

**From:** Carroll, John <John.Carroll@unh.edu>  
**Sent:** Wednesday, February 12, 2020 11:08 PM  
**To:** Michael Behrendt  
**Subject:** Michael, Please send to PB, Re: Gerrish Extension. John

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**From:** Diana Carroll <dianacarrollnh@gmail.com>  
**Sent:** Wednesday, February 12, 2020 3:20 PM  
**To:** Carroll, John <John.Carroll@unh.edu>  
**Subject:** Gerrish

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To the Planning Board, February 12, 2020

## The Broader Implications of Gerrish Drive Extension

In its consideration of the Gerrish Drive Extension and related proposed residential development, the Planning Board needs to consider broader downstream impacts, i.e., the Gerrish Brook – Johnson Creek Watershed. The removal of a large number of water-absorbing trees for both roads and buildings in the proposed development yields quite a bit of additional water for flooding. The three streams converging at the Gerrish Drive/Ambler Way intersection will be enlarged in their water volume by such tree removal as well as by the

significant increase in large impervious surface and, additionally, by the loss of absorptive surface which will occur with both the roads and buildings of the development. That quantity of water will be further exacerbated by the increased precipitation which we are already now seeing and which will increase further as a result of climate change. (All science is in agreement on this.)

So what is impacted downstream and why should we take a broader view?

1. The Gerrish Brook Watershed and all those Madbury properties which are part of that watershed are subjected to likely much increased flooding.
2. The Rte. 108 culverts at Rte. 108's intersection with Gerrish Brook in Madbury, just down the hill from the Durham Evangelical Church, is a site already depicted on Strafford County Planning Commission maps as already vulnerable to tidal flooding from rising sea levels. Rising tidal levels coming up Johnson Creek and Gerrish Brook in coming years will clash with increased freshwater flood waters to make area flooding in this part of Madbury much worse.

3. The City of Portsmouth's nearby water wells and water treatment facility, though upstream on Johnson Creek, can be vulnerable to the flooding from Gerrish Brook, especially when it faces the back-up occurring from both fresh water and salt water simultaneously.

Such tampering with the Town of Durham-owned Gerrish access property and its three streams, as well as the rest of the developable property in the proposed residential development, can well have serious consequences, therefore, for both Madbury and Portsmouth, as well as Durham. A wetlands scientist and, without doubt, a hydrological scientist, are needed to view the broader picture.

Sincerely,

John E. Carroll, 54 Canney Road

Professor Emeritus of Environmental Conservation

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