Sanders:

I offer the following comments on the application of Trans Canada Ravenswood LLC for a water withdrawal permit for 1.5 billion gallons per day from the East River for its TC Ravenswood Generating Station facility in Queens, Application ID: 2-6304-00024/00054. I offer these comments as a citizen concerned about water usage in our state.

I thank the Department of Environmental Conservation (DEC) for extending the comment period on this application until September 11, 2013, pursuant to the notice in the August 28, 2013 Environmental Notice Bulletin, and I thank you for the materials provided in response to my FOIL request, pursuant to your letter of August 27, 2013. As I explain below, however, the public still has not had adequate time to evaluate the issues raised by the Ravenswood permit application.

For the reasons set forth below, I request that the Ravenswood water withdrawal permit application be denied, or in the alternative, that the comment period be extended, that public hearings be scheduled, and that a proper environmental review under SEQRA of the application for this Type I project be conducted.

New York's new water permitting law and regulations were enacted to protect New York's water resources in a way that promotes equity to all users, environmental quality, and sustained quantities for generations of New Yorkers to come.

The procedure being followed by the DEC in considering the first withdrawal permit under the new law and regulations falls far short of widely held expectations for how the program would be administered, and violates the state's public trust responsibilities as set forth in the New York State Constitution, the Environmental Conservation Law, the Coastal Resources Act and the common law to hold New York's water and all public natural resources of the state in trust for the benefit of all people and other living organisms.

Ravenswood's Permit Application Must Be Denied because It Fails to Comply with Permit Application Requirements

Ravenswood's permit application fails in several respects to provide sufficient information to meaningfully review the application. These failures should result in denial of the application and a directive to cure these failures. When Ravenswood resubmits a revised application, a new comment period should be set.

Ravenswood Fails to Provide Information on Rainfall, River Flow, Contributing Watershed Size, Other Upstream Water Withdrawals, Safe Yield Analyses, Passby Flow Calculations or Intake Structure Design

Among the exhibits required to be included in a water withdrawal permit application pursuant to Section 601.10 of the water withdrawal regulations, 6 NYCRR Part 601.10, is an engineer's report. Section 601.10(e) of the regulations sets forth the "minimum information" that an engineer's report "shall contain." Section 601.10(e)(11) provides that, "for surface water sources, information on rainfall, stream flows and classifications, contributing watershed size, location of the nearby USGS stream gages, other upstream water withdrawals, safe yield analyses or passby flow calculations and proposed withdrawal methods including intake structure design and screening," shall be provided. The Ravenswood water withdrawal application is for withdrawal from a surface water source, the East River. But the engineer's report attached to the Ravenswood application contain only some of the information required by section 601.10(e)(11). The information provided by Ravenswood in paragraph 11 of its certified engineer's report is as follows.

The Hudson-Raritan Estuary System is a coastal plain estuary dominated by the drowned river valley of the Hudson River estuary. The estuary system extends 170 miles from the dam at Troy, NY to Sandy Hook, NJ. The freshwater tributary to the estuary system drains a total of about 16,300 square miles. Seasonal and inter-annual variation of stream flow of the Hudson River recorded at Green Island, New York, near Troy (USGS gage 0 1358000) is characterized by high flow during March through May, with monthly mean peak flow of 32,719 cubic feet per second (CFS). The mean oscillating tidal flow in the East River reaches about 240,000 CFS. The estuary system is comprised of all tidally inundated areas within these drainage basins including tidal straits; Harlem and East Rivers. The East River extends 16 miles from the battery to Throgs Neck and Willets Point at the Long Island Sound. The tidal straight is divided into distinct hydrological sections. The East River is narrow and bulk-headed along most of the length, and is divided into east and west channels where it passes Roosevelt Island. The station is located on the east channel from which the station withdraws its cooling water. Maximum river velocities are high, reaching 5.0 ft/sec. The station utilizes a once through cooling water system. The intake structures are recessed 60 feet inside the bulkhead line. Units 10 and 20 each have four water intake bays that measure 11.2 feet wide and by 17 feet deep at mean low water (MLW). Unit 30 has six intake bays that each measure 11.2 feet wide by 24 feet deep (MLW). The existing technology includes 14 vertical continuous traveling screens outfitted with 3/8 inch square mesh and high pressure wash to remove impinged material.

The information required by section 601.10(e)(11) that is not provided in this statement is information on other upstream water withdrawals, safe yield analyses, and passby flow calculations. The information that is not provided is essential to conducting a proper evaluation of the impact of these withdrawals.

Ravenswood Fails to Provide an Adequate Analysis of Increased Water Conservation Measures

Section 601.10(e) (3) of the regulations requires that the engineer's report "shall contain" "an evaluation of all practicable alternatives to the proposed source, which shall include an analysis of increased water conservation measures as a means to reduce or eliminate the need for the proposed source." The evaluation provided by Ravenswood of practicable alternatives is completely inadequate. First and foremost, the Ravenswood application fails to consider the alternative of closed-cycle cooling. Closed-cycle cooling is a proven technology that reduces power plant water intake by up to 98 percent, thereby reducing the damage to aquatic life by up to 98 percent. See Reeling in New York's Aging Power Plants: The Case for Fish-Friendlier Power, Kyle Rabin, Network for New Energy Choices, June 2010, <http://www.gracelinks.org/141/reeling-in-new-york-s-aging-power-plants>.

Ravenswood Fails to Provide an Adequate Watershed Map

Section 601.10(c) of the regulations states that a watershed map shall be provided with the application, and that "Watershed maps shall be USGS topographic maps, or the equivalent, and must indicate the location of the withdrawal and the location of any return flow, including any existing or proposed interbasin diversions. For surface water withdrawals, the map shall include the line of divide surrounding the tributary watershed." The watershed map provided by Ravenswood in its permit application, Figure 2, fails to comply with these requirements. Without a proper map, it is difficult for the public to adequately evaluate potential impacts of the Ravenswood withdrawals. The watershed map provided by Ravenswood is deficient in four ways. It:

- A. Is not a topographic map and does not show land heights or water depths,
- B. Shows only a small portion of the East River immediately adjacent to the Ravenswood plant, so fails to give a complete view of the watershed from which the water is to be withdrawn,
- C. Does not show the location of the withdrawals in the East River, and
- D. Does not have a scale to show distance.

Ravenswood Fails to Comply with Proper Water Conservation and Efficiency Measures

Section 601.10(f) of the regulations states that a water withdrawal permit application must contain:

A completed form as made available by the Department or, if acceptable to the Department, a detailed plan, that demonstrates the applicant's water conservation and efficiency measures that are environmentally sound and economically feasible and that minimize inefficiencies and water losses. Such measures must

include but are not limited to: source and customer metering; frequent system water auditing; system leak detection and repair; recycling and reuse; and ability to enforce water restrictions during drought.

The responses contained in the Water Conservation Program (WCP) form attached as Appendix B to the Ravenswood application show that Ravenswood's water conservation measures are inadequate in at least five respects:

1. In response to the question on the WCP form, "Are all sources of supply including major interconnections equipped with master meters?" Ravenswood's response is "No."
2. In response to the question, "How often are they calibrated?" Ravenswood's response is "Meters are not calibrated at this time."
3. In response to the question, "Do you regularly survey your facility for leakage?" Ravenswood's response is "No."
4. In response to the question, "Do you regularly survey underground piping for water leakage?" Ravenswood's response is "No."
5. In response to the question, "Do you conduct a water audit at least once each year?" Ravenswood's response is "No."

An Additional Extension of the Comment Period Is Needed

Even though the Department has extended the comment period two weeks, the time given to the public to comment on this application is still not sufficient. The Ravenswood application is the very first application under the DEC's new water withdrawal regulations, effective April 1, 2013, and a number of precedential issues are raised by this application. The time to make comments was reduced because the application documents were not made available for some time. It was not until August 20, that I received the first documents in response to my FOIL request for documents related to the application and I did not receive your letter dated August 27, 2013, which enclosed additional documents until Saturday, August 29, 2013.

The public needs more time to fully evaluate the ramifications of this permit application and the process being followed by the DEC in issuing or denying it. Various members of the public have received conflicting and confusing answers from Department staff regarding the relationship between the Ravenswood water withdrawal permit application and the Ravenswood SPDES permit. The DEC needs to issue a written clarification of its position on these issues.

Also, the revised notice identifies several important changes and additions relating to the SEQRA review and the Coastal Resources Act review needed on the permit application. Once the applicant makes appropriate changes in its application, the public should be given an opportunity to review and comment on these changes and additions.

The revised notice adds the statement that, "NYS DEC has determined that the issuance of "initial permits" under ECL section 15-501.9 as implemented by 6 NYCRR 601.7 is a ministerial action and therefore subject to the Type II exemption set out in 6 NYCRR

617.5(c)(19).” This explanation was not in the original notice, and the public needs a reasonable amount of time to consider the implications of this statement.

The revised notice recognizes that the project is in fact located in a Coastal Management area and is subject to the Waterfront Revitalization and Coastal Resources Act. Now that this is recognized, it would seem that the DEC’s consideration of Ravenswood’s application for a water withdrawal permit is premature and should not be undertaken until the NYS Department of State and New York City have ruled on the project’s consistency with the relevant State and City coastal management policies, including Policy 18:

To safeguard the vital interest of the State of New York and of its citizens in the waters and other valuable resources of the State’s coastal area, all practicable steps shall be taken to ensure that such interests are accorded full consideration in the deliberations, decisions and actions of State and Federal bodies with authority over those waters and resources.

The application is silent regarding Policy 18. Once the project’s consistency with relevant State and City coastal management policies is determined, the public must be given an opportunity to comment on that determination.

Public Hearings Are Needed

In view of the significance of this project and the precedential nature of this application process, hearings in New York City and upstate should be held to give the public adequate opportunity to present their concerns to the DEC about the water withdrawal permitting process being used in connection with the Ravenswood application.

A Type I SEQRA Review is Required

A Type I SEQRA review is required under the SEQRA regulations as part of the permit application process for the Ravenswood water withdrawal project. A full environmental review must be an essential component of the DEC’s consideration of this huge withdrawal application. Consideration must be given to the needs of other users and to the natural environment that will be impacted by the withdrawals sought to be permitted.

As noted above, the revised notice states that, “NYS DEC has determined that the issuance of “initial permits” under ECL section 15-501.9 as implemented by 6 NYCRR 601.7 is a ministerial action and therefore subject to the Type II exemption set out in 6 NYCRR 617.5(c)(19).” Section 617.5(c)(19) requires that the action involve “no exercise of discretion, including building permits and historic preservation permits where issuance is predicated solely on the applicant’s compliance or noncompliance with the relevant local building or preservation code(s).” The DEC does have discretion in connection with various aspects of this application. The DEC water permitting regulations clearly give the DEC discretion to deny a permit application, even an application for an initial permit. It cannot logically be claimed that the issuance of the first water withdrawal permit to be issued under New York’s new water withdrawal permitting legislation is an act that involves “no exercise of discretion.”

To the extent that the DEC claims to have created a special class of permits—“initial permits”— to which the overall protections provided in the state’s new water withdrawal

permitting legislation do not apply, and which it has no discretion to deny, the regulations creating such permits are not valid. The DEC does not have authority under in the 2011 water permitting legislation to issue non-discretionary withdrawal permits.

Withdrawals of 2,000,000 GPD or More Are Type I Actions under SEQRA

Section 617.4(6)(ii) of the SEQRA regulations provides that any project that “would use ground or surface water in excess of 2,000,000 gallons per day,” is a Type 1 action and therefore subject to review under SEQRA. In the case of Ravenswood, we are talking about a withdrawal that is 750 times the size of the 2,000,000 gpd described in 6 NYCRR Section 617.4(6)(ii).

To put the size of the proposed permit amount in perspective, 1.5 billion gallons per day is half again as much water as is used by the entire New York City water supply system, which according to the NYC DEP 2012 drinking water report, provides nearly half the population of all New York State with drinking water:

The New York City Water Supply System provides approximately one billion gallons of safe drinking water daily to more than eight million residents of New York City and to the millions of tourists and commuters who visit the City throughout the year, as well as about 110 million gallons a day to one million people living in Westchester, Putnam, Ulster, and Orange counties. In all, the New York City Water Supply System provides nearly half the population of New York State with high quality drinking water.”

New York City 2012 Drinking Water Supply and Quality Report, <http://www.nyc.gov/html/dep/pdf/wsstate12.pdf>, p. 2. One and a half billion gallons of water per day is approximately 20% of New York’s total freshwater usage of 7.9 billion gallons per day in 2000 as calculated by USGS. See New York Water-Use Program and Data 2000, U.S. Geological Survey Open-File Report 2005-1352, September 2005, <http://ny.water.usgs.gov/pubs/of/of051352/of2005-1352.pdf>. One and a half billion gallons of water per day is more than twice as much water as the 650 million gallons per day estimated to be used by all the coal and gas power plants in the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. See The Last Straw: Water Use by Power Plants in the Arid West, Clean Air Task Force and Land and Water Fund of the Rockies, April 2003, http://www.catf.us/resources/publications/files/The_Last_Straw.pdf.

Impacts on the Brooklyn-Queens Sole Source Aquifer Must Be Considered

In 1984, the EPA designated a portion of the Brooklyn-Queens Aquifer System as a Sole Source Aquifer (SSA) under the federal Safe Drinking Water Act. The discussion of this designation on the EPA Region 2 website, provides, “The area designated as the Sole Source Aquifer is the recharge zone and streamflow source zone for the aquifers underlying southeastern Queens County and defined by the outside boundary of Kings County (Borough of Brooklyn) and Queens County (Borough of Queens) in the city of New York and parts of Nassau County.” See <http://www.epa.gov/region2/water/aquifer/brooklyn/brooklyn.htm>. The EPA website also states, “More than fifty percent (50%) of the drinking water for the aquifer service area is supplied by the Brooklyn-Queens Aquifer System. . . . Designation [as an SSA] will provide an additional review of those projects for which Federal financial assistance is requested, and will ensure ground water protection measures, incorporating state and local measures whenever

possible, are built into the projects.” Possible impacts of the heavy withdrawals from the East River by the Ravenswood project right at the edge of the Brooklyn-Queens sole source aquifer must be considered in evaluating the environmental impacts of the project.

Fish Kill Issues Must Be Considered

The Ravenswood plant uses a “once-through” cooling system, which withdraws huge amounts of water, runs it through the plant’s cooling system, and then releases it back into the East River. The problem is that the water intake system also sucks in and kills billions of eggs, larvae and young fish each year. In addition, millions of larger fish are injured or killed annually when they are trapped on intake screens. These fish kills must be addressed in the SEQRA review of Ravenswood’s water withdrawal permit application, and mitigation measures evaluated. Closed-cycle cooling is a proven technology that reduces power plant water intake by up to 98 percent, thereby reducing the damage to aquatic life by up to 98 percent. See Reeling in New York’s Aging Power Plants: The Case for Fish-Friendlier Power, Kyle Rabin, Network for New Energy Choices, June 2010, <http://www.gracelinks.org/141/reeling-in-new-york-s-aging-power-plants>.

The September 12, 2012 Industrial Fact Sheet on the Ravenswood SPDES permit prepared by DEC staff, which was provided in response to my FOIL request, states in Appendix B, Biological Fact Sheet - Cooling Water Intake Structure that “ under a 1992 consent order with the Department, Con Edison conducted a series of studies to assess the Station’s impact on aquatic resources in the East River and determine best technology available for the cooling water intake system and that the most recent Impingement and Entrainment studies were conducted from March 2005 to February 2006.”

The issuance of a new type of permit to Ravenswood requires that a SEQRA review be done for this permit. Whatever understanding the parties may have reached with regard to the Ravenswood SPDES permit regarding environmental reviews, that understanding does not encompass the issuance of a new type of permit that was not in existence at the time the understanding was reached.

Conclusion

For the reasons set forth above, I request that the Ravenswood water withdrawal permit application be denied, or in the alternative, that the comment period be extended, that public hearings be scheduled, and that a proper environmental review under SEQRA of the application for this Type I project be conducted.

Very truly yours,



Rachel Treichler