

**Notes from the Conservation Commission Gerrish Drive Subdivision Site Walk on May 8, 2020
10:00 am and **My Concerns and Questions Regarding the Wetlands Impacts****

The following are my notes and concerns, and not those of Durham's Conservation Commission. I am new to the Commission, and some of my assumptions about Town-owned roads may be incorrect as well as my interpretations of what I heard during the site walk.

Notes

Town Road: The developer plans to use a culvert and redirect flow on the south side of the ROW. May use check dams to present scouring of the stream edges.

The swale areas would be revegetated using native planting.

Most likely an arched open culvert would be used at the stream crossing.

The developer would like the Town to own (and thus maintain) the entry road to the development and...

The developer would like the Town to extend the Town portion of the road up to the junction with the road connecting the houses. **This would extend the roadway to a full 540 feet-all at 50' width** and be a significant savings to the property owner that would be shifted to the **Durham taxpayers.**

The entry road would use the full 50' for the roadway plus swales to each side.

The plan is to use catch basins to filter water flowing from the Gerrish/Ambler neighborhood. These catchment basins would require regular cleaning, **a responsibility of the Town if the road is owned by Durham.** The catchment basins would fill part of the role of filtering the Gerrish / Ambler Road runoff that is **currently filtered by the natural wetlands.** From the BMP for Forestry: Protecting New Hampshire's Water Quality,

"...constructing roads can...diminish the benefits of vegetation next to waterbodies. Harvesting may reduce shade on the water's surface, reduce the amount of natural woody debris, or eliminate leaf litter that is an important food source for aquatic life. In addition, timber harvests that remove a significant percentage of the trees in a watershed can increase the amount of water moving through the soil into streams, and in some instances, increase flooding."

Sewer: The development would like to use town sewer. The sewer line would follow the road. A new sewer line from the junction of Gerrish Road and Canney Road would allow neighbors to tie into the sewer line. Working septic systems would still be required and the homeowner costs would vary depending on which side of the road the sewer followed.

Wetlands: The term "degraded" used to describe the wetlands is a general term used to describe wetland adjacent to homes and roadways that contribute water to the site. It is not a reflection on the quality of the filtering that is done by the wetland vegetation.

Neighborhood: Neighbors who joined the site walk were interested in learning more about access to a sewer system. They would see this as one potential positive to come from the disruption of the area and wetlands.

Has the abbutter in Madbury been contacted? It was reported that the Town of Madbury has been contacted and is not interested in the proceedings.

Concerns Regarding the Wetlands Impacts

The plans include filling in wetlands to accommodate the roadway to the last house to the south. By doing so, the developer would move the wetland buffer away from the two most southerly houses and the proposed community green space. The end of the roadway for the last two houses would still be within the 75' wetlands buffer.

By my map measurements, approximately 2500 SF (50' x 50') would be filled at the end of the roadway at the southernmost location. When **added** to the other wetland disturbance (ROW 7807SF + 1633 SF), the total is approximately 12,000 SF, or **1200 SF of wetland per house structure**. This does not include the road or structures within the 75' buffer. If soil impacts (815 SF + 3950 SF) along the entry road are included, the total disruption may be in excess of 16,000 SF or **1600 SF** per house structure. **Is this an acceptable wetlands loss?**

Town or HOA ownership? (Gerrish Drive to the junction with the private road accessing each driveway) Either as a Town or privately owned and maintained road, the proposed roadway would be situated across the wetlands that now serve as a filter for waters from the Gerrish and Ambler neighborhood, and is the locus of two drainages that drain the neighborhood. These drainages cut across and through existing houselots, and flow actively during and after rain events.

The building of the road over the wetlands would be a potential site of flooding which might impact the new roadway and adjacent existing house lots. The maintenance of the catchment basins would be an added responsibility of the town, as well. **Does the town want this additional responsibility and costs for construction and maintenance of the access to a private road (that will not serve any additional houses beyond the new subdivision) at taxpayers' expense?**

Conditional Use Criteria

1. No alternative location: There appears to be no alternative approach to the land proposed for development.

#1. There are additional options for placement of houses and the private roadway.

2. Soil disturbance will be minimum necessary for the construction and operation of the facilities as determined by the PB. Direct wetland disturbance will be impacted by the construction of the access road and by fill of a section of wetland. There will be additional disturbance within the 75' buffer caused by the construction of the private road.

#1. The filling of part of the wetland allows for moving the 75' buffer so that two houses can be fully outside of the buffer. This seems like an odd way (fill the wetlands and move the buffer) to deal with the 75' buffer that is meant to protect the wetlands from pesticides, fertilizers, and herbicides.

#2. Twelve hundred to 1600 SF of wetlands will be impacted for each building constructed.

Construction of the roadway including tree removal along the 75' buffer will cause soil disturbance upslope from the wetlands [From the BMP for Forestry: Protecting New Hampshire's Water Quality, "...**constructing roads... can reduce the soil's absorbency. This can occur any time the forest floor is disturbed, removed, compacted, or otherwise damaged.**" And, "The basic legal requirement in New Hampshire is to keep pollution—including mud, silt, rock, soil, brush, or chemicals —out of the water and wetlands."

3. Location, design, construction and maintenance will minimize and detrimental impact on the wetland, and mitigation activities will be undertaken to counterbalance any adverse impacts.

#1. The current design for the development allows for an attractive setting of houses surrounding a shared green space. The houses, however, do not have to be placed in that arrangement, and all of the houses could be placed so the houses and roadway are not in the 75' buffer.

#2. The elimination of the two southernmost houses would keep all houses and road outside of the buffer except for a short section of road and not require filling any existing wetlands on the development site. All wetlands disturbance would be at the site of the entry road off of the Gerrish/Ambler junction.

#3. Removing the vegetation from the wetland with the road construction, will reduce the filtering properties of the area. Catchment basins may replace this loss. Installation of sewer access along Gerish and Ambler Roads will also reduce the introduction of nitrogen from weakened septic systems (if weakened systems are replaced in order to join a new sewer system) and should be considered as a condition of using the ROW. However, the septic systems are less likely to allow nitrogen to reach Great Bay, when all of the septic systems are fully operational, compared to sewage treatment. The sewer connection from the Gerrish/Ambler junction to the new development should be paid for by the developer and not Durham's taxpayers, whether or not the Town takes responsibility for the full entrance road.

4. Restoration activities will leave the site, as nearly as possible in its existing condition and grade at the time of application for CUP. There are a number of restoration wet / detention basins for filtering of road runoff at the development site. Roads will be tilted so that runoff is away from the wetlands. Leach fields are at the far western edge of the site and away from the wetlands. There are plans for catchment basins along the (ROW) section of the entry road. Native plants will be used in restoration.