

TO: Stefanie Giallongo, Seacoast Region Wetland Permitting Specialist, NH
Department of Environmental Services
FROM: Gail Kelley, 11 Gerrish Drive, Durham, NH
RE: Abutters' Report on Mulhern Subdivision Plan to Dredge, Fill and Pave
Over Wetland at Gerrish Drive, Durham, NH
DATE: Sept. 17, 2020
CC: Durham Planning Board and Conservation Commission

Finally, here is the long-promised information from abutters regarding the planned destruction of the Gerrish Drive wetland in Durham to build a road to Michael and Martha Mulhern's proposed subdivision at 91 Bagdad Road.

In a separate email, I am forwarding videos my husband, Andrew Merton, took of the effects of a heavy rainstorm Dec. 14, 2019, on the wetland and abutting properties. Also, our neighbor Mike White compiled these videos into a PowerPoint presentation available at GerrishROW.pptx. As you will see from the videos, this wetland is not a mere damp area. Water flows into it year-round – except during a severe drought like the one we are having now. In winter, when the wetland is covered with snow and ice, water can still be heard flowing underneath. During early spring snow melt and after heavy rain, the amount of water entering the wetland can reach a height of 2 ½ feet or more (I've measured it on several occasions), and the width of this streambed/floodplain wetland can expand from 50 feet to more than 100, as is shown in the videos.

The conditions in the videos occurred again in March of this year. These are not unusual events. As our next-door neighbor, John Lewis, stated in one of the planning board public hearings on this road-building proposal, "there's never a never year" for this extent of flooding in the wetland. Over the past 10 years or so, concurrent with increasing evidence of climate change worldwide, the flooding events have become more frequent.

The wetland to be dredged, filled, and turned into a paved road is located at the junction of Ambler Way and Gerrish Drive, in a subdivision established in 1972 and known then as Pine Ridge. That name soon fell into disuse. Ambler Way and Gerrish Drive are actually *one* horseshoe-shaped road with the two legs of the horseshoe having these two separate names. One curve of the horseshoe is on high ground on Ambler Way; the other curve is on Gerrish Drive in the lowest spot in the neighborhood. My husband Andy and I built our house (11 Gerrish) on the lot in this low spot adjacent to the wetland 33 years ago. We, along with our neighbors Michael and Molly White (20 Ambler), John and Cindy Lewis (9 Gerrish) and Otis Sproul (8 Gerrish), have what you might call the most close-up and personal relationships with this wetland.

Three culverts empty into the wetland, two of them carrying water from three areas of the neighborhood: 1) the uphill east side of Ambler Way, 2) a gully in the neighborhood's center area, and 3) the uphill south side of Gerrish Drive. The third culvert, installed under our driveway, accepts uphill drainage from the north side of Gerrish Drive. This water flows through a ditch across the lawn of John and Cindy Lewis (9 Gerrish) before reaching

the culvert under the driveway at 11 Gerrish and then flowing into the wetland. This culvert also serves as the overflow drain for a large vernal pool – sometimes more like a pond -- between 9 and 11 Gerrish. Like the streambed/floodplain wetland, this pool has enlarged over the years. It was a small, springtime mud puddle in 1987 when we moved into our house here. All three of these waterflows are likely fed also by springs, since the amount of flow during extended dry periods when no surface water is available appears greater than can be attributed to septic system seepage.

The Gerrish Drive wetland is, thus, the holding sink for subsurface and surface water as well as storm water runoff for the entire 23-house Gerrish Drive-Ambler Way subdivision. After percolating through the wetland, the water emerges on the east side of 11 Gerrish as an unnamed stream that feeds into another unnamed stream originating in Madbury, which flows into Gerrish Brook, which flows into Johnson Creek, which flows into the Oyster River, and then into Great Bay.

The proposed road would be built through the wetland as an extension of Gerrish Drive. It would then traverse a steep ravine that rises at about a 50-degree angle. At the bottom of this ravine flows another stream feeding into Gerrish Brook.

A water main and possibly electricity and cable utilities to serve the new subdivision will be installed along the same route as the road. This, of course, means that in addition to the dredging of the bigger wetland to accommodate the pipeline and cables, a trench (tunnel?) will have to be dug through (under?) the stream at the bottom of ravine.

The developer of this subdivision, Michael Mulhern, is founder and CEO of Northern Capital Mortgage Company, based in Portsmouth. Although he and his wife, Martha, have bought and refurbished fixer-upper houses and then sold them, this is his first foray into building a subdivision. The site of the proposed project is 16 acres of mixed woodland, wetland, and ledge the Mulherns own and live on, east of the Gerrish Drive-Ambler Way neighborhood and Bagdad Road and north of Route 108. Michael Sievert of MJS Engineering in Newmarket, whom you probably know, is the current engineer for the project and is filing the permitting application to DES on the Mulherns' behalf. Wetland scientist Mark West, no doubt also known to you, is working with Sievert.

To the best of my knowledge, six of the twelve primary wetland functions listed in RSA 482 A:2 apply to this wetland: ecological integrity, wetland-dependent wildlife habitat, flood storage, sediment trapping, nutrient retention, and noteworthiness.

Ecological Integrity & Wetland-Dependent Wildlife

Wetlands scientist Mark West referred to the Gerrish wetland as “degraded” and “low functioning” due to nearly 50 years of “untreated” storm water, surface run-off from paved surfaces, and subsurface percolation from septic systems throughout the neighborhood. Mike Sievert rates the wetland’s soil as “not great.”

Looked at from another perspective, however, it’s the Gerrish wetland that is *performing the treatment* of storm water, surface water, and septic seepage, preventing degradation of the small stream that emanates from the far end of this basin to join larger streams heading for Great Bay. The processing of that last contaminant must be highly refined because there has never been any foul, swampy or sewage-like smell in that wetland. Judging from the diversity of plant species within the Gerrish wetland, its sediment trapping and nutrient retention (evidenced by abundant tree and other vegetative growth flourishing in it), the wildlife it supports and attracts, and its flood storage capacity (without this, I’m certain flooding events here would be more extensive than they are), this wetland is performing its treatment function very well.

Red maples rising more than 30 feet (I’ve measured these, too), some ash, gray birch, and basswood, jewel weed (to combat the effects of the poison ivy nearby), ferns, and, to my chagrin, recently discovered invasive buckthorn grow in this wetland, along with other vegetation that a wetlands plant specialist could identify more readily than I. Our neighbor, Otis Sproul at 8 Gerrish, has for many years maintained a fiddlehead garden in the wetland behind his house. Such tree and plant growth does not happen in “not great” soil. Silt is more fertile than other soils, providing trees and other plants a more nutritive and water retentive medium than the wetland’s clay floor to anchor themselves in. The more vegetation that grows in the wetland, the more silt is trapped from getting into the streams the wetland feeds, and as the silt accumulates, a fertile soil base develops for the growth of more vegetation – a continuous cycle of surface and storm water treatment far more efficient and effective than any manmade retention pond, catch basin, rain garden or waste water treatment plant. Mature trees in the wetland are not only helping to clean water; through carbon sequestration, they’re also cleaning the air – all done without tax dollars. The shade these trees provide in summer slows evaporation of ground moisture, thus sustaining vegetation and beneficial organisms in the wetland’s soil.

As for wildlife, we have lots of toads and a few frogs – unfortunately, fewer frogs than we used to see 20-25 years ago. We’ve always had an abundance of dragon flies.

The number of deer and turkeys has increased dramatically in the time we’ve lived on Gerrish Drive. For the past several years, I’ve counted as many as 17 deer grazing in our yard, at other times, a flock of 23-30 turkeys chowing down on whatever it is they chow on – other than my plants -- before they all head to the wetland. This is why our rose bed, herb garden, holly bushes, hydrangeas, lilacs, and even ferns are fenced in for much of the year. What the deer don’t eat, the turkeys dig up. Other occasional visitors: opossums, skunks, foxes, and a black bear that has raided our birdfeeder four times, when we’ve forgotten to bring it in before sunset. (Last fall while I was raking leaves shortly after the evening turned dark, the bear showed up to take down the birdfeeder again, bending the metal pole to the ground. My yelling and slapping of the rake did not deter it from ambling off with a cylindrical feeder full of seed. Two months ago I found that feeder, smashed and lying near the stream east of our lot.)

At night we hear coyotes howl and owls hoot. We frequently see hawks and pileated woodpeckers. Phoebes (another consumer of mosquitoes) nest on and around our lot. One year a determined phoebe tried to build a nest on a hanging lantern at our front door. Daily for a week or so, I would remove the beginnings of the mud nest that bird was building. It didn’t give up until I fashioned a cone over the lantern. Two years ago a cardinal pair built a nest in a holly bush next to our garage; this year they moved to a hemlock behind our woodshed.

Last year I had my first sighting ever of a bobcat. It was not a good sight. The bobcat was lying dead beside the road where Gerrish Brook flows under Route 108. When I stopped at the Durham Police Station, just a quarter-mile away, to report the dead animal, I was told several bobcats have been seen in this area lately. Whether any of this wildlife is dependent on this particular wetland, I can’t say. All I’m saying is that all these life forms – animal, botanical, and microbial -- are here, and as long as they are, they benefit from and add to the wetland’s ecological integrity.

Flood Storage, Sediment Trapping, & Nutrient Retention

As you have already read – and perhaps seen in the videos – these primary wetland functions have been addressed in the foregoing.

Noteworthiness

The single most noteworthy aspect of this wetland is its participation in the Great Bay watershed. Building a road through the tributary wetland on Gerrish Drive will add silt and pollutants to that fragile watershed. Certainly, the importance of maintaining the health of Great Bay cannot be overstated.

The Mulhern Subdivision Access Road Proposal

The area containing the wetland and the route of the proposed road was deeded to the town of Durham in 1972 by the developer of the Gerrish Drive-Ambler Way neighborhood (then called Pine Ridge). This property was designated "Future Street" on the original map of the neighborhood. Future Street was never constructed.

The questionable circumstances under which this wetland came to be designated a *town-owned right of way* requires some knowledge of the history behind the Gerrish/Ambler subdivision. That history is in an attachment to this email, titled History of Gerrish-Ambler Subdivision. It is a history with holes, however. Although the town archives contain records of the proceedings of all town boards and commissions for every year from 1934 to the present, the records of 1971-1972 planning board deliberations are missing. While the attached historical information may seem irrelevant to the Wetlands Bureau's assessment of the permit application for this project, it bears heavily on why this location was chosen as the access to the proposed subdivision when **the Mulherns owned another access that would present minimal, if any, wetland impact.**

None of us in the Gerrish Drive-Ambler Way neighborhood opposes a new subdivision on the property in question as long as it is constructed with adherence to town zoning ordinances and with sensitivity to environmental impact and genuine efforts to minimize that impact. These are basic requirements for a conservation subdivision in Durham, the only kind of subdivision the town now allows. So far, the Mulhern proposal flouts more of those requirements than it complies with, and not just in the matter of the access road – yet, this proposal is already in the final review phase.

According to Sievert, the building of the proposed road will, of course, entail removal of all trees and other vegetation in the Gerrish Drive streambed/floodplain wetland, dredging it, and then depositing as much as four feet of fill to bring the new roadbed up to the level of the road it will connect with. A wide swale will be constructed on the south side of the former wetland to capture water that flows into it from Ambler Way, the center of the neighborhood and the south side of Gerrish Drive. The swale will then direct ("channelize" was the word used in one planning board meeting) this water, untreated by wetland filtration, into a culvert and

thence into an unnamed tributary stream to Gerrish Brook on the east side of 11 Gerrish. Construction of this swale will denude the side of the abutting lot at 20 Ambler that faces the wetland, depriving that lot of natural screening from the new road and its guardrails, thus diminishing that property's attractiveness – and value.

To direct runoff from the new road into this swale, Sievert says, the north side of the road will have to be "slightly super-elevated." In other words, the road will be tilted toward the swale, draining additional pollutants (silt, road salt and dirt from the sanding of the road in winter and year-round drippings of engine fuel, grease, and oil from vehicles) directly into the swale and, thus, directly into the Gerrish Brook tributary stream at 11 Gerrish, since the wetland that could filter and absorb this water will have been obliterated.

To accomplish this super-elevation, Sievert says he will build a vertical retaining wall to hold to keep the fill from subsiding into the remaining portion of wetland at 11 Gerrish that is outside the boundary of the town-owned right of way. This portion of the wetland will remain intact – sort of. As stated earlier, this area of the current wetland accepts drainage from the north side of Gerrish Drive, which flows in a ditch across the lawn of 9 Gerrish and under the driveway and across the front of 11 Gerrish. Sievert claims the retaining wall will direct this water – again, no longer filtered by the current wetland -- into the unnamed Gerrish Brook tributary stream on the east side of the 11 Gerrish lot. A more likely outcome of the super-elevating of the road and placement of a retaining wall is that, due to the relative flatness of this part of the wetland, water will back up onto 9 and 11 Gerrish, further decreasing what usable land these lots have that is not already relegated to wetland. While the view from 20 Ambler will be of a road with guardrails rather than of a wooded wetland, the view from 11 Gerrish will be of a retaining wall with guardrails on top of it, a piece of brutalist landscaping to send the value of that property plummeting.

Sievert has said the landscape architect he works with will restore the vegetation of the wetland so that in a few years it will look the way it does today. Good luck with that fantasy, given the appetite of the resident deer herd. Also, it takes more than a few years for maples to grow 30 feet tall, especially without decades of accumulated fertile silt in which to take root.

After proceeding through the wetland, the proposed road will traverse a steep ravine, at the bottom of which is another tributary stream to Gerrish Brook and ultimately Great Bay. Because of the elevation of the road at this point and its perch on top of a tall box culvert, there will be no swales to

help slow the movement of storm water and pollutants as they drop directly into the stream flowing through that culvert.

At the April 27, 2020, meeting of the Durham Conservation Commission, one commissioner pointed out that a lot of silt enters the Gerrish wetland from a wetland in the center of the neighborhood. The commissioner asked Sievert whether he planned to construct any sort of retention pond to handle that silt once the wetland is removed. Sievert replied, it would not be his client's responsibility to fix an existing problem in the subdivision. The existing silt in the existing wetland is not an existing problem. Destruction of the wetland that puts that silt to good use is the problem.

At this same meeting, a commissioner with nearly 30 years of experience on such commissions called this colossally flawed access road plan "one of the worst" he'd ever seen. While this proposed road is not the only insult to wetland protection in the Mulhern subdivision proposal, it is the most egregious.

Proposed Mulhern Subdivision – in Brief

Of the 16 acres that make up the subdivision property, three in the northern portion will be given over to house sites and the loop road serving them. This area is a steep hill crowned by a forest of old-growth pine, hemlock and some oak and maple, all soaring straight up, higher than I can estimate– no bent or double-trunk trees to be seen. Large ledge outcroppings poke up here and there from the forest floor. It is a spectacularly pristine forest, and, with the exception of College Woods, a rarity for an area so close to the center of town. Indeed, it is a rarity for this part of the state, where forests like this disappeared in the 18th and 19th centuries, when shipbuilding and sawmills were the economic drivers of towns close to the coast.

What a unique and serene setting this forest would be for future residents of the Mulhern subdivision to enjoy. Sadly, they won't, not if the current proposal comes to fruition. To make room for the proposed houses, the forest will be cleared and the forest floor converted to lawns, removing carbon sequestration now operating on a grand scale and destroying a shade-dependent ecosystem developed over who knows how long. The subdivision's three duplexes and nine single-family homes and their septic systems will be arranged around a central green, to configure a pocket neighborhood. A pocket neighborhood can be placed just about anywhere in any number of configurations. No amount of engineering prowess will ever be able to create an old-growth forest.

As vigorous as this forest appears to be, it is on the most environmentally fragile portion of this property. Unnamed tributaries to Gerrish Brook – i.e. water that is on its way to the Great Bay watershed -- wind around the base of that hill. The forest's massive root system now absorbs storm water and helps prevent erosion of that steep hill into the Gerrish Brook tributaries. The subdivision's road will skirt around the edges of the summit and will breach wetland buffers in three or four places.

To manage rain and treat storm water run-off from the paved road, paved driveways, and roofs situated along the curved spine of the C-shaped road, Sievert plans to install a subterranean treatment center in the central common area. As sophisticated as this manmade treatment system may be, it will never capture as much rain and run-off as the forest does now, especially on the steeply descending slopes on the west, north, and east sides of the three-acre hilltop.

How the Mulhern Subdivision Proposal Measures up to Ordinances

The Durham Zoning Ordinance states that the purpose of the provisions in the section governing conservation subdivisions is to assure that such subdivisions:

- 1. Preserve those areas of the site that have the highest value for conservation purposes;*
- 2. Preserve identified historic, known archaeological, and identified cultural features located on the site;*
- 3. Locate the buildings and structures on those portions of the site that are the most appropriate for development, considering both the development suitability of the site and its conservation value;*
- 4. Create continuous open spaces or "greenways" by linking the common open spaces in adjoining subdivisions wherever possible; and*
- 5. Minimize the impact of residential development on the Town, neighboring properties, and the natural environment.*

Statements 2 and 4 do not apply to this subdivision. The other three do, and this subdivision proposal fails to meet all of them:

- The environmentally fragile area designated for development has the highest value for conservation for all the reasons noted in the aforesaid description of it. This portion of the property should be preserved for conservation purposes.
- According to topographical maps provided by Sievert (and based on the assessments of two Conservation Commission members who walked the property independently – as did I), there is an area, at the

southern end of the property, accessed off the Bagdad spur road, that is suitable for development. It is designated as such on early maps of the property prepared by the Mulherns' first engineer, Bob Stowell. There is one tiny stream here, about 15 inches wide, but no ravine or steep slopes. Trees are younger. Due to the shallow sloping of the terrain here, storm water run-off would be minimal. A rough roadway already exists, which Sievert used for bringing in the equipment needed for digging test pits. These vehicles were able to cross the strip of not-so-wet wetland via a bridge of logs laid on the ground. Other than that one low spot with the log bridge, this area is of low conservation value. However, access to it is the one the Mulherns eliminated.

- Rather than minimizing the impact on neighboring properties, the destruction of a complex wetland and the construction of a road in its place will have maximal impact on the neighboring Gerrish Drive-Ambler Way neighborhood and the natural environment.
- In addition to permitting from the DES Wetlands Bureau required for this project, the Durham Zoning Ordinance requires a conditional use permit from the planning board when the construction takes place in a wetlands conservation overlay district (WCOD).

The zoning ordinance states the following:

The Planning Board shall approve a Conditional Use Permit for a use in the WCOD only if it finds, with the advice of the Conservation Commission, that all of the following standards have been met in addition to the general standards for conditional uses and any performance standards for the particular use:

- 1. There is no alternative location on the parcel that is outside of the WCOD that is reasonably practical for the proposed use;*
- 2. The amount of soil disturbance will be the minimum necessary for the construction and operation of the facilities as determined by the Planning Board;*
- 3. The location, design, construction, and maintenance of the facilities will minimize any detrimental impact on the wetland, and mitigation activities will be undertaken to counterbalance any adverse impacts; and*
- 4. Restoration activities will leave the site, as nearly as possible, in its existing condition and grade at the time of application for the Conditional Use Permit.*

Clearly, from all that has been stated, the Mulhern subdivision access road proposal meets only one of these standards -- #1 -- and that's because the Mulherns eliminated not only an alternative location for the road but also the one with the least impact on wetlands.

How the Least Problematic Access Was Eliminated

Serious planning for the subdivision was well underway in early 2018, if not before. The Mulherns and their first project engineer, Bob Stowell, met with the Durham town planner in the spring of 2018. By then, the subdivision property had been surveyed, preliminary homesite density calculated, the area of the property to be developed determined, and accesses to that area examined. They discussed all of this with the town planner.

Theoretically, three accesses were available, realistically, two. A potential access from Route 108 lacked enough land under Mulhern ownership to accommodate the width of a road and would require cutting through steep ledge to reach the subdivision. For these reasons, this access route was discarded from the start. The two remaining possibilities were: 1) from a road situated off Bagdad Road labeled on official maps as Access and Utility Easement and 2) an undeveloped town-owned right of way from Gerrish Drive.

The Access and Utility Easement is a 50-foot-wide, paved road serving four house lots, three of which have Bagdad Road addresses, though the road itself is a spur road off Bagdad and not owned by the town. According to deeds of transfers of the 16-acres the Mulherns now own, live on, and plan to develop, as well as other properties along this easement, this road was created, in the early 1970s, "for the purposes of ingress and egress" to that 16-acre property and to all the lots along the easement and was *jointly owned* by all those property owners. The Mulherns thought otherwise.

Both of the potential access routes had drawbacks. The route via the undeveloped town-owned right of way is the shortest to the house sites, approximately 550 feet, but about two-thirds of this route lies in the Gerrish Drive wetland.

While an access road from the Bagdad spur road to the house sites would have insignificant wetland impact, that route would be more than twice as long as the Gerrish Drive wetland route, which translates into more than double the construction cost.

However, it is highly unlikely the Mulherns would be allowed to choose the less expensive route of paving over a wetland as long as an access route

that does not involve violation of the town's wetlands protection regulations was available to them. So they rid themselves of that access:

In 2018 the Mulherns owned two lots and two houses on the Access and Utility Easement (Bagdad spur road) -- a large house they built in 2005 (#93 Bagdad) and were living in at the time, and a small rental house (#91 Bagdad), which sits diagonally across the road from #93. They planned to sell the big house and live in the small one until they built a new house in their new subdivision. The smaller house was situated on a two-acre lot contiguous to a 16-acre lot on which the other house sat. Before putting the big house on the market, the Mulherns requested -- and the planning board approved -- a change in the lot lines of these two houses. That change switched the sizes of the two lots, putting the big house on two acres and the small house on the 16 they now plan to develop. Lot #91 became the entire property for the proposed subdivision, including the locus for an access to it.

The Mulherns sold the big house in September 2018. From that point on, project engineer Mike Sievert and the town planner maintained that the Mulherns no longer had access from the Bagdad spur road -- although they continue to have access to their house at 91 Bagdad. The town planner said he knew the lot line adjustment would result in the elimination of the access from the Bagdad spur road -- in fact, at the public hearing on the lot line change, he announced this would happen but did not explain how. Yet he could not have made this announcement without knowing how it would come about. When planning board members asked why this would happen, he evaded the question. Ownership of the Bagdad spur road did not come up. For the following two years, abutters and planning board members asked how the loss of this access was possible. No plausible answers were forthcoming. Meanwhile, the subdivision proposal progressed through the review process, with the planning board accepting that no other access existed except the Gerrish wetland route. As late as this past June, at the last planning board hearing before the formal application stage, one planning board member asked the Mulherns' attorney whether her clients have rights to an access road from Bagdad Road. She replied she was not prepared to get into details of the matter at that time.

In an April 25, 2020, letter to the planning board, intended to be shared with the public, the Mulherns offered their explanation what happened. They said that because their deed for 93 Bagdad contained language about the easement that served the other two houses on that road -- #91 (which they already owned) and #95 -- they figured they owned the whole road. When they sold 93 Bagdad, they decided to also deed away their presumed ownership of the road to the new owner. But, during the title search for the

sale of 93 Bagdad, the shared ownership of the road was discovered –the owners of #95 also held ownership rights to the road. So, the Mulherns negotiated with these neighbors to relinquish their rights as well because “the buyer of 93 Bagdad requested that he be the sole owner of the driveway.” That now-sole owner then wrote a letter to the planning board, dated April 26, 2020, stating: “I own the driveway and under no circumstances would I give the Mulherns permission to build a road in its place to access their land.”

One last thought: At a Durham Conservation Commission meeting this past April, in which the Mulhern subdivision was being discussed, a commissioner asked project engineer Mike Sievert, “How do you keep land from being contaminated by fertilizer, herbicides, and pesticides in the 75-foot wetlands buffer when you have roads there?”

Sievert’s reply: “If we were to restrict that, then there would be a limit on what could be used on lawns.”

Something to ponder as we consider the sensibilities behind this conservation subdivision proposal.

Thank you for your expressed openness to receiving input from abutters. I hope you find this useful.

Kind regards,

Gail Kelley

History of Ambler Way/Gerrish Drive Subdivision

Jan. 5, 1972

Developer Walter Cheney receives conditional approval for Pine Ridge Subdivision (later known as Ambler Way/Gerrish Drive Subdivision). Due to the high water table in the subdivision, six additional requirements are added to the standard guidelines for installation of septic systems there.

Ambler Way/Gerrish Drive Subdivision consists of 21 house lots arranged along both a single, horseshoe-shaped road. One leg of the horseshoe is name Ambler Way; the other leg, Gerrish Drive. One bend of the horseshoe, on Ambler Way, accommodates two, pie-slice-shaped lots, both satisfying the required minimum lot size of 40,000 square feet.

The other bend of the horseshoe, where Ambler Way and Gerrish Drive meet, lies in the lowest point of the subdivision, though the map does not disclose this. A wetland occupies the whole bend of the road there. Cheney could not squeeze in even one pie-sliced-shaped lot there. Yet he owned more than 60,000 square feet of land to one side of the wetland and next to a lot on Gerrish Drive. The center of this 60,000 square-foot plot is high enough ground to be buildable, but, because of the wetland, there was not enough dry land between this high ground and the subdivision's road for even a driveway. The plot was inaccessible. Shaving off a bit of the lot next door for a driveway would render that lot under the minimum lot size. Cheney came up with a solution that made this larger plot part of the subdivision.

The map of Pine Ridge Subdivision he submitted to the planning board shows a "Future Street" at the bend where Gerrish Drive and Ambler Way meet, i.e. directly *in* the wetland. Now the problematic 60,000 square foot plot is accessible – at least on paper – via frontage on the Future Street in the wetland.

No indication of a wetland appears anywhere on this map; there was no need for such information. The Durham Zoning Ordinance in effect in 1972 contained no provisions addressing wetlands. The only mention in the ordinance of wet areas of any kind is in the section regarding mobile home parks: "All such parks will be in areas free from marshes, swamps, stagnant pools, or other potential breeding places for insects or rodents." Such was the lack of understanding then of the roles of wetlands. [*Sources: Approved subdivision plan and records of Pine Ridge Subdivision; Durham Planning Office files; 1972 Durham Zoning Ordinance; online*]

March 1972

Cheney does not build Future Street. He deeds it to the town, with the restriction that this land (street) remain undeveloped for seven years, an odd restriction to place

on a deed for a street. I leave the rationale behind that restriction up to others to ponder. [Sources: *Deed of transfer of Future Street in Pine Ridge Subdivision from Walter Cheney to Town of Durham; Pine Ridge Subdivision file, Durham Planning Office*]

Throughout the 1970s Durham was inundated with subdivision proposals, many, if not most, of them submitted by Walter Cheney. The town did not have a professional town planner, just a volunteer planning board, people with other jobs. They didn't have time to inspect every parcel that came before them. March – the month when the planning board accepted the deed for the land designated Future Street -- is not a good month for inspecting land. There may be snow cover, the ground may still be frozen, a spring thaw can make walking in undeveloped areas of scrub growth or woods difficult.

Whether the planning board ever looked at or knew the nature of the land occupied by Future Street in the Ambler Way/Gerrish Drive Subdivision will never be known. What, if any, discussion the board had around the acquisition of Future Street will also remain unknown. Although the town has minutes of planning board meetings from 1934 to the present, those for 1971 and 1972 are mysteriously missing. This was not the only time Cheney hoodwinked the Planning Board.

1975

Durham adds wetland conservation overlay districts to its zoning ordinance, with regulations on uses and activities allowed in such areas. Due to these new wetland ordinances, Cheney is stuck with five lots, in another subdivision he is developing, that are too wet to build upon. So, he deeds the five lots -- 12 soggy acres -- to the town as a ball field. To this day, despite mitigation efforts by the town, spectators standing on the sidelines of that field to watch kids play soccer often have to wear boots.

In another subdivision, he deeds a quarter acre to the town as a playground -- thus unloading a former farm dump and junk yard he would otherwise have to pay taxes on and clean out. [Sources: *personal experience attending games at the ball field during the 1990s and statements of other spectators this year before the pandemic lockdown; January 2020 conversation with Durham Public Works Director Michael Lynch, now retired; file on town-owned lands, in Durham town office and online*]

Summer 1984

Local realtor shows Gail Kelley and Andrew Merton the only remaining undeveloped lot in the Ambler Way/Gerrish Drive Subdivision (formerly Pine Ridge). They are skeptical on the first visit because the lot is too wet to get onto, but they agree to a second visit – wearing boots. On the second visit, the lot appears promising.

However, skepticism returns when they see a map of the subdivision. The lot, located in a bend of the subdivision's horse-shoe-shaped road where Gerrish Drive and Ambler Way meet, lacks access to that road. The map shows a Future Street fronting the lot, but that street does not exist. The realtor explains, the town owns that so-called street but will never build it because the area is all wetland. He says the town will not object to a driveway going across Future Street to access the lot. The Durham Building Inspector confirms this, almost word for word, adding that Durham's zoning ordinance would not permit the building of a road in that wetland.

Gail Kelley and Andrew Merton buy the lot – 11 Gerrish Drive.

1987

Durham adopts the town council form of government, replacing the board of selectmen with an elected town council, which hires a town administrator. The town administrator hires a town planner to assist the volunteer planning board and conservation commission as well as the town council on land use matters.

Gail Kelley and Andrew Merton apply for and receive a building permit to build their home at 11 Gerrish Drive, including a driveway across the wetland.

During the construction of their driveway, they discover the wetland is the drainage basin for the whole subdivision, with water from two culverts emptying into it, forming a stream. The wetland also accepts storm runoff from Ambler Way and Gerrish Drive and surface water that runs across the front lawn of the house next door (9 Gerrish Drive). Because the wetland lies nearly four feet below the level of Gerrish Drive, fill is needed to bring the driveway entrance up to street level. To accommodate the flow of water across the lawn at 9 Gerrish, a culvert is installed under the new driveway at 11 Gerrish.

2020

Water from the two culverts emerging at the curve where Ambler and Gerrish meet flows into the wetland at a steady pace year-round. Heavy rainstorms overwhelm the capacity of these culverts, causing water to overflow the culvert trough in front of 20 Ambler Way, creating in a wide band of running water across the driveway of this lot and into the wetland.

Ambler Way/Gerrish Drive Subdivision residents who have lived for more than 30 years near or next to the wetland attest that their lots have become wetter in the past decade and the wetland itself has widened. Portions of lawns stay spongy, even during a drought. A once-small vernal pool between 9 and 11 Gerrish Drive has expanded and hardly fits the definition of vernal anymore since it remains wet throughout the year, becoming a small pond during spring thaw and heavy rainstorms.

Whether these conditions are the result of a rising water table or the consequences of climate change (i.e. more frequent freeze-and-thaw periods in late winter and heavy rains throughout the year) or a combination of all these factors is beyond the expertise of these residents to determine. *[Video provided in a separate attachment to this email, confirms the observations of these residents are not exaggerated. The video was taken in the aftermath of a heavy rainstorm Dec. 10, 2019. Another, slightly less severe, storm occurred in mid-March 2020, causing similar conditions. Video of that storm's effects is also available, but the one provided should suffice in getting the point across.]*

Given the prevailing conditions of this wetland and the prospect that continuing climate change will compound them, the idea of:

- 1) removing all trees and other filtering -- and carbon-sequestering -- vegetation in the wetland,
- 2) dredging and filling the wetland,
- 3) building a road on top of that,
- 4) fashioning swales to "channelize" water currently entering the wetland in order to direct it "more efficiently" -- but without benefit of natural filtration -- to the stream the wetland now feeds,
- 5) clearing an old-growth forest for proposed homesites on the plateau of a steep bluff above streams within the Great Bay watershed -- a forest now sequestering even more carbon than those in the wetland and absorbing ground- and storm-water, thus controlling erosion of the slopes of the bluff into the streams below,
- 6) filling in a wetland on the homesite portion of the proposed subdivision and substituting it with a manmade wet pond and detention ponds so that two of the proposed homes currently within a wetland buffer will then be outside it, and
- 7) adding plowed snow containing road salt and petrochemicals to areas where existing wetlands that could filter these substances will have been obliterated ... constitutes nothing less than hubristic indifference to environmental consequences as well as detrimental impacts on existing developed properties in the Ambler Way/Gerrish Drive Subdivision.