Hudson River Drinking Water Intermunicipal Council

Town of Esopus, Town of Hyde Park, Town of Lloyd, City of Poughkeepsie, Town of Poughkeepsie, Town of Rhinebeck, Village of Rhinebeck

December 1, 2020

Hon. Michelle L. Phillips, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Champlain Hudson Power Express - Case 10-T-0139

Dear Ms. Phillips:

The Hudson River Drinking Water Intermunicipal Council (the "Hudson 7") has serious concerns about construction-related risks the Champlain Hudson Power Express project (the "Project") proposed by Transmission Developers Inc. ("TDI") poses to our drinking water supplies in the Mid-Hudson Valley. While the Commission is considering changes to the Project route, we ask you to further amend the Project to protect our drinking water.

The Hudson 7 is a coalition of seven municipalities that draw drinking water from the Hudson River. Our five public water supplies ("PWS") serve 106,000 residents, three hospitals, three colleges, and major regional employers, providing safe water for human consumption, firefighting, industry, and more. The Hudson 7 came together in 2018 to protect our shared water source.

As this letter will describe, the Project will churn up contaminated sediments from the river bottom in close proximity to our PWS intakes. Current plans do not adequately protect water quality, leaving our systems vulnerable to contamination or emergency shut-down. With limited storage capacity, any service interruption would threaten public health and safety. Recent dredging operations have brought the risk of contaminant transport into clear focus, and it is our duty to prevent future contamination of our water supplies.

In light of these risks, the most prudent course of action would be to modify the Project to a terrestrial route for the section of the Hudson River affecting drinking water intakes, from at least Kingston to Poughkeepsie. For example, the CSX corridor along the west side of the river could offer an alternative route that would avoid our water intakes completely.

1. The Project has not adequately accounted for drinking water intakes.

The proposed path of the Project passes within one-half mile of all five of our PWS intakes, as shown on the maps attached as Exhibit A. The cable excavation would be within 500 feet of Esopus's intake and would pass between Poughkeepsie's two intakes. Project documents make no mention of Lloyd's intake. Excavation of the river bottom threatens to suspend contaminated sediments that will be drawn directly into the PWS intakes.

The operators of the five PWS in the Hudson 7 have been largely excluded from any planning around drinking water supply impacts from the Project. Some of the operators received a FOIL request in 2010, 2011 or 2014 asking about the location of their intake infrastructure. The Town of Lloyd was never contacted. After that, the operators heard nothing and didn't know if the Project was even going forward.

In February of this year, the Poughkeepsie PWS operator received a communication from TDI asking again about the intake infrastructure. The operator answered the request and asked TDI to attend the February 2020 Hudson 7 meeting to discuss the Project. TDI did not attend. The Hudson 7 reached out again to invite TDI to its October 2020 meeting. TDI instead sent a letter reciting some of the water supply-related conditions in its Certificate of Environmental Compatibility and Public Need ("Water Supply Conditions"), asserting that they had been developed with input from the PWS operators.

In fact the only "input" was physical intake location requested by TDI and provided by some operators. It appears TDI wanted to make sure the excavation would not physically hit the PWS infrastructure, but there was no communication about water quality protection. Having now reviewed the Water Supply Conditions, it is clear that no PWS operator would ever have agreed to them. The Hudson 7 questions whether the NYS Department of Health has reviewed them. If they have, we would like to see that review.

As this letter will describe, the Water Supply Conditions are wholly inadequate to protect the drinking water of 106,000 residents. The Project must be redesigned to protect our water supply.

2. The Project will suspend contaminated river sediments.

Installation of the Project will involve jet-plowing a trench at least seven feet deep in the bottom of the Hudson River. This action will unearth sediments known to be contaminated with a variety of toxic contaminants. The Project's Final Environmental Impact Statement ("FEIS") recognizes that "chemical analysis showed the presence of petroleum compounds, organochlorine pesticides, PCB congeners, and heavy metals within the sediment in the vicinity of the intakes," specifically naming the Esopus, Hyde Park, Poughkeepsie and Rhinebeck

intakes. PCBs are the most high-profile toxic pollutant known to contaminate the Hudson River, and "hotspots" of high-concentration PCBs have not been thoroughly investigated in the Hudson River south of Troy. Additionally, a Center for Biological Diversity letter dated October 2020 names "arsenic, cadmium, mercury, benz(a)anthracene, pyrene, 4,4-DDE, copper, lead, phenanthrene, naphthalene, dioxin and PCBs" as contaminants that are present in Hudson River sediments.

The FEIS admits that "temporary impacts on drinking water intakes could result from suspended sediment entering the intakes during the installation of aquatic transmission cables. The aquatic transmission cable route would be installed and buried using water-jetting techniques, which would result in sediment suspension and transport. The presence of contaminants in river bottom sediments and the potential for mobilization of these sediments resulting in increased contamination could have temporary impacts on water quality during transmission cable installation in the vicinity" of PWS intakes. The FEIS also states flatly that "PCB concentrations resulting from proposed CHPE Project cable installation activities would be higher than the [drinking] water quality criteria established by USEPA and New York State water quality standards."

Even "temporary" impacts are unacceptable to the Hudson 7. A temporary contamination event would mean that contaminants would reach consumers. Temporary contamination can and will result in long-term loss of consumer confidence in the quality of public tap water. There appears to be no provision for covering the costs to our communities of remedying an MCL violation, let alone restoring public confidence. If the contamination is detected in real time and a PWS must shut down, even a temporary disruption poses great risk to public health, due to the acute lack of both storage capacity and emergency water supplies serving our communities. We see no conditions that would ensure TDI covers the cost of supplying emergency water supplies, in the event one or more PWS is disrupted. These risks pose an unacceptable financial burden on our water supply systems and municipalities.

The Project's Suspended Sediment / Water Quality Monitoring Plan calls for a 1,000-foot "pre-installation trial" prior to Project construction. That test should be conducted now, and its results analyzed to assess impacts on PWS before the Project moves forward any further with its current design. We believe the safest choice would be to change the Project to a terrestrial route in the Mid-Hudson area.

3. <u>The Project's water supply protection plans are wholly inadequate.</u>

The Project's Certificate of Environmental Compatibility and Public Need includes a set of conditions intended to mitigate impacts on water supply intakes (the "Water Supply Conditions"; Appendix 1 of the Certificate). The Hudson 7's technical advisor, Paul Malmrose, PE, has

reviewed these conditions and reports that they are inadequate for multiple reasons. The following are just a few of the problems we have identified on initial review. If the Project goes forward with an underwater route, further review and discussion will be essential to protect the PWS.

a. Jet-plowing would disturb and re-suspend contaminated river sediments.

As stated above, TDI acknowledges that the current design of the Project would disturb contaminated sediments in the vicinity of drinking water intakes, resulting in the potential for "temporary" contamination or disruption that is unacceptable to our communities. Terrestrial routes are proposed as alternatives to avoid sensitive in-water areas elsewhere along the Project route, and should be considered in the reach of the Hudson that includes our communities' drinking water intakes as well. In addition, at least two other alternate installation technologies are proposed for use elsewhere along the Project route to minimize impacts: shear plow and horizontal directional drilling. These and other alternatives should be considered before any in-water installation near our communities' drinking water intakes.

b. Preventive action would only take place *after* finished water exceeds contamination limits, risking public exposure to contaminants.

The Conditions indicate that corrective actions would only be taken after a finished water sample exceeds a Maximum Contaminant Limit (MCL). If an MCL limit is exceeded, TDI would employ mitigation measures. If the Department of Public Service determines mitigation methods are unsuccessful, only then would TDI suspend the installation of the cable. This process would allow contaminated water to enter customers' homes and businesses for several days and maybe even weeks while laboratory results are obtained, mitigation measures installed, and a final decision reached to suspend the operation. This delay is unacceptable to the PWS operators and the communities that rely on Hudson as a drinking water supply. If the Project must occur near PWS intakes, robust mitigation measures should be implemented *before* installing the cable, not after contamination occurs.

c. Pesticides and petroleum products would not be monitored.

The Conditions indicate that raw water samples would only be analyzed for metals and PCBs, even though the FEIS also states that petroleum products and pesticides were found in the river sediment near the intakes. Raw water samples should be analyzed for a full range of potential contaminants, including petroleum products (including polycyclic aromatic hydrocarbons), and pesticides.

Further, the water samples should be analyzed for Total Organic Carbon (TOC). TOC is an important parameter for the water industry because when organic carbon combines with chlorine, they form trihalomethanes (THMs) and haloacetic acids (HAAs), which are both federally and state-regulated because of their health effects. A recent water quality survey for the Hudson 7 determined that THM and HAA concentrations are an issue for our PWS. Jet plowing for the Project will suspend TOC, and TOC will stay in suspension much longer than suspended solids. In fact, most TOC is in the dissolved form so that organic carbon could be in the raw water for an extended time. We recommend that if the TOC concentrations increase by more than 1.5 milligrams/ Liter (mg/L) in the raw water entering the plants, the cable installation should be suspended, and the Department of Health and PWS operators must be consulted.

d. Turbidity monitoring and limits are inadequate to protect drinking water.

Even if sediments stirred up are not contaminant-laden, a sudden increase in turbidity can interfere with safe water treatment. The Project's Water Quality and Sediment Plan states that if the total suspended solid (TSS) level is 200 mg/L higher in a downstream sample than the corresponding upstream sample, TDI will report the condition and work with the Department of Public Service and Department of Environmental Conservation to modify the operation. These requirements are inadequate.

First, it will take at least 24 hours to obtain TSS results, and likely 48 hours, given the Conditions. Turbidity, on the other hand, can be measured instantaneously in Nephelometric Turbidity Units (NTU). Continuous turbidity monitoring should be required.

Second, a maximum difference of 200 mg/L is too great. Higher standards are to be met in Lake Champlain, where the Conditions require a maximum difference of 100 mg/L. Measuring turbidity (rather than TSS), the maximum difference in in-river turbidities should be no more than 100 NTU to protect Hudson River drinking water since a sudden change of a magnitude greater than 100 NTU could disrupt the water treatment process.

Third, it is insufficient to test conditions in the river alone. Conditions at PWS should be continuously monitored, and work should be suspended if the turbidity of raw water entering the plants increases by 50 NTU. If either of the in-river or raw water limits is exceeded, the Department of Health and the PWS operators should be consulted to determine additional mitigation techniques.

Finally, the Department of Health should be consulted, along with the Department of Public Service and Department of Environmental Conservation, on all conditions related to drinking water supply protection, including but not limited to any modification of operations to reduce TSS.

4. PWS have limited storage capacity to accommodate planned or emergency shut-downs.

Our water systems must remain operating to serve their communities, and they have little ability to shut down temporarily to avoid impacts or respond to emergencies. Four of our five PWS rely solely on the Hudson River, and our communities currently have no plans for substitute water supplies in an emergency. Only Lloyd has an alternate water source, its reservoirs on Illinois Mountain, and these lack sufficient capacity to supply the average water demand. The five systems are isolated from one another, and each has very limited storage capacity. Poughkeepsie, which serves the most people -- over 75,000 residents, as well as two hospitals, three colleges and major regional employers -- has less than one day of reserve capacity.

The Water Supply Conditions state that operations within one mile of the intakes shall be performed at night or at another time when the system is not operating to the extent reasonably possible. But the PWS do not shut down at night, and night excavation operations create additional risks like limited ability to visually monitor disturbance. The Hudson 7 PWS operators are willing to discuss shutting down plants when work is close to the intakes, but shutdowns would have to be limited and reflect limited storage capacities.

The Hudson 7 would also request that work is not performed between May 15 and September 15 when water demands are high, and storage becomes more limited. Adding this to the habitat-related restrictions, there would be a very limited season when work could proceed. Again, this points to the preference for a terrestrial route.

Furthermore, the limited reserve capacity reflects the importance of avoiding emergency shutdowns. If TDI's Project presents a risk of shutting down one or more of our PWS, TDI should provide a fully-insured plan to pay for an alternate drinking water source for all who rely on each PWS.

5. Lessons learned from recent excavation underscores the vulnerability of Hudson River drinking water.

Since the Project was initially planned, we now have the benefit of a clear lesson learned from unsafe river bottom excavation that threatened Poughkeepsie's water supply. In December 2018, Central Hudson commenced a manufactured gas plant remediation project in the Hudson River bottom near Poughkeepsie. Coal tar was mobilized, floated with the tide, and reached the intake for the Poughkeepsie PWS. The PWS had to be shut down, and the remediation project halted. As part of a December 2019 DEC Order on Consent resulting from the incident, Central Hudson agreed to pay $305,000, including a $275,000 civil penalty.

The contaminants of concern associated with coal tar are known as polycyclic aromatic hydrocarbons (PAHs). Prior to this December 2018 incident, both the company and state

regulators had stated that the likelihood was negligible that the remedial project would result in contamination reaching public drinking water intakes in the Hudson River. The 2018 release of PAHs into the Hudson River showed that the initial project design was inadequate to protect Hudson River water supply intakes.

The Central Hudson remediation project has since undergone several redesigns with the intent of protecting Hudson River drinking water intakes from PAHs. These redesigns include substantial changes to dredging technology, pilot testing, water quality testing, environmental monitoring, containment and communications protocols, which each come at significant cost. State regulators are clearly taking a more protective approach since that episode, for which we are grateful. The estimated cost to Central Hudson of its one-time pilot tests of hydraulic dredges in Fall 2020 is nearly $11 million.

This is a cautionary tale for the CHPE Project as PAHs are common in Hudson River bottom sediments. The FEIS listed benz(a)anthracene, pyrene, phenanthrene and naphthalene -- all of which are PAHs. The Central Hudson incident demonstrates how highly mobile these contaminants can be when disturbed. The Central Hudson project lacked adequate protections and had to be redesigned. The TDI CHPE project too must be redesigned.

6. <u>Conclusion: The Project should be redesigned to protect the Mid-Hudson Valley's water supply.</u>

The Hudson 7's goal is to ensure that one essential fact -- 106,000 people rely on this river for drinking water -- is always elevated to its appropriate level of importance. For our communities there is nothing more important.

We recognize that New York City may have a need for electric supply, but we question whether the City would accept a similar excavation within its drinking water reservoirs. The Project might meet an electric supply need, but in doing so it would put 106,000 Mid-Hudson residents at risk.

In light of the real and present risks, the Hudson 7 would like to see the Project relocated to avoid the stretch of the Hudson where we draw water. Any in-river installation of the Project that does occur in areas that may affect our intakes must take place only after substantial revision of the Project, in light of the concerns outlined in this letter, and in full consultation with PWS operators. We reserve the right to identify additional concerns, as we continue to review documents related to the Project.

The Hudson 7 stands ready to work collaboratively with TDI and State agencies to address these critical concerns.

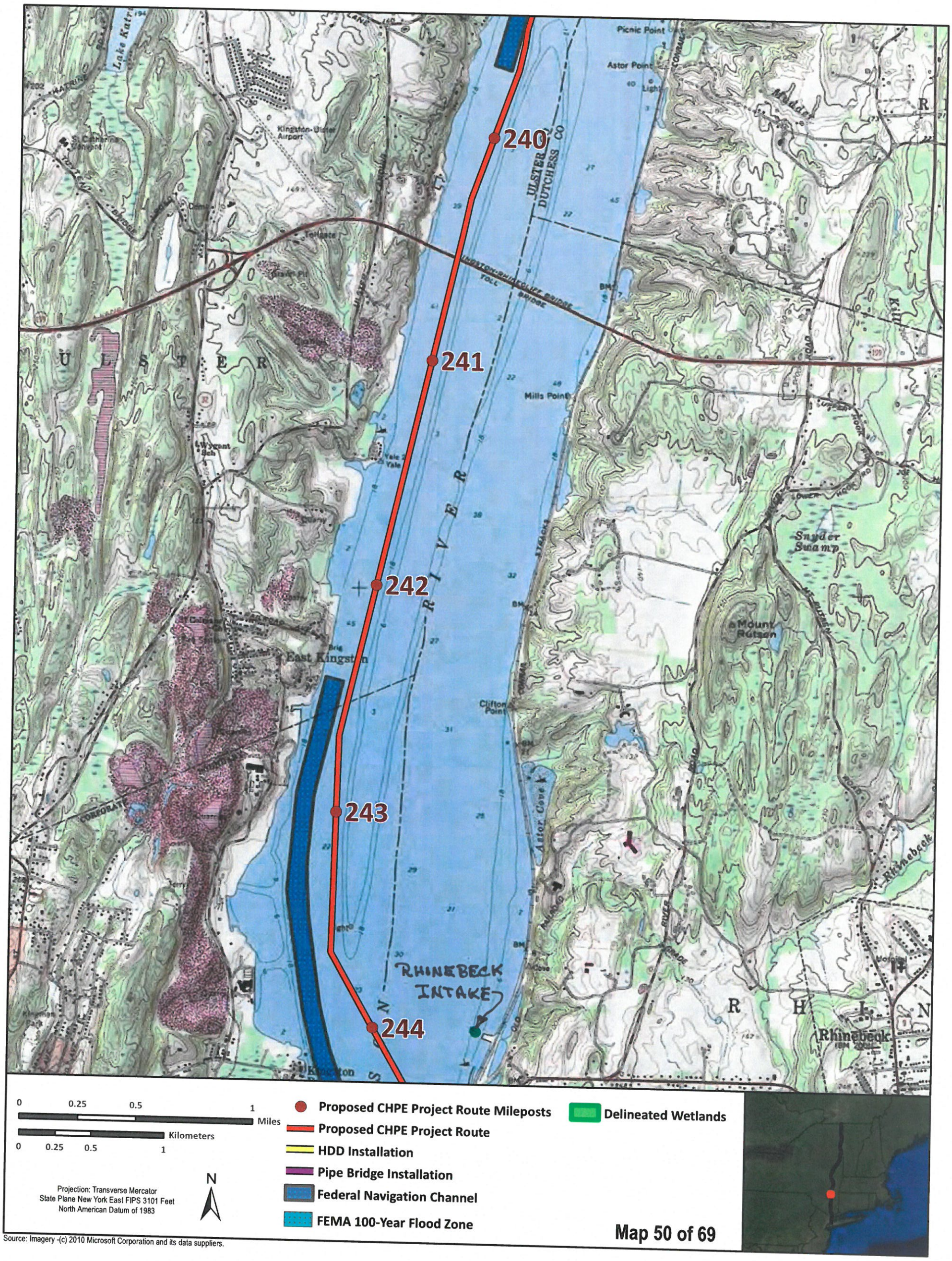
Please feel free to contact me directly at Rhinebeck Village Hall (845-876-7015 or 76 East Market Street, Rhinebeck, NY 12572), or direct technical questions to Paul Malmrose, PE, at 860-895-7211or PEMalmrose@tighebond.com.

Sincerely,

Gary Bassett
Chairman

cc:
Jen Laird White, TDI VP External Affairs
Roger Sokol, director, Bureau of Public Water Supply, NYS Department of Health
Basil Seggos, Commissioner, NYS Department of Environmental Conservation
Colonel Matthew W. Luzzatto, US Army Corps of Engineers
Lieutenant General Scott A. Spellmon, Chief of Engineers, U.S. Army Corps of Engineers
Bruce J. Walker, Assistant Secretary Office of Electricity Delivery and Energy Reliability U.S. Department of Energy
Marc Molinaro, Dutchess County Executive
Pat Ryan, Ulster County Executive
NYS Senator Sue Serino (NY-41)
NYS Senator George Amedore (NY-46)
NYS Senator-elect Michelle Hinchey (NY-46)
NYS Assembly Member Kevin Cahill (NY-103)
NYS Assembly Member Jonathan Jacobson (NY-104)
NYS Assembly Member Kieran Lawlor (NY-105)
NYS Assembly Member Didi Barrett (NY-106)
US Senator Charles Schumer
US Senator Kirsten Gillibrand
US Rep. Sean Patrick Maloney (NY-18)
US Rep. Antonio Delgado (NY-19)

Exhibit A



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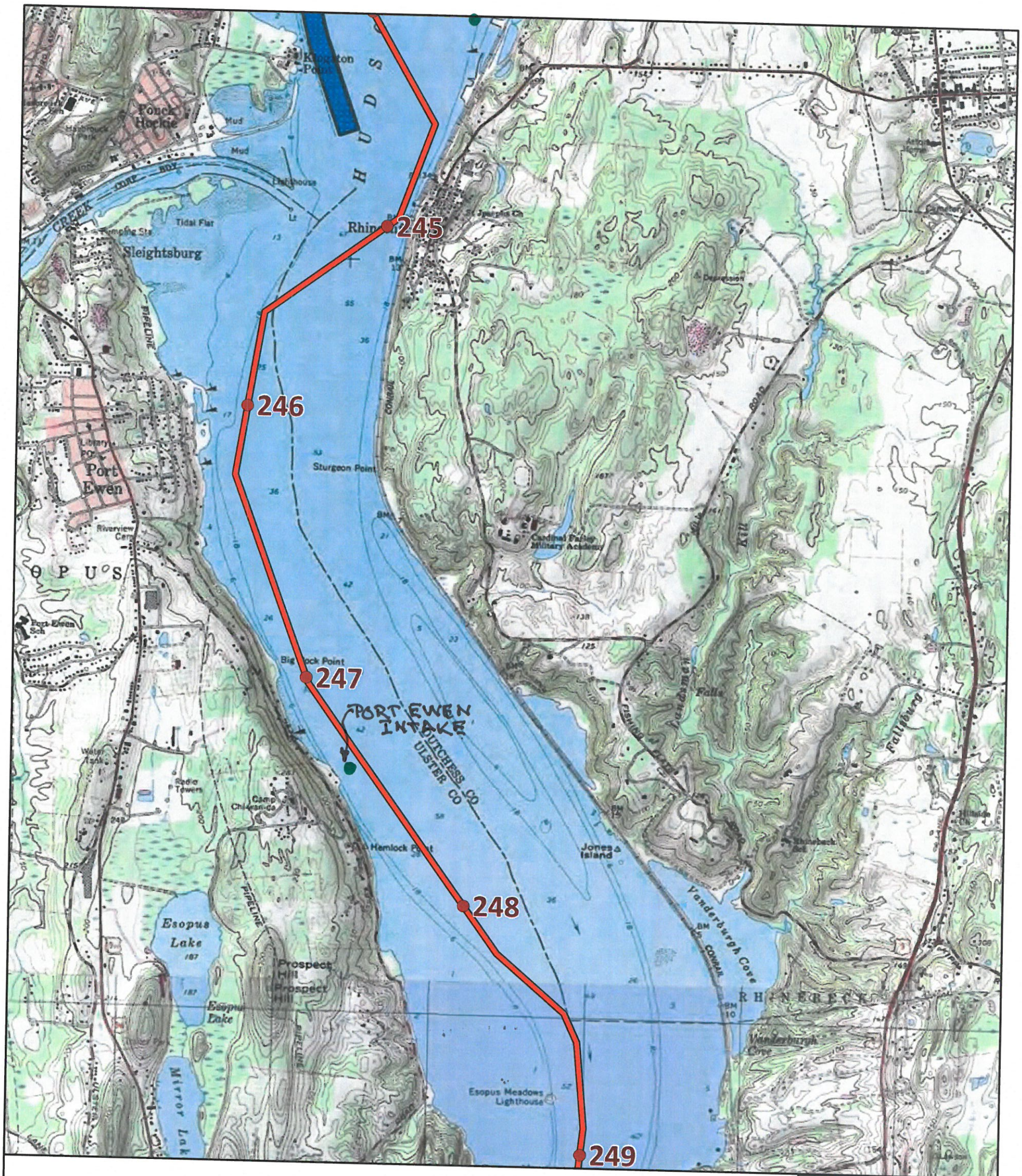

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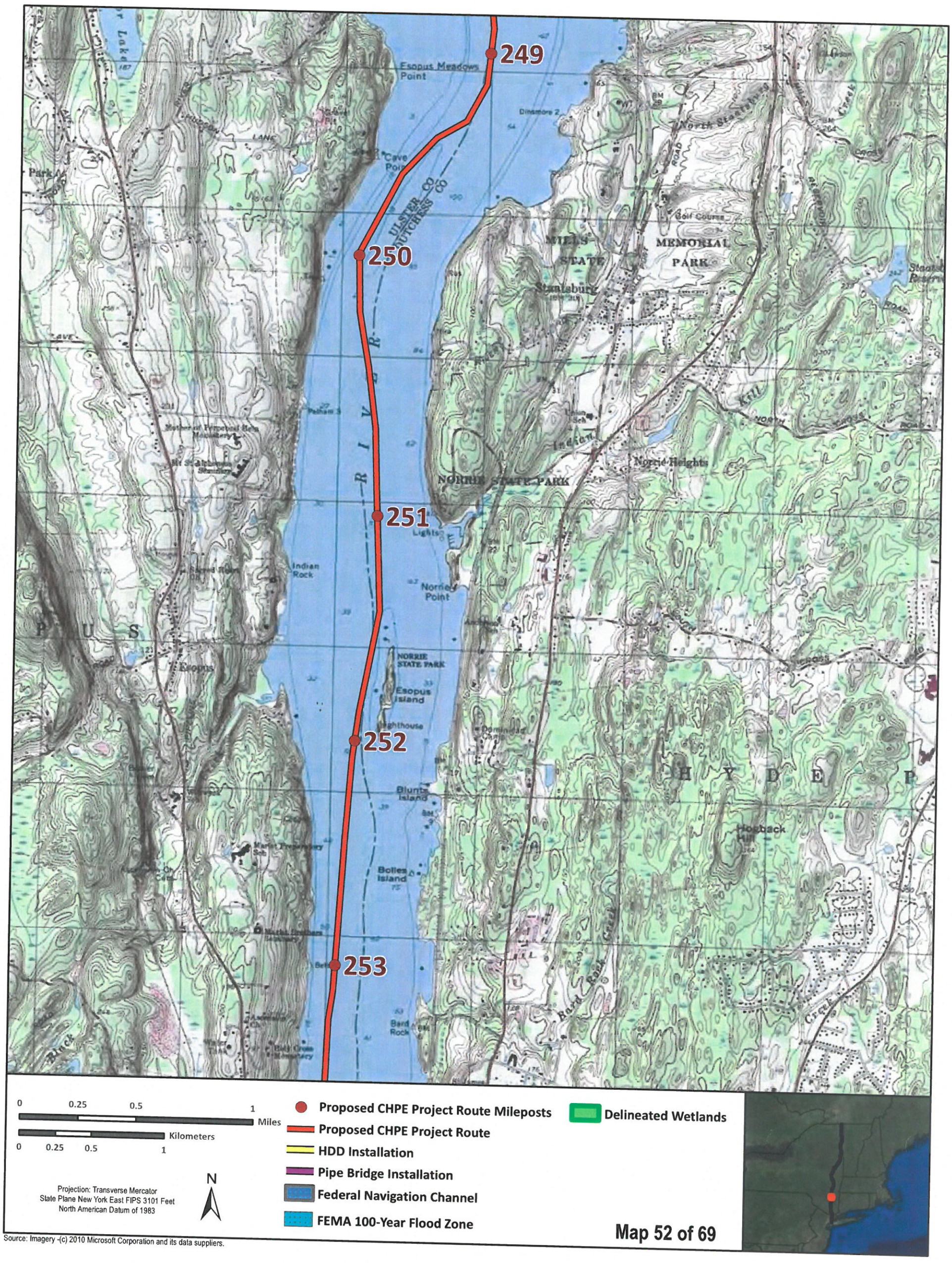

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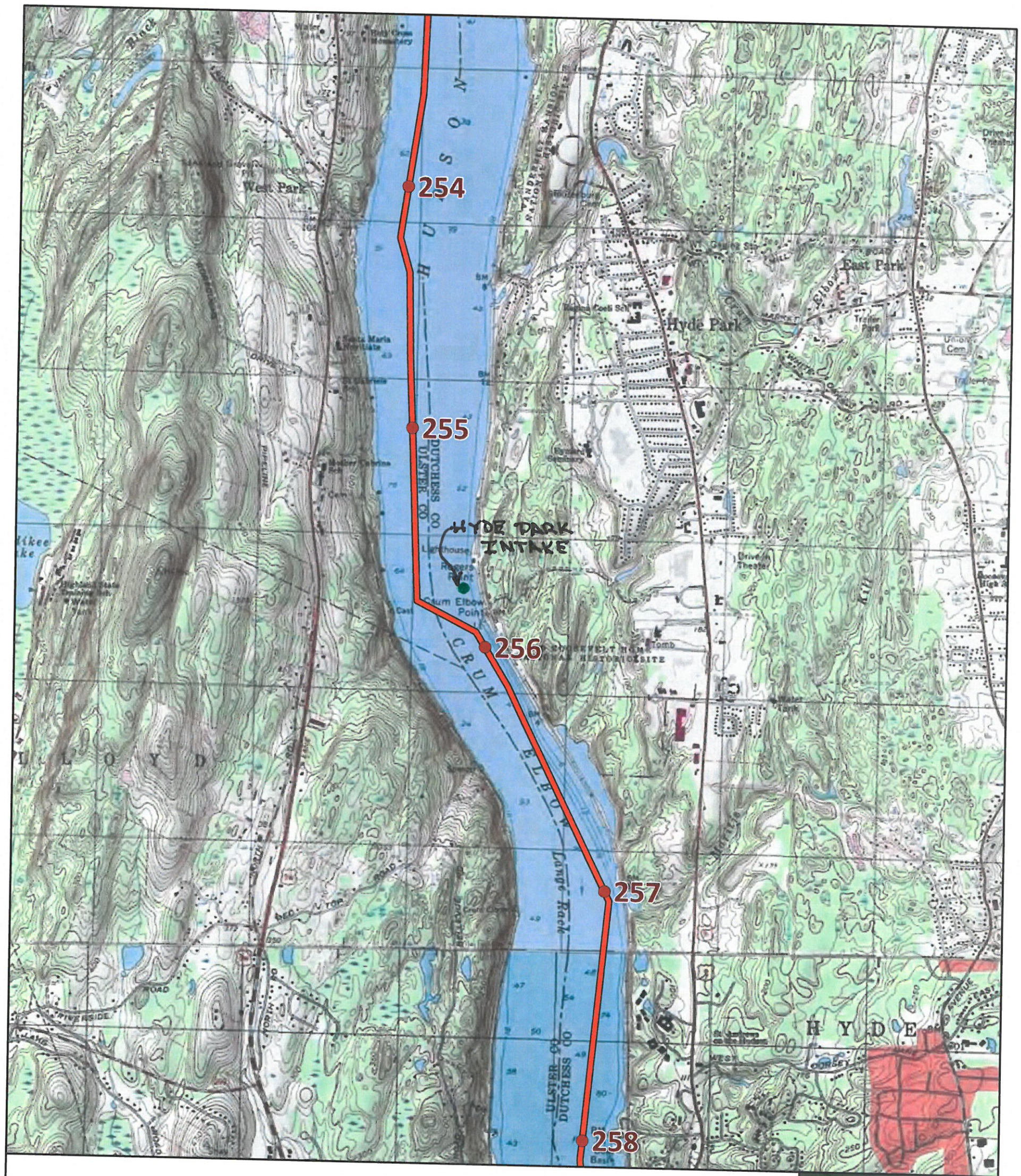

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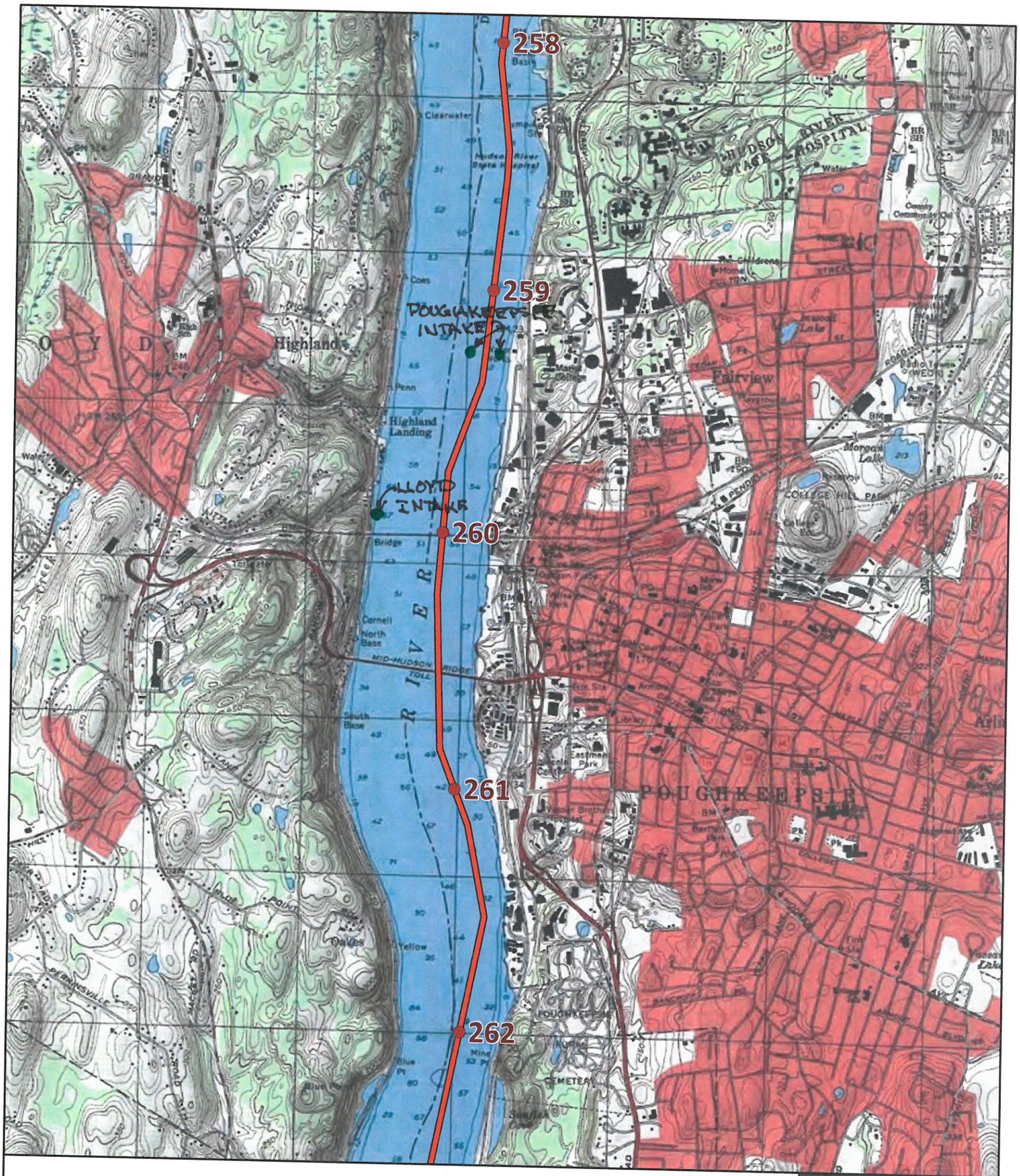

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