THE STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

Docket No. 2015-04

Re: Application of Public Service Company of New Hampshire (d/b/a Eversource Energy) for Certificate of Site and Facility, Seacoast Reliability Project (Madbury to Portsmouth)

POST-HEARING MEMORANDUM
OF
CONSERVATION LAW FOUNDATION

November 15, 2018

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FACTUAL OVERVIEW

The Project As It Relates to Little Bay and the Great Bay Estuary

Eversource ("Applicant") seeks a certificate of site and facility to site, construct, and operate a new 115kV electric transmission line from Madbury to Portsmouth, New Hamsphire ("project"). The project, first conceived and selected by the Applicant in 2010 based purely on cost considerations, and without public input or an evaluation of environmental impact, proposes to cross Little Bay between Durham and Newington using a jet plow, hand-jetting, and trenching to bury three cables in the bay's sediments. The project is anticipated to release approximately 1,500 tons of sediments into Little Bay. In locations where the jet plow and hand-jetting cannot achieve the desired burial depth, the Applicant intends to cover the cable with concrete mattresses – permanent structures encompassing up to 8,681 square feet located in areas that are used by the public for boating and other activities, that will be visible from the water and the land, and that will cause the permanent loss of habitat.

The Value of Little Bay and the Great Bay Estuary: "Extremely Valuable Natural Resources Deserving of Protection"[1]

Little Bay is a public water with tidally submerged land that is held in trust by the state of New Hampshire for the benefit of the public. It is part of the larger Great Bay estuary, which has been designated an estuary of national significance. Day 5 AM at 57 (lines 1-5) (Pembroke). Little Bay and Great Bay are acknowledged by the Applicant's own witnesses to be "extremely valuable natural resources deserving of protection." Day 5 AM at 61 (lines 4-8) (Allen). When healthy, the Great Bay estuary (including Little Bay) provides a diversity of essential habitats. Eelgrass habitat is considered a cornerstone of the ecosystem's health, providing numerous critical functions including stabilizing sediments, providing food for various organisms,

[1] *See* Testimony of Sarah Allen, Day 5 AM at 61 (lines 4-8).

providing structure for other organisms, and removing nutrients from the system.[2] The estuary also provides habitat for oysters, including commercial oyster aquaculture, which provide important ecosystem functions and local economic benefit.[3] The estuary, including Little Bay, also provides important recreational opportunities for the public, including boating, fishing, swimming and aesthetic enjoyment.

The Great Bay Estuary: A Resource in Decline

The Great Bay estuary, of which Little Bay is a critical part, is in a state of decline and faces numerous challenges. According to the Piscataqua Region Estuaries Partnership's science- and data-driven[4] 2018 *State of Our Estuaries* report (CLF Exh. 22), of sixteen indicators in the Great Bay estuary, *twelve* demonstrate negative or cautionary trends. Indicators exhibiting *negative* trends include eelgrass and oysters; indicators exhibiting *cautionary* trends include total suspended solids, nutrient concentration, nutrient loading from non-point sources, and other water quality challenges. *See* CLF Exh. 23 at 12. The Piscataqua Region Estuaries Partnership, including the many scientists and stakeholders who have informed its analysis, has identified key management objectives for the estuary, including:

- increasing eelgrass distribution to 2,900 acres and restoring connectivity of eelgrass beds throughout the estuary by 2020 (CLF Exh. 23 at 23);
- increasing the abundance of adult oysters at the estuary's six documented beds, to 10 million oysters by 2020 (CLF Exh. 23 at 32);

[2] *See* Day 10 PM at 124 (Selig) (describing eelgrass as the "linchpin" to the health of the estuary); Day 5 AM at 58 (lines 1-8) (Pembroke) (describing the numerous ecological functions of eelgrass and acknowledging its importance to the Great Bay ecosystem). *See also* CLF Exh. 22 (*State of Our Estuaries* Report, 2018) at 23.
[3] *See* CLF Exh. 22 (*State of Our Estuaries* Report, 2018). *See also*, Testimony of Jason Baker, Day 14 AM.
[4] *See* Day 13 AM at 22 (lines 8-15) (Jones).

- improving water quality and mitigating pollution sources to meet water quality standards for bacteria and for shellfish harvesting (CLF Exh. 23 at 28);
- no increasing trends for total suspended solids (CLF Exh. 23 at 15); and
- managing nutrient loads to the estuary to minimize adverse, nutrient-related consequences (CLF Exh. 23 at 16).

Public Investments to Restore the Estuary's Health

To restore the health of the Great Bay estuary, and in particular to address the adverse impacts of nitrogen pollution on eelgrass habitat and water quality, numerous municipalities have made – and are making – significant public investments (millions of dollars) in the upgrade of sewage treatment facilities and stormwater management.[5] Significant investments also have been made in restoring oysters in the estuary, including the recent development of an oyster aquaculture industry in Little Bay and other parts of the estuary. *See* Day 14 AM, generally (Baker). The introduction of new threats and sources of pollution will undermine these important efforts and investments.

ARGUMENT

V. The Applicant Failed to Demonstrate that Its Jet Plow Proposal Will Not Have an Unreasonable Adverse Effect on Water Quality, the Natural Environment and Public Health

The Applicant's proposed jet plow operation is projected to release approximately 1,000 cubic yards of sediment into the water column – an amount of sediment equivalent to 1,500 tons and to the sediment yield that can be expected from approximately 165 square miles of land in the Great Bay estuary watershed.[6] As the Applicant acknowledges, sediments in the water

[5] Day 10 PM at 123 (Selig). *See also* Day 5 AM at 57 (lines 11-18) (Pembroke) (discussing efforts to restore eelgrass and to reduce nutrients flowing into the estuary).
[6] Day 5 AM at 71 (lines 12-13) (Allen); Day 13 AM at 37 (lines 8-14) (Dacey, Jones). Day 13 AM at 38 (line 11) (Jones); CLF Exh. 27.

column can act as transport agents for contaminants and nutrients and can adversely affect exemplary communities, which the Applicant acknowledges are present in Little Bay. Day 5 AM at 60 (lines 12-17) (Pembroke); Day 5 AM at 60-61 (Allen).

As discussed below, the disturbance and release into the water column of such a massive volume of sediment would have a significant impact on the health of Little Bay and the Great Bay estuary and would undermine management goals and public investments that are being advanced to restore the estuary. Also as discussed below – and despite the value and sensitivities of the Great Bay estuary and the magnitude of disturbance proposed by the Applicant – the project is plagued by uncertainties about the impacts it will cause.

a. The project poses a significant threat to oysters, oyster aquaculture, and public health

The Great Bay estuary's oyster population is severely depleted – down from more than 25 million adult oysters in 1993 to just 2.1 million oysters, on average, since 2012. CLF Exh. 22 at 32. As discussed above, the restoration of oysters, with a goal of increasing their numbers to 10 million by 2020, is an important management goal for the estuary. CLF Exh. 22 at 32. The proposed project, by exposing oysters to contaminants and sediments, will have an unreasonable adverse impact on oysters, public health, and New Hampshire's newly developing oyster aquaculture industry. The Applicant failed in its burden to demonstrate otherwise.

i. The Applicant failed to demonstrate that its project will not harm oysters and the public's health by releasing contaminants, including harmful pathogens, from sediments

UNH/Durham witness Stephen Jones, Ph.D., an expert highly qualified to speak to the subject,[7] testified about the threat to oysters, and to human health, from contaminants and

[7] Dr. Jones is an expert in environmental toxicology and microbiology, and in the assessment of the transport and fate of contaminants and sediments in water and in shellfish. Day 13 AM at 7-8 (Jones).

pathogens contained in sediments. In particular, Dr. Jones explained that sewage treatment facilities and stormwater runoff from impervious surfaces contribute contaminants that "will settle out into the sediment, and this includes bacteria, viruses, parasitic pathogens of humans" and pathogens harmful to oysters. Day 13 AM at 14 (lines 14-23) (Jones). He explained that sediments are a "resting place" for these organisms; that the organisms "remain viable"; and that "if they're stirred up back into the water," oysters and other bivalve filter-feeders will "take them up," bringing the contaminants into their tissue and potentially causing people who eat them to become sick. Day 13 AM at 15 (lines 1-7) (Jones). As Dr. Jones testified: "[T]here's a public health as well as an oyster health concern about stirring sediments up and resuspending these microorganisms that have accumulated in the surface sediments." Day 13 AM at 15 (lines 7-11) (Jones). Intervenor Jason Baker, a commercial oyster farmer in Little Bay with education and experience in coastal environmental management,[8] raised similar concerns and noted that "fine sediments like those on the substrate in Little Bay are very good at binding to contaminants." *See* Day 14 AM at 13 (Baker).

The Applicant failed to adequately assess this significant issue pertaining to the impacts of contaminants – including viruses and pathogens – on oysters and people who consume oysters. The failure to address the impact of pathogens on oysters (Day 13 AM at 16) is particularly troubling given that two pathogens – MSX and Dermo – caused the near decimation of the estuary's oyster population in 1993, a population crash from which the estuary has yet to recover. CLF Exh. 22 at 32; Day 13 AM at 23-24 (Jones). The failure to address the issue as it

[8] Mr. Baker testified to having an educational background primarily in marine biology, with an undergraduate degree in biology and a master of environmental management degree focusing on coastal environmental management. He further testified to having worked for thirteen years for the Commonwealth of Massachusetts in the area of coastal planning and habitat restoration. Day 14 AM at 7 (lines 2-15) (Baker).

relates to human consumption of oysters is equally troubling, given the implications to public health as well as to the health of New Hampshire's growing aquaculture industry.

Compounding the Applicant's failure to adequately address these issues is the recent announcement by NHDES and the N.H. Fish & Game Department that, as a result of pollution from Portsmouth's Peirce Island sewage treatment plant, the lower part of Little Bay (located north and east of Fox Point in Dover) is being closed seasonally for shellfish harvesting, and part of a closed area in *upper* Little Bay will now be *opened* for shellfishing. CLF Exh. 24; Day 13 AM at 17-19 (Jones). As a result, areas in "[e]xtremely close proximity" to the proposed project will now be subject to shellfish harvesting. Day 13 AM at 19 (Jones). This recent development – opening areas for harvesting in close proximity to the project, and closing areas farther from the project – only increases concerns about the project and the risks its poses to oysters and the people who eat them. Day 13 AM at 20 (lines 11-23) (Jones).

ii. **The Applicant has failed to demonstrate that its project will not harm oysters as a result of the suspension and settling of sediments**

Separate and apart from the threat of pathogens and other contaminants, sediments alone can adversely affect the health of oysters. As stated in the 2018 *State of Our Estuaries* report, sedimentation, including the resuspension of sediments, "is another stressor on oysters. . . ." *See* CLF Exh. 22 at 33. As described by Dr. Jones, "if [oysters] are filter feeding and there's suspended sediments in the water, it can stress them that way as well, and make them more susceptible to these diseases. . . ." Day 13 AM at 25 (lines 5-8) (Jones). Indeed, intervenor Jason Baker, a commercial oyster farmer who owns Fat Dog Oysters, testified at length about his concerns with sedimentation of his commercial oyster stock in Little Bay, including the greater susceptibility of oysters grown directly on the bay's substrate (his company's preferred approach) and the greater adverse impact of sediments during the dormancy period for oysters

which begins when water temperatures drop to approximately 50 degrees.[9] Day 14 AM at 9-12, 31-32. He testified at length about his concern that the addition of sediment from the project, on top of naturally occurring sediment load, will cross a tipping point that, cumulatively, causes mortality problems for his oysters. Day 14 AM at 32 (lines 6-13) (Baker).

Again, suspended solids in the Great Bay estuary have been identified as an indicator exhibiting cautionary trends, and as a management concern in the Piscataqua Region Estuaries Partnership's 2018 *State of Our Estuaries* report. CLF Exh. 22 at 12, 15-16. In fact, the report identifies sediments as a threat to oysters and establishes a management goal of "no increasing trends for total suspended solids." *Id.* Considering it would cause the release of sediments in an amount equivalent to the sediment yield of 165 square miles of land within the watershed, the risks to oysters – and to undermining this key management goal – is unreasonably high. The Applicant has failed in its burden to prove otherwise.

iii. The Applicant has failed to demonstrate that its project will not have an unreasonable adverse effect on New Hampshire's developing oyster aquaculture industry

In addition to impacts on oysters generally, the project poses a significant challenge for the newly developing oyster industry in Little Bay and the Great Bay estuary. The new closure in Lower Little Bay (the northern part of the bay) will prevent oyster farms from selling oysters out of the closure areas for a period of time. Day 13 AM at 20 (lines 1-7) (Jones). "The only area where they can [sell oysters from] is in the part of Little Bay that's closer to where the cable crossing will occur." Day 13 AM at 20 (lines 7-10) (Jones). As Jason Baker explained:

> Lower Little Bay is closer to the Portsmouth wastewater discharge. And that's the area that's been closed for the winter. So several farmers, oyster farmers in Lower Little Bay have already moved a number of their – much of their gear to Upper Little Bay – and my

[9] Mr. Baker testified that September and October (the Applicant's proposed time period for jet plowing in Little Bay) is a transition period when oysters are "going from active pumping to dormancy." Day 14 AM at 35 (lines 16-19) (Baker).

> farm is one example of that – so they can continue to harvest throughout the summer. *So it moves them away from the wastewater discharge in Portsmouth, but closer to the proposed jet plow area in Upper Little Bay.*

Day 14 AM at 17 (lines 9-20) (Baker) (emphasis added). Mr. Baker further testified to his concern that the addition of sediment from the project, on top of naturally occurring sediment load, will cross a tipping point that, cumulatively, causes mortality problems for his oyster stock. Day 14 AM at 32 (lines 6-13) (Baker). He also expressed significant concerns about the impacts of the project on his business and about the logistical challenges related to the Applicant's suggested mitigation approach of cleaning Mr. Baker's commercial oyster stock. Day 14 AM at 23, 66-71, 75-79, 83-84 (Baker).

b. The project poses a significant threat from its release of nitrogen, and to the estuary's recovery of eelgrass resources

Durham/UNH's experts have identified the release of nitrogen from sediments as a major concern. Specifically, based on the presence of nitrogen in pore water within sediments, they have calculated that the disturbance of sediments as part of the jet plow operation will release a significant amount of nitrogen into the water column – approximately 300 times the amount of nitrogen released by Durham's sewage treatment plant on a daily basis. Day 10 PM at 195 (lines 1-6) (Selig); Day 13 AM at 25-26 (Jones). The Town of Durham is concerned, with good reason, about the shock this large nitrogen release could cause to the estuary, and about the project's nitrogen release undermining investments it is making to reduce nitrogen loads from its sewage treatment plant and from stormwater runoff. Day 10 PM at 127-129 (Selig).

As Dr. Jones explained, municipalities in the Great Bay estuary watershed are investing in strategies, with respect to wastewater and stormwater, to reduce nitrogen effluent discharging into the estuary. Day 13 AM at 26-27 (Jones) *See also* Day 10 PM at 127-129 (Selig). The amount of nitrogen expected to be released as a result of the jet plow is not only significant in

comparison to nitrogen loads from Durham's sewage treatment plant, but the amount also *exceeds* the amount of nitrogen Durham – with public investment – anticipates being able to reduce through further stormwater management. Day 13 AM at 27 (lines 5-12) (Jones).

The project's release of a significant load of nitrogen (nitrogen that will become biologically available) is of great concern to the health of the estuary, which already is suffering from excess nitrogen pollution, which, in turn, is prompting the regulatory actions that are causing municipalities like Durham to incur costs. Reducing nitrogen loads in the estuary remains a high priority management objective for restoring the estuary's health. CLF Exh. 22 at 16 ("PREP Goal: Manage nutrient load to the estuaries and the ocean to minimize adverse, nutrient-related consequences"). Dr. Jones, one of many scientists on the Management Committee for the Piscataqua Region Estuaries Partnership, testified that nutrient loading "remains a cornerstone indicator for the estuary." Day 13 AM at 30 (lines 14-20) (Jones).

The reason nutrient loading is such a major priority and is forcing major investments in nitrogen loading reductions, is its adverse effect on water quality and, in particular, eelgrass habitat. As discussed above (*see* pages 1-2 *supra*), eelgrass serves numerous critical functions and is considered a cornerstone of the estuary's ecological health. Unfortunately, as a result increasing nitrogen loads, eelgrass habitat has greatly declined. CLF Exh. 22 at 23-24. As described by Dr. Jones:

> [O]ne of the main species of concerns in the estuary that is now also declining is eelgrass. It's a critical habitat for fish. It's a nursery area, and the more that light penetration is impaired by phytoplankton in the water column, the less light gets to the eelgrass, and it weakens the eelgrass. It actually prevents eelgrass from growing in some deeper areas. It also weakens it, and it becomes more susceptible to disease as well.

Day 13 AM at 28-29 (Jones). Dr. Jones further explained that high nitrogen concentrations enable the growth of certain seaweeds that compete with eelgrass for habitat, contributing to the decline of eelgrass. Day 13 AM at 29-30 (Jones).

Little Bay historically had abundant eelgrass, with eelgrass present on the east and west sides of upper Little Bay, including in the area where the Applicant proposes to install its three cable crossings. Day 13 AM at 31 (lines 9-10) (Jones); CLF Exh. 25. Importantly, the fact that eelgrass does not currently exist in upper Little Bay does not mean that it will not exist there in the future. Rather, improvements in water quality – as a result of public investments in nitrogen load reductions – are creating conditions that already are leading to the return of eelgrass in the bay. As Dr. Jones testified:

> Dr. Short who is the resident eelgrass expert would tell you that eelgrass is recovering in Little Bay, and it happens to coincide with Durham's relatively recent upgrade of the wastewater treatment facility to reduce nitrogen inputs. There may be other factors concerned, but eelgrass is recovering in Little Bay.

Day 13 AM at 33-34 (Jones).

Restoring the health of eelgrass in the estuary, along with reduced nutrient loading, is a major management goal and is considered to be a highest priority indicator for the estuary's health. Day 13 AM at 30-31 (Jones); CLF Exh. 22 at 16, 23. It would be unreasonable and contrary to the statutory standards governing the Committee's decision-making, to allow a project of the scale proposed by the Applicant to undermine the progress that is being made to reduce nutrient loads and enable the recovery of the estuary's (including Little Bay's) essential eelgrass habitat.

c. Despite the significant value of the Great Bay estuary and the massive scale of the project – releasing 1,500 tons of sediment into the water column – the proposal is plagued with uncertainties

Despite the magnitude of the project, and the significant value of, and threats facing, the Great Bay estuary, there remain significant uncertainties from the Applicant's analysis, including the following:

- The potential for the jet plow crossing time to be up to fifteen hours is inconsistent with the Applicant's modeling, which assumed a seven-hour crossing time. Day 13 AM at 38-39 (Dacey). The Applicant has described the jet plow operation as starting at high slack tide, "so the tidal current will be taking any sediment plume away from the area [in Great Bay] that eelgrass exists" and suggests that jet plowing will occur only on the outgoing tide, preventing the project's sediment plume from traveling into Great Bay. Day 5 AM at 108-109 (Pembroke). The longer crossing time – up to fifteen hours – would be inconsistent with the Applicant's assumption that jet plowing will occur only on the ebb tide and raises significant questions about the Applicant's mixing zone projection, including the extent and impacts of the sediment plume reaching into Great Bay on a flood tide. Day 13 AM at 39 (Dacey).[10]
- The fact that the jet plow crossing time will not be continuous – as a result of the need to stop operations, re-set anchors, and pull the barge – was not part of the Applicant's model and, like a longer crossing time, undermines the model's predictions about the plume and mixing zone. Day 13 AM at 40-41 (Dacey).

[10] The Applicant itself acknowledges that the greater the duration of the jet plow operation when crossing Little Bay, the more the project is subject to the impacts of tides. Day 5 AM at 99 (lines 7-11) (Swanson).

- Elutriate analyses are needed to reduce uncertainties in the Applicant's water quality evaluation and relative to potential water quality violations. Day 13 AM at 11-13 (Famely).
- There is no empirical evidence to support the Applicant's modeling, despite the many factors involved in the jet plow operation (crossing rate, intensity of pressure used) and the tidal dynamics of Little Bay. NHDES originally recommended that a jet plow trial run be conducted prior to the Committee's issuance of a decision. NHDES's current recommendation would preclude the Committee from reviewing data from the jet plow trial run data as part of its decision-making, creating an unreasonable data gap. *See* Day 13 AM at 42-43 (Dacey).
- There remains too much uncertainty regarding "the sediment plume geometry, suspended sediment concentrations, and subsequent deposition that may result from a range of likely conditions encountered during and following cable installation activities," with a failure on the part of the Applicant to account for the effects of wind and to account for likely operating and environmental conditions combined with a potential higher sediment loss rate from jet plowing. TD-UNH Exh. 3 at 2 (lines 26-28). Moreover, the Applicant's "model sensitivity runs that were conducted demonstrated how the sediment plume could vary; however the suspended sediment concentrations and deposition results from these model runs *were not utilized in evaluating potential environmental impacts within Little Bay.*" *Id.* (lines 34-37).
- The Applicant has failed to apply the U.S. Army Corps of Engineers Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Dsiposal in New England Waters (RIM) "in a consistent and diligent manner to fully address

potential risk to aquatic communities resulting from exposure to the jet plow and hand jet sediment plumes." TD-UNH Exh. 3 at 4 (lines 29-33).

- The Applicant has failed to properly assess the impact of removing portions of its un-utilized, abandoned cables currently on the floor of Little Bay. According to the Applicant's analysis and testimony, several of those cables contain lead, some at high levels. *See* App. Exh. 106 at 2, Appendix C; Day 2 PM at 71-72 (Bowes). Despite analyzing all of the cables for lead and acknowledging that some of them contain high levels of lead, the Applicant has no clear understanding as to *which* cables are *where* on the floor of Little Bay. Day 2 PM at 72-74 (Bowes) (acknowledging Applicant's consultant's statement that "[w]hile OSI's survey identified the geospatial presence of the existing cables, *there is some uncertainty as to the cable type at each location*.") (emphasis added). Accordingly, the Applicant has no knowledge of whether the cables they will need to cut, for removal of portions thereof, are high in lead content, and what the impacts will be of cutting cable, removing cut portions (with the potential for deterioration in the process), and leaving cut portions of cable in the bay. Absent a clear understanding of the lead-related impacts of this process, the Applicant should not be permitted to proceed with its cable-removal plans.

In addition to the above, the Applicant's comparative analysis of jet plowing and horizontal directional drilling reflects the Applicant's underlying uncertainty about its conclusion that jet plowing will not have a significant adverse impact. The report, prepared in July of 2018, is replete with qualifying language relative to impacts associated with jet plowing, such as:

- "there are no *anticipated* impacts to water quality from hand jetting operations," App. Exh. 133 at 12 (emphasis added);

- "[n]o impacts to these [oyster] farms are *anticipated*," App. Exh. 133 at 14 (emphasis added);
- "It is *expected* that the benthic infaunal community will recover in terms of abundance . . . ," App. Exh. 133 at 15 (emphasis added);
- "It is *not expected* that [various fish species] would be impacted by exposure . . . ," App. Exh. 133 at 16 (emphasis added);
- "it is *unlikely* that entrainment will have a significant effect on [certain fish] populations," App. Exh. 133 at 16 (emphasis added).

Asked if the intent of this language was to express some degree of uncertainty, the Applicant's environmental consultant testified as follows:

> Well, *there is a degree of uncertainty as to what the results would be*. The assessment of the likelihood of impact was based on our knowledge of the resources that are in the project area and review of literature, peer-reviewed literature, reports on projects that have been done using similar techniques and so on to assess whether or not impacts could be expected from such an action. You know, *we won't have any certainty until the Project is actually built and has been monitored*.

Day 5 PM at 31-32 (emphases added).

In light of the value of Little Bay and the larger Great Bay estuary, and in light of the environmental challenges these important resources already face, allowing a project of this magnitude to proceed with such uncertainty would be unreasonable and contrary to the governing standards and criteria set forth in RSA 162-H:16,IV. Moreover, allowing the project to simply develop a better understanding of key impacts *as part of the project's construction and operation, <u>after</u>* impacts have occurred, would be equally unreasonable and unlawful.

The jet plow trial run would generate the first actual data about the impacts of jet plow technology in Little Bay. Day 12 PM at 50 (lines 21-24). The purpose for the trial run, as specifically acknowledged by the Applicant's consultants, is to generate empirical evidence to

test the validity of the Applicant's modeled predictions and to gain a better idea about the environmental impact of jet plowing. Day 5 AM at 102-103 (Swanson);[11] Day 5 PM at 36 (lines 20-24). Yet the trial run (according to NHDES's latest recommendations) will not occur until *after* the Committee renders its decision and this proceeding is over. Day 5 AM at 102-103 (Swanson). Again, allowing the Applicant to proceed with the uncertainties inherent in its jet plow proposal would be unreasonable and contrary to the requirements of RSA 162-H:16, IV. The Applicant simply has not met its burden to demonstrate that the project will not result in unreasonable adverse impacts to water quality and the environment. Analyses that *post*-date a decision from the Committee cannot lawfully and reasonably be relied upon as a basis for issuing a certificate.

VI. The Applicant Failed to Obtain Necessary Property Rights for the Installation of Concrete Mattresses and Failed to Demonstrate that Its Proposed Use of Concrete Mattresses Will Not Have an Unreasonable Adverse Effect on Aesthetics and the Natural Environment

As stated in documents that post-date NHDES's final decision (Feb. 2018), the Applicant now intends to install up to 8,681 square feet of concrete mattresses in Little Bay (fully 3,345 square feet more than the square footage approved in NHDES's final decision in February). The concrete mattresses will permanently occupy subtidal land in public waters in an area with numerous public uses. The Applicant has neither obtained all necessary approvals to install

[11] The Applicant's witness Mr. Swanson testified as follows:

> Q: What I'm trying to untangle here is the difference between having empirical actual evidence versus having predictions that you obviously have a high level of conversation [*sic*.] in based on modeling, and right now you have predictions that you have a high level of confidence in based on your model. You don't actually know.
> A (Swanson): That's the purpose of the trial run.
> Q: That is my point. Yes. Precisely. That's the purpose of the trial run, correct?
> A (Swanson): Correct

Day 5 AM at 102-103 (Swanson).

concreate mattresses on subtidal land in Little Bay, nor has it established by a preponderance of the evidence that its proposed use of concrete mattresses will not result in unreasonable impacts to aesthetics and the natural environment.

a. Concrete mattresses cannot be installed in Little Bay absent permission from the Governor and Council, which the Applicant has not obtained

The Applicant has proposed the installation of concrete mattresses in Little Bay, which undisputedly is a public water, on subtidal land that undisputedly is owned by the State of New Hampshire and held in trust for the benefit of the public. *See Opinion of the Justices (Public Use of Coastal Beaches)*, 139 N.H. 82, 89 (1994) ("New Hampshire has long recognized that lands subject to the ebb and flow of the tide are held in public trust.").[12] *See also* Day 7 PM at 168 (line 12), 171 (line 21) (Varney). Public uses of Little Bay – uses that are protected by New Hampshire's public trust doctrine – include boating, fishing (for finfish and shellfish), swimming, and recreation. *Opinion of the Justices*, 139 N.H. at 89-90 (discussing protected uses). *See also, e.g.*, Day 15 PM at 131-132 (R. Miller).

The installation of concrete mattresses will interfere with the public's use and enjoyment of Little Bay and permanently destroy natural habitat. Day 2 PM at 31-32 (Bowes). Mr. Dennis Hebert (on behalf of the Town of Newington), for example, expressed concerns about boats colliding with concrete mattresses in tidal conditions when they are covered with only a few inches of water. Day 11 AM at 22-23 (Hebert). Mr. Hebert also testified to concerns "about those mattresses which are coming up on to the shore [--] whether or not they would block anyone walking along the shoreline, just enjoying the shoreline, and I know quite a few people do walk down in that area." Day 11 AM at 23 (lines 1-6) (Hebert). Durham resident Dr. Regis

[12] For a discussion regarding the history of New Hampshire's public trust doctrine, *see Opinion of the Justices*, 139 N.H. at 87-88.

Miller testified to her use and enjoyment of Little Bay, including for kayaking and its aesthetic value, and to the concrete mattresses interfering with those uses.

The Committee's rules specifically require the Applicant to demonstrate that it "has a current right, an option, or other legal basis to acquire the right, to construct, operate, and maintain the facility on, over, or under the site. . . ." Site 301.03(c)(6); Day 2 PM at 26-27 (Bowes). Although the Applicant obtained what it characterizes as a "license" from the N.H. Public Utilities Commission ("PUC") to cross Little Bay (Day 2 PM at 28 (Bowes)), the PUC lacks the legal authority to convey to a private entity the permanent right to occupy a portion of subtidal lands. Under New Hampshire's public trust doctrine, the Governor and Council has the sole legal right and authority to convey the state's rights to public land and property to a private entity. *See* RSA 4:40.[13]

Having not obtained the right to use the inter-tidal land of Little Bay for the permanent installation of concrete mattresses, the Applicant has failed to obtain the required property rights to proceed with the proposed project. Until such time as the Applicant obtains the property rights required for the permanent installation of concrete mattresses, the proposed project should not be approved. Alternatively, should the Committee grant a certificate, it should do so conditioned upon the Applicant first obtaining necessary rights to install permanent structures in Little Bay from the Governor and Council.

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[13] RSA 4:40 states in pertinent part:

> **Disposal of Real Estate.** Disposal of state owned real estate shall occur as follows:
> I. Except as provided in RSA 4:39-c, RSA 228:31-b, and RSA 204-D, upon recommendation of the head of any state department having jurisdiction over the same, all requests for the disposal or leasing of state-owned properties shall be reviewed and approved by the long range capital planning and utilization committee, with advice from the council on resources and development, prior to submission to the governor and council for approval. Upon determination that the property is no longer needed by the state, the governor and council shall first offer it to the town, city, or county in which the property is located. If the town, city, or county refuses the offer, the governor and council may sell, convey, transfer, or lease the real property.

b. Concrete mattresses will have an unreasonable, adverse effect on aesthetics; the Applicant has failed in its burden to prove the contrary

The concrete mattresses – articulated structures to be situated on top of the three cables – are proposed to be installed in Little Bay near the western shore in Durham and the eastern shore in Newington. The installation of mattresses in these locations, particularly during low tide and tidal conditions on either side of low tide, will make them plainly visible from both the land and the water, including for people engaged in public uses of the bay, such as boating, fishing and swimming.

The visibility of the proposed concrete mattresses would unreasonably affect Little Bay's significant aesthetic values and has generated strong opposition and concerns from both the Towns of Durham and Newington. As Mr. Hebert testified, the Town of Newington's concerns about the aesthetic impacts of the concrete mattresses have not only not diminished during the course of this proceeding but have actually *increased* based on information learned during the adjudicatory hearing. Day 11 AM at 19-20 (Hebert). The Town of Durham also is concerned and believes that the Applicant has underestimated the number of concrete mattresses that will ultimately be required. Day 10 PM at 131 (Selig).

The Applicant has failed to demonstrate by a preponderance of the evidence that its proposed use of concrete mattresses will not have an unreasonable adverse aesthetic impact on Little Bay. Rather than properly assess these impacts, the Applicant relies on an impact analysis – conducted by Mr. David Raphael – that is flawed in several ways. First, Mr. Raphael's "moderate" rating for visual impacts on Little Bay was done before he even knew about the need for concrete mattresses, and his July 2018 report was prepared *before* a determination of the number and location of concrete mattresses to be used. Day 9 AM at 83 (lines 10-13), 111 (lines 15-22) (Raphael).

Second, Mr. Raphael's analysis of view impacts was conducted from the water, with a viewing distance of "a couple hundred feet or more,"[14] despite Mr. Raphael's acknowledgment that not all boats stay in Little Bay's channel and that there are "paddlers and folks who probably come closer to shore." Day 9 AM at 126 (lines 15-22) (Raphael). It cannot be disputed that people who operate boats close to the shoreline in Little Bay will clearly see the concrete mattresses as will people who walk along Little Bay's shores. Day 15 PM at 131-132 (R. Miller); Day 11 AM at 22 (Hebert). Nonetheless, Mr. Raphael failed to even consider a vantage point closer than "a couple hundred feet or more" from the concrete mattresses in assessing visual impacts.

Third, Mr. Raphael failed to provide visual simulations of the concrete mattresses at the time when they would have their greatest impact – low tide. As described by Durham resident Jeff Miller, at low tide, mudflats on the west side of Little Bay extend almost a half mile, to the channel, meaning that all of the concrete mattresses on the Durham side would be fully exposed. Day15 PM at 95 (lines 2-24), 126-129 (J. Miller); Durham Residents Exh. 8. Mr. Raphael attempts to minimize the visual impact of the concrete mattresses in part based on the theory that "low tide is a time when people aren't out and about mucking around the shorelines. . . ." Day 9 AM at 78-79 (Raphael). While it is true that people may not be able to access the shoreline during low tide from the water, people can nonetheless enjoy Little Bay *from the land* during those time periods and, of course, still can enjoy the bay *on the water* during low tide in or closer to the channel.

[14] Mr. Raphael testified about conducting his view analysis from "the centerline of the channel where most of the boat traffic is located and perhaps coming some distance on either side, you know, and could be a couple hundred feet or more." Day 9 AM at 131-132.

Finally, notably lacking from Mr. Raphael's analysis is any consideration of the view impacts of concrete mattresses from the shorelines in either Durham or Newington, including from properties where homeowners enjoy views of Little Bay.

Individually and collectively, the above flaws render the Applicant's visual impacts analysis deficient for purposes of demonstrating the concrete mattresses will not unreasonably affect the significant aesthetic values of Little Bay.

c. Concrete mattresses will have an unreasonable, adverse effect on the environment; the Applicant has failed in its burden to prove the contrary

The proposed installation of concrete mattresses would result in a permanent change in benthic habitat. Day 6 AM at 75 (lines 4-6). As discussed above, areas in Little Bay to the east and west of the bay's channel have historically provided eelgrass habitat and, with improving water quality, could provide such habitat in the future. *See supra*, page 10. The Applicant's proposal to install concrete mattresses would permanently eliminate eelgrass habitat – in stark contrast to the management goal of *increasing* eelgrass in the estuary – rendering it unreasonable in terms of its impacts on Little Bay.

The proposed installation of concrete mattresses also would cause the permanent loss of potential feeding habitat for sturgeon, endangered and threatened species that feed on "soft bottom" habitat. Day 5 AM at 7-8; Day 6 AM at 125-126. While the Applicant attempts to minimize this impact by characterizing the number of sturgeon entering the Great Bay estuary as "low" (Day 6 AM at 128 (lines 4-6)), it should not be allowed to *benefit* from the low number of these species in the estuary (i.e., from their endangered and threatened status) for purposes of seeking a certificate. To the contrary, the endangered and threatened status of these species require greater vigilance in protecting habitat that they will use.

VII. The Applicant Failed to Demonstrate that the Project Will Not Unduly Interfere with Orderly Development of the Region, with Due Consideration to the Views of Municipalities

Despite involving water resources and tidally submerged land, the Applicant's proposed use of Little Bay is relevant to land use considerations and to the statutory criterion addressing orderly development of the region. *See* Day 7 at 153 (lines 14-22) (Varney). Accordingly, the Applicant bears the burden of establishing by a preponderance of the evidence that the project, as it relates to Little Bay, does not unduly interfere with orderly development of the region. RSA 162-H:16, IV(b). This analysis, of course, must include consideration of the views of affected municipalities. *Id.* The Applicant failed to satisfy this statutory criterion.

a. The project's impacts will undermine concerted efforts by municipalities in the Great Bay estuary watershed – including significant public investments – to restore the estuary's health

As discussed above, the Great Bay estuary is in a state of decline, and concerted efforts – including the development of science-based management goals – have been established to restore its health. Consistent with the management goals of reducing nitrogen loads and restoring eelgrass and oysters, municipalities have been required to invest in wastewater treatment and stormwater management to reduce pollution loads to the estuary. As Durham's Town Manager Todd Selig testified:

> The 2018 [*State of Our Estuaries*] report expanded the number of indicators to try to better explain for our constituent audience in the Seacoast and across New Hampshire ways in which the estuary is in peril and ways in which we can measure whether there are improvements. And the good news in this report was that there was progress in preserving more land for conservation. There have been improvements to a number of the wastewater treatment[] plants and all of the sewer communities that empty into the bay. And the EPA and the New Hampshire Department of Environmental Services are in an ongoing process to continue to improve the effluent outflow from those wastewater communities, in particular, trying to reduce the amount of nitrogen that's being deposited into the bay. And the communities surrounding the bay have spent millions of dollars over the last several years to address this very important issue.

Day 10 PM at 123 (lines 2-22) (Selig).

The proposed project will undermine these regional efforts by:

- releasing sediment in an amount equivalent to the sediment yield of 165 square miles of land within the watershed;
- releasing pollution that is harmful to eelgrass, including nitrogen in an amount equivalent to 300 days of nitrogen discharge from the Town of Durham's wastewater treatment plant, and in an amount that exceeds the nitrogen load it can reduce through investments in stormwater management;
- releasing contaminants, including pathogens, that are harmful to oysters, the public health, and New Hampshire's developing oyster aquaculture industry; and
- eliminating eelgrass habitat with the proposed installation of concrete mattresses.

Because it would undermine significant efforts, including public investments, to restore the health of the Great Bay estuary, the proposed project cannot satisfy the requirement that it not unduly interfere with the orderly development of the region.

b. The project's reliance on concrete mattresses would establish a troubling precedent that will open the door to future, cumulative impacts in the Great Bay estuary

The permanent installation of concrete mattresses, as proposed by the Applicant, is unprecedented in Little Bay; and there is no evidence in the record that concrete mattresses have been used elsewhere in the Great Bay estuary or, for that matter, in any water body held in public trust by the state of New Hampshire. Accordingly, the Applicant's proposed use of concrete mattresses, which is strongly opposed by the Towns of Durham and Newington due to their impacts on aesthetic values and public uses of Little Bay (*see* page 18, *supra*), raises important questions about whether, if permitted, concrete mattresses or similar permanent infrastructure

might be proposed for use elsewhere in Little Bay or the Great Bay estuary in the future. In addition to their unreasonable adverse impacts on Little Bay, the precedent established by the Applicant's proposal could lead to impacts elsewhere in Little Bay or the Great Bay estuary, and to cumulative impacts associated with the introduction of more and more artificial structures into this highly valuable public asset – a resource that has been deemed an estuary of national significance and that is of tremendous value to the region, and whose subtidal lands are held in trust for the public.

c. The Applicant's cumulative installations of cables in Little Bay establishes a precedent that will be harmful to the Great Bay estuary

The proposed project also raises important concerns about the accumulation of infrastructure in public waters like Little Bay. As discussed above, the Applicant previously installed several cables that are currently un-utilized, that contain toxic substances like lead, and that will never be used again in the future. With the exception of small portions of the abandoned cable that will be removed to clear a path for three *new* cables, the Applicant has no plan to remove its previously installed cables. The Applicant's past and currently proposed use of Little Bay for cable crossings – effectively littering the floor of Little Bay with abandoned cables while using the bay to install three new ones – hardly demonstrates the orderly use and development of this public resource of regional and national significance. To the contrary, it paves the way for the Applicant, or other entities, to add new infrastructure to obsolete, abandoned infrastructure in public waters, and on subtidal state land, in the future.

d. The Applicant's use of the existing cable corridor does not minimize impacts to Little Bay

The Applicant contends that siting the project in existing right-of-way supports the orderly development of the region. Its consultants concede, however, that using the existing

cable corridor across Little Bay, as opposed to some other location, would not reduce the project's environmental impact. Day 5 AM at 87-88 (Pembroke).

VIII. The Applicant Failed to Demonstrate that the Project will Serve the Public Interest

a. The Applicant failed to demonstrate that, having completed all other elements of the Seacoast Solutions suite of projects, *this* project is necessary

The proposed project is part of the larger Seacoast Solutions suite of projects developed by the Applicant as part of the ISO New England process. All other projects in the Seacoast Solutions suite have been constructed and put into operation, which raises the critical question whether the Applicant's currently proposed project is actually needed. The Applicant attempts to justify the proposed project on the basis of reliability concerns, claiming that without it, rolling brownouts may become necessary. According to the Applicant's own witness, however, ISO-New England's "year of need" for the Seacoast Solutions suite of projects has long since passed and there have been *no* rolling brownouts. Day 2 PM at 77 (Bowes). Just as important, the Applicant's witness Robert Andrews testified that "if you go back a few years, the [electricity] load forecasts were much higher," and those anticipated loads did not materialize. Day 4 PM at 61 (Andrew).

There is no evidence that the Applicant, ISO New England, or any other entity has assessed – taking into account the Seacoast Solutions projects that are already in place – the likelihood of rolling brownouts if the proposed project is not built. Day 2 PM at 77-78 (Bowes). Nor is there evidence – based on updated load projections, and taking into account the Seacoast Solutions projects that are already in place – that the proposed project is necessary. Absent such evidence, the Applicant cannot satisfy its burden to demonstrate that the project and its associated impacts are necessary, and that the purported benefits of the project outweigh its

substantial impacts. Accordingly, the Applicant failed in its burden to demonstrate that the project serves the public interest.

b. The Applicant failed to fairly assess alternatives, improperly assessing and rejecting other project designs and approaches to justify its original project proposal, which it selected purely based on cost and without consideration of its impacts

The proposed project has its origins in a process that occurred in the context of the regional independent system operator – ISO New England. Within that context, the Applicant considered two options – a suite of projects called Seacoast Solutions, and the so-called Gosling Road Autotransformer option. The process ultimately led to the selection of the Seacoast Solutions option, which includes the project at issue in this docket. Of note, cost was a major consideration in determining which project to proceed with. Day 4 AM at 78 (Andrew). Costs for the Seacoast Solutions suite were premised on the assumption that the Applicant would jet-plow across Little Bay – an assumption that was made before any environmental assessment of jet-plowing in Little Bay had been conducted. Day 4 AM at 79-80 (Andrew). As discussed below, the Applicant's subsequent assessment of alternatives was improperly designed and weighted to provide post-hoc justification for its original, pre-environmental-review selection of the proposed project.

The Applicant concedes that whether it selected the Seacoast Solutions suite of projects or the Gosling autotransformer alternative, there would be infrastructure-related impacts in one or more communities. Day 1 AM at 70-71 (Quinlan). Yet, while explicitly acknowledging that stakeholder input was "a critical and ongoing part of the ISO-New England process," there is no evidence that the Applicant informed any of the Seacoast communities that would be affected by the Seacoast Solutions or Gosling Autotransformer alternatives considered as part of the ISO New England process. Day 2 PM at 33-32 (Bowes).

The Applicant agrees that the selection of the Seacoast Solutions suite of projects, as part of the ISO New England process, in no way limits or constrains the Committee's authority to grant or deny a certificate for the Seacoast Reliability project. Day 1 AM at 74 (Quinlan). The Applicant also agrees that its investment in other projects that are part of the Seacoast Solutions suite does not in any way limit or constrain the Committee's authority. Day 1 AM at 75-76 (Quinlan). Indeed, the Committee, as the body solely responsible for determining whether the project satisfies the criteria of RSA 162-H:16, IV and other requirements, can and should determine that the Applicant has failed to demonstrate that the proposed project is necessary and / or that there are no feasible alternatives with lesser impact.

i. The Applicant failed to fairly and properly assess horizontal directional drilling as an alternative to jet plowing

In its February 28, 2018 final decision, NHDES recommended that the Applicant conduct a comparative study of jet plowing and horizontal directional drilling ("HDD"). As the basis for this recommendation, NHDES stated:

> Although there are environmental risks such as "frack-out", as well as other challenges associated with horizontal directional drilling (HDD), it may be feasible and have less impact on surface water quality than the proposed jet plow method which will result in hundreds of cubic yards of sediment being temporarily suspended in the water column and deposited elsewhere in Little Bay. In Document 1 of their submittal dated September 19, 2017 to the SEC and in the pre-filed direct testimony of James Jiottis (an employee of Eversource Energy), the Applicant provided a relatively brief explanation as to why HDD was not selected and, in our opinion, did not provide sufficient information to support their conclusion.

COMM Exh. 12a at 1-2. NHDES proceeded to recommend specific elements of a study comparing HDD and jet plowing, with the specific recommendation that "[i]f cost is the reason given for determining an alternative is not feasible, detailed cost estimates should be provided from at least two companies experienced with jet plowing and two companies experienced with HDD." COMM Exh. 12a at 2.

Although the Applicant did conduct a comparative study of jet plowing and HDD, the study is effectively a results-oriented analysis intended to justify the Applicant's original preferred option: jet plowing across Little Bay. The study unfairly assessed horizontal directional drilling (in favor of jet plowing) in two important ways: (1) it artificially inflated the potential environmental risks associated with HDD, and (2) it failed to comply with NHDES's specific recommendations to assess and compare the costs of HDD and jet plowing.

Inflating the Environmental Impact of HDD

By boring *under* Little Bay as opposed to plowing through Little Bay's sediments, horizontal directional drilling would avoid the 1,500 tons of sediment release associated with the jet plow alternative. Nonetheless, in its analysis of HDD, the Applicant initially used identical language to describe the impacts of HDD as compared to jet plowing. *Compare* Section 2.1.5 of the HDD/Jet Plow report (describing impacts of jet plowing) *with* Section 2.2.5 (describing impacts of HDD) (App. Exh. 133 at 5, 8). In fact, Section 2.2.5's discussion of HDD includes a mistaken reference to "the jet plow site," showing that language from the jet plow discussion was simply copy and pasted into the HDD discussion. *See* App. Exh. 133 at 8) ("Large particles such as sands settle out of suspension rapidly and generally close to the *jet plow sit*e.") (emphasis added); *compare with* identical language at App. Exh. 133 at 5). Asked about this at the hearing, the Applicant's witness Sarah Allen testified that it was not unreasonable to describe the impacts with the same language, even though it created the impression that the impacts were similar. (p. 122, lines 8-18). This, despite Ms. Allen's testimony that horizontal directional drilling entirely under Little Bay would "theoretically eliminate impacts to water quality." Day 5 AM at 128 (lines 8-15) (Allen).

The Applicant's comparative study also failed to include any analysis whatsoever of the environmental impacts resulting from the cable removal associated with jet plowing. While the Applicant's study emphasizes the "impacts" resulting from seven geotechnical borings and barge anchoring for HDD, nothing is said about the impacts of cable removal related to the jet plow option. When questioned about why the report failed discuss the environmental impact of cable removal, Ms. Allen admitted that "if it [the impact of the cable removal] was left out, that was probably an omission on our part." Finally, the pre-filed testimony of the environmental panel, with no modeling or analysis, and no quantification of how much bentonite would be released in a large inadvertent return, concluded that the bentonite from a large inadvertent return could impact eelgrass. Conversely, the environmental analysis of jet plowing concluded that the release of 1,500 tons of sediment from the jet plowing operation would never reach any eelgrass beds. App. Exh. 16 at 8 (lines 14-18) (Pembroke, Pre-Filed Testimony); Day 5 AM at 105 (lines 6-14 (Pembroke).

At the hearing and in filed testimony, Applicant's expert Ann Pembroke conceded that absent a *large* inadvertent return involving the release of bentonite into the environment, horizontal directional drilling would have essentially no adverse environmental impact on Little Bay. Day 5 PM at 7 (lines 1-8) (Pembroke). When asked to quantify by cubic feet or weight what would constitute a "large" inadvertent return, Ms. Allen testified that "she could not define that. (p. 130, lines 13-15). Absent a large or catastrophic inadvertent return, all the experts agree that horizontal directional drilling would have little or no impact on Little Bay. Day 5 AM at 76 (lines 1-6) (Pembroke).

In rejecting horizontal directional drilling in favor of jet plowing, the Applicant relies almost exclusively on the notion there could be a large inadvertent return that would cause

significant environmental harm. Its heavy reliance on this alleged threat is not credible for the following reasons. First, the Applicant conducted no bedrock core drillings to assess the probability of an incidental return. As a result, lacking the information that bedrock core drillings would provide, the Applicant's consultants could not testify at the hearing whether an inadvertent return would be likely or unlikely. Day 5 PM at 6 (lines 2-17) (Nelson). Second, the applicant inflates the potential environmental impact of horizontal directional drilling by emphasizing concerns about the impact of a large release of bentonite into Little Bay, without quantifying or defining in any manner what would constitute a "large" release. Although it is not disputed that HDD would have an impact on residents of Newington and Durham residing near Little Bay, the Applicant provided no evidence of abutters actually having been consulted on the subject and rejecting it. The Applicant's environmental panel testified to having no knowledge of whether there has been any such objection to impacts associated with horizontal directional drilling. Day 5 AM at 120 (lines 16-19) (Nelson).

Failing to assess the costs of HDD

Despite NHDES's specific recommendation that the Applicant compare the costs of HDD and jet plowing, the Applicant failed to do so. In response to questioning about *why* its study failed to address comparative costs, the Applicant represented that "cost was not the dominant factor for rejection of HDD." Day 5 AM at 113 (lines 12-13) (Allen). This testimony, however, conflicts with other evidence offered by Applicant that cost was the major consideration in selecting jet plowing for installation. The Applicant's witness Robert Andrew, in describing the reasons for originally selecting the proposed project using jet plow installation over other alternatives, stated that cost was a major consideration. Day 4 AM at 78-79 (Andrew). Other witness testimony, as well as the HDD report itself, show that the Applicant

considered cost as a major factor in selecting the jet plow alternative over the horizontal directional drilling alternative and in confirming its prior, preferred option of proceeding with a jet plow operation. *See* Day 5 AM at 116 (lines 16-23) (Allen); App. Exh. 133 (HDD/Jet Plow Report) at 34 (citing HDD's "significantly higher cost" to support the Applicant's selection of jet plowing).

Having relied on cost as a basis for rejecting horizontal directional drilling, the Applicant cannot now credibly claim that when conducting its study comparing HDD and jet plowing cost ceased being a substantial factor in its decision to proceed with the jet plow option. To the contrary, when the Applicant conducted the comparative study in response to the NHDES recommendation, cost was a substantial factor in its decision to use jet plowing and detailed cost information obtained from two independent companies, as specifically recommended by NHDES, should have been included in its study. The Applicant's outright failure to comply with NHDES's recommendation renders its analysis of HDD deficient and reinforces the conclusion that its study was simply a biased effort to support a preordained result.

ii. **The Applicant failed to explore design alternatives that avoid or reduce the need for concrete mattresses**

In determining the route for crossing Little Bay, the Applicant considered factors such as avoiding as much of its existing, abandoned cables as possible as a means to reduce costs, using as little cable as possible (also to reduce costs), and utilizing an existing easement in the vicinity of Welsh Cove in Newington. Day 2 PM at 68-70 (Wall, Dodeman). The Applicant did *not*, in selecting the route for crossing Little Bay, consider an alternative to reduce reliance on concrete mattresses. Day 2 PM at 68-70. It would be contrary to the public interest to allow the Applicant to proceed with its proposed project without having even assessed the possibility that, using another route within the cable corridor (i.e., a route not constrained by cost considerations

associated with avoiding existing cables), the installation of concrete mattresses could be avoided or greatly reduced.

c. The project's significant impacts outweigh its claimed benefits and are contrary to the public interest

As discussed throughout this memorandum, the proposed project will have significant impacts on the natural environment, water quality, and aesthetics – all within the context of a resource designated as an estuary of national significance. Even if the Applicant could demonstrate by a preponderance of the evidence that the project is necessary and will have certain benefits, the impacts outweigh the claimed benefits, rendering the project contrary to the public interest.

d. The project is contrary to the public interest because its impacts will undermine public investments to restore the Great Bay estuary

As discussed throughout this memorandum, the proposed project will undermine efforts among Seacoast region communities, including public investments, to reduce nitrogen loads to the Great Bay estuary and restore the health of the estuary. As a result of the is impact, the proposed project is contrary to the public interest.

CONCLUSION

The Applicant failed in its burden to demonstrate, by a preponderance of the evidence, that its proposed project satisfies the criteria of RSA 162-H:16. Its proposal to release 1,500 tons of sediment in Little Bay, and to install up to 6,861 square feet of concrete mattresses, would result in unreasonable impacts to water quality, the natural environment, public health, and aesthetics, and would be contrary to the public interest. It also would unduly interfere with the orderly development of the region – particularly by undermining concerted, ongoing efforts and public investments by communities throughout the Seacoast. Moreover, the Applicant has not

obtained the necessary legal permissions to install concrete mattresses in public waters on subtidal land held in trust by the state of New Hampshire for the benefit of the public. For each of the reasons set forth in this memorandum, the Committee should deny the Applicant's request for a certificate of site and facility.

Respectfully submitted,

CONSERVATION LAW FOUNDATION

BY: _____

Thomas F. Irwin (N.H. Bar No. 11302)
V.P. and CLF New Hampshire Director
Conservation Law Foundation
27 N. Main Street
Concord, NH 03301
(603) 225-3060 x3013
tirwin@clf.org

Dated: November 15, 2018

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Post-Hearing Memorandum has, on this 15th day of November 2018, been sent by email to the service list in Docket No. 2015-04.

_____
Thomas F. Irwin (N.H. Bar No. 11302)