From: Carroll, John
To: Michael Behrendt
Cc: Richard Reine; April Talon; Karen Edwards
Subject: combined studies required for Gerrish Wetlands
Date: Thursday, January 21, 2021 9:01:38 PM

Dear Michael, with copy to the Planning Board, the Conservation Commission, Town Public Works Director Reine and Town Engineer Talon,

As a person who is intimate with ecological study over a lifetime, from a doctoral dissertation in the early 1970s on policy and law as related to coastal wetlands in the Northeast (Maine to Maryland), through exactly fifty years of teaching, research and writing in universities (43 years of which were at UNH), I know we must need respect the integral complexity of Nature, most of which is so interactive and interrelated that it is beyond our understanding to fully comprehend. Engineers can do wonderful things, but they simply cannot replicate the complexity of nature, both the visible complexity and the hidden complexity. That is what we are up against here in the example of the town-owned Gerrish wetland and its hydrological relationship to the broader watershed.

In your recent December 29th e-mail announcing the intent for independent ecological, hydrological and storm water studies of the Gerrish Wetlands (and the Mulhern application overall), a wise and necessary move, it is important to note the need for:

1. The integration of these studies by those doing the studies, recognizing the integration in nature of all three in what I call the "holding and slow-release tank" that these Gerrish wetlands in fact are - thus they should not be completely separated studies as there must needs be integration of the work between and among those carrying out the studies, and the qualified persons selected by the town should be able to work with one another as well as be fully independent of the applicant.
2. The avoidance of any tendency to assess the inventory-oriented studies of the applicant's engineer and ecologist or be hampered in by the framework and approach of those hired agents of the developer, but to conduct studies that are fully independent; this is not an argument against the engineering qualifications of the project engineer nor the ecological science qualifications of the applicant's selected ecological scientist but is both a call for full independence of those two individuals hired by the town and a call for their ability, the independent ecologist and the independent hydrologist, to be able to integrate their work with one another, while also recognizing that they need go farther than simple inventory and assessment of what is there but rather develop an understanding of the interdependency of the two in the natural system.
3. Respect for the reality that such studies should cover the seasons, as conditions and circumstances change from one season to another and the functioning of nature in one season differs from natural functioning in other seasons.

4. Recognition of the boundaries of both the Upper Watershed (which may exist to a point near the Canney/Bagdad intersection as that appears to be where the streams and rivulets begin) and, as well, the downstream impacts (which are initially in Madbury but return to Durham in the Johnson Creek/Oyster River Watershed, before emptying into Great Bay).

Key words here are integration and comprehensiveness, over both space and time, and independence without influence from the nature or structure of inventories or assessments done by the agents of the applicant (since the hired agents are obviously paid to serve the applicant).

I naturally believe, as we all should, that the applicant be treated fairly. If I were the applicant, I would obviously want fair treatment. So, in fairness to the applicant, the applicant should be advised that the potentially substantial expense of all these very necessary studies can be avoided, as can the potentially lengthy timeframe involved, by altering the application to use the Bagdad Access/Entrance. While the latter entrance is not without some wetland impacts, those direct impacts to functioning wetland are very minor and are primarily focused on wetland buffer acreage (in fact high elevation buffers) rather than on functioning wetlands themselves. A walk along the passageway constructed by Engineer Sievert to bring in needed heavy equipment to do initial surveying and test pit construction, a passage bed that can be very clearly seen when snow is not on the ground, involves only one very small log "bridge" and otherwise dry ground.

Sincerely

John E. Carroll

Professor Emeritus of Environmental Conservation

University of New Hampshire

cc.: Rick Reine, Public Works
April Talon, Town Engineer
Conservation Commission (via Karen Edwards)
Planning Board (via Karen Edwards)