

October 17, 2018

Dear Members of the NH Site Evaluation Committee,


Thank you for your efforts in reviewing extensive testimonies and holding public hearings for the SRP. Your task is not easy. I was at the October 11<sup>th</sup> public hearing for Durham residents. I have also reviewed a fair amount of the testimonial record for SRP.

You may wonder why there is a disconnect between the concerns of Durham residents for Little Bay crossing versus opinions of various expert studies/testimonies by consultants' representing Eversource, DES, Durham, and the Public Counsel. It is fair to ask "is this disconnect driven by Nimby?" In my opinion, it is not Nimby; and *the residents' concerns are grounded in differing degrees of willingness to take undue, unknowable risks with the Bay estuary.*

The extensive, detailed scientific studies and testimonies create a situation of "fighting battles in the weeds". Frankly, they are a red herring as they focus on the wrong battles. Eversource has skillfully defined the scientific battlefield to their advantage to distract from the real battlefield. We need to take a step back from the scientific details in the record, and look at the big picture of what the real scientific issues and risks are for the Little Bay and Great Bay Estuary.

Jet plowing has been around for decades. However, its use for cable laying has been mostly for cable laying in the sea floor, or in coastal areas, or in large rivers, or in a few Bays with wider and more open mouths exposed to the ocean. *Jet plowing has not been proven in complex, enclosed (narrow mouth, deeply embedded within land mass) estuary like the LBGB estuary.*

Please visualize the following. We have two walking canes, one with a traditional hooked handle and the other with a knob handle. Let us tie the knob handled cane to the hooked cane such that the straight part of the knob cane becomes an extension of the straight part of the hooked cane. Thus, we have the hook shape now about half way along the long two straight

pieces.  In this visual, the long straight pieces are the Piscataqua River, extending from the sea (bottom of long cane) up north towards Dover. The hooked handle, is where Little Bay begins (at Dover Point bridges on Route 16). That hooked handle approximates Little Bay from Dover Point, then bending along Fox Point, and continuing southwards. The tip of the hook approximates where Eversource proposes its cables to cross the Little Bay. While the cane's hook ends there, in reality the LB continues a bit further south and then balloons out (at Adam's Point) into the much larger Great Bay.

The distance from the ocean to the proposed cable crossing (tip of hook) is roughly 10 miles, and distance to Great Bay "balloon" is about 14 miles from the ocean. While in our visual the canes are straight, in reality they are full of kinks and turns along that straight line. *Little and Great Bay are embedded deeply within surrounding land mass, and they are not in the main*

*flow of the Piscataqua River, and they are not anywhere near the mouth of the river. The mixing of incoming tides with water already in the LBGB is intense in this part of the estuary at the tip of the hooked handle, making it one of the most sensitive areas for benthic biome.*

This LBGB estuary configuration is unique. If we look at *all* the large and small Bays along the US eastern seacoast, we will find *none* like the LBGB layout. Closest comparison, albeit a poor comparison is Chesapeake Bay. Chesapeake is not a good comparison because it is wider with a more open mouth to the ocean than the LBGB estuary.

This is the scientific distraction, elegantly executed by Eversource. It has chosen to define jet plow in Little Bay as if it were comparable to “coastal”, or “within a large river” setting. Thus all the scientific studies, computer models, and analyses *are based on assumed “coastal” conditions*. Experienced, objective people know that you can prove almost any scientific conclusion you want if you set the scope by asking “only the wrong questions, and never asking the right questions”; a technique scientists recognize as defining “initial conditions, boundary conditions” to suit one’s purpose. I know this because of my scientific background, and from thirty years of management consulting and expert witness experiences. This is how Eversource has elegantly, wrongly defined the scientific battlefield to suit its purpose.

Other experts (DES, Durham, Public Counsel, etc.) are thus “forced” to fight the battle in and refute Eversource’s analysis on this wrong battlefield. It is not that these various scientists are not knowledgeable. Rather, because of severe constraints of time and money, these opposing experts are limited/forced to only address the technical details laid out by Eversource on its chosen, distraction of a wrong battlefield. I was also on the Durham Town Council and have seen first-hand how our limited resources constrain our consultants. In the ideal world, these opposing scientists would have more resources to be able to point out the wrongly chosen conditions, i.e. wrong battlefield, which lead to false confidence that there are no environmental risks. But we do not have the ideal world, and these experts have severe limitations of time and money, that the deep pocketed Eversource does not. *All the “coastal” or “shore land” assumptions, models and technical analyses that these experts use, are incapable of reflecting what will actually happen in the complex, deeply embedded LBGB estuary which require different boundary conditions (a different battle field).*

This is the basis of the disconnect between the Durham residents’ view of the risks and the “I see very little risks” attitude of Eversource. What is ironic, is that Eversource is also on record saying something like “it is neither responsible nor liable for damages, if something were to go wrong while jet plowing the Little Bay”.

I also suspect that it was not a coincidence that your visit to see the LB crossing in Durham was arranged to be around a high tide, making it impossible for you to see mud flats or salt marshes, which are like New Hampshire’s environmental lungs (visualize the mud flats as areola of our lungs, crucial to breathing and to sustaining life). I know you are all busy and over-burdened,

but if there is only one thing you could do before making your decision on Little Bay crossing, it is that you must see the mud flats along Durham's LB shore at lower tides.

While most of the Durham residents who spoke of their concerns for the Little Bay are not scientists, they intuitively know that their embedded estuary is threatened by SRP. The residents sense that Eversource is *proposing to do an intrusive, unproven, risky operation (jet plow) on the lungs, and to put permanent band aids (concrete mattresses) on the areola (mud flats).*

The short-run risks (plume, re-floatation of particles, tidal speeds, wind speed, etc.) have made Eversource change its original plan to now propose to dig shallower trenches (5' vs 8') near the Bay Shore. However, that has increased the longer term risks of permanent bandages (concrete mattresses) on scars on shallow mud flats and near some salt marshes.

None of the sophisticated computer models or hypotheses or theoretical analyses in the SRP docket capture this anomalous situation of the LBGB estuary. Scientific battles have been conducted as if this was similar to any other "coastal" situation. It is emphatically *not similar to a coastal situation*. It would only be comparable to coastal situation if the cable crossing were to be in the lower Piscataqua River (the straight part of the canes) and near the mouth of the Piscataqua; or using our visual, if Eversource were to jet plow through "nostrils" (mouth of river). But it is not, it wants to jet plow through the lungs. That situation (wrong battle field) is what invalidates all assumptions and conclusions for the environmental impact on LB as documented in the SRP docket. I suspect this may be a reason why DES has suggested having a trail run before deciding on jet plowing the Bay.

It is also important to recognize that there are no possible adequate control measures that can contain these risks, because we do not know the full extent of these unknowable risks. Even requiring a trail run will not significantly diminish these unknowable risks. Further, if you allow Eversource to begin SRP by first building the land based lines, we will be preordained to have zero control over the Little Bay risks because by then it will be too late to stop the LB crossing. ***It is imperative to not allow the use of Little Bay for this project, period.***

You have the unenviable task to sort through the testimonies and the record. I suggest that while you continue to do that, you also call a "mental time out", and consider this big picture for the disconnect of differing concerns for unknowable risks. Do we really want to allow Eversource to do a first of its kind jet plowing project in Little Bay estuary by letting them put a stake through New Hampshire's environmental lungs? I would hope not. Whatever you decide to do, please do not allow jet plowing in Little Bay.

Thank you

Sincerely

Dr. Firoze Katrak

565 Bay Road, Durham, NH 03824