Nordic Aquafarms Damage to Watersheds

Nordic entered land during spring rains to drill and operate test wells causing considerable erosion.

I asked Elizabeth Ransom why they used heavy equipment while it was raining. She said the work had already been scheduled.

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Photos Taken April 19, 2018, April 29, 2019 and December 12, 2019

Quality of Habitat

My son Walden Merkel Cutting on a homeschool trip to the Little River Trail. Interestingly, Nordic did not list beaver in their study of wildlife.

Wildlife Cooridor

The forest lands that boarder the Little River form a wildlife connecting cooridor to Belfast Bay. This allows the wildlife to move between the seashore and interior wood lands.

Mature Forests Effective at Carbon Sequestration

I calculated the forests, soils and 17 wetlands store approximately 13,465 metric tons of carbon above and below ground on the 34 acre site.

Left intact, this forest's current sequestration rate is approximately 42.9 metric tons of carbon each year.

Biological Corridor to Belfast Bay

Corridor

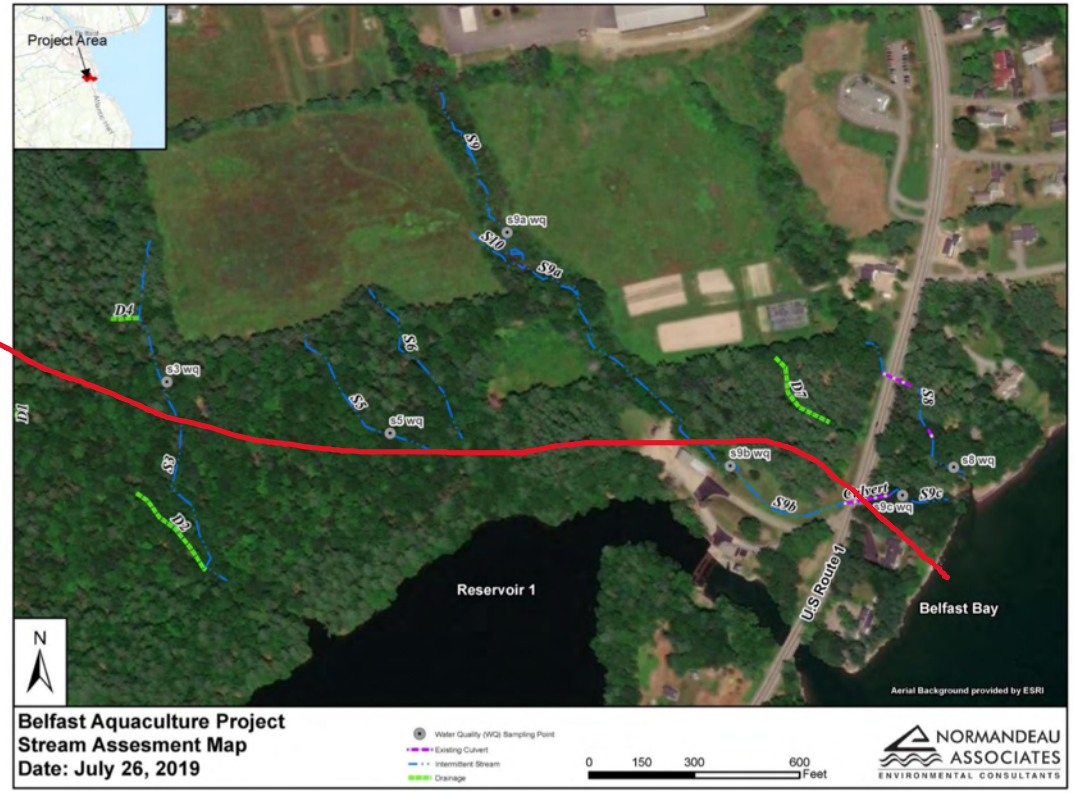

Figure 1. Belfast Aquaculture Project Stream Assessment Map.

Intact Stream S3 Not Yet Impacted

This intact stream was not breached by Nordic and no sediment flow was observed.

High Quality Stream S3

Vernal Pool and Wetlands

Many pools, pillows and pockets throughout site that naturally slow water.

Early Pillow and Pocket Formation

Erosion From Access Road to Exploratory Drill Sites

Poor Road Practices Cause Erosion

Drill Site Without Sediment Trap

Elizabeth Ransom testified under oath on 2/12/2020 at DEP Hearing that sediment traps were used. This well has no trap.

Photo Taken April 19, 2018

These Wells have no Sediment Trap

Sediment in Streams S5 and S6

Wetland Disturbance From Access Roads for Wells

Lower Portion of S5/S6 – Heavy Sediment

Poor Practices Lead to Erosion on S9

Sediment Fence Installed

Well Adjacent to S9 with Sediment Fence

MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs)

MAINE EROSION AND SEDIMENT CONTROL BMPs – 10/2016

Sediment barriers should be inspected and repaired before, during, and after each rain event.

Collected sediments should be removed when one-half the height of the barrier is filled.

https://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_engineers.pdf

Poor Installation Resulted in Sediment Flow Under Trap

Ineffective Sediment Trap

S9 Below Sediment Trap

Logging of Mature Forests Prior to Permitting

80-Year Old White Pine – Preemptive Logging

Current research shows that trees increase their carbon sequestration significantly as they age. In addition, forests and wetlands provide multiple ecosystem services.

Dr. William R Moomaw's recent work establishes that proforestation, meaning enhancing older forests, is actually the most viable way to achieve CO2 Targets.

Anderson, Mark G., *Wild Carbon: A Synthesis of Recent Findings* in Wild Works, Volume 1 Northeast Wilderness Trust