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June 4, 2014

Mr. Dustin Roma
Milone and MacBroom
100 Commercial Street, Suite 417
Portland, ME 04101

Re: Sunset Landing property (Map 15, Lot 9), Chebeague Island

Dear Mr. Roma:

We have completed a wetland delineation and preliminary soil analysis of the above-referenced property, to help evaluate the development potential of the lot for future Town of Chebeague Island community needs.

I have reviewed a plan prepared by Nadeau Land Surveys, showing the location of my wetlands flagging and soil test pits evaluated for on-site subsurface wastewater disposal potential. Following are brief summary comments regarding wetlands observed on-site, and soil suitability for future potential septic system placement. Also enclosed are a series of representative captioned photos of the property.

Background Information

The property consists of gently (3-8%) to moderately sloping (8-20%) topography. Central portions of the lot are dominated by a circular access around an old house site with associated field/grassy area surrounding the original foundation hole. Old apple trees and an old dug well are present also, further suggesting past human habitation at this site.

Areas of shallow-to-bedrock soils are present, evidenced by undulating exposed bedrock, particularly in the westerly portions of the parcel. Soils to the east give way to marine sediments with shallow seasonal high water tables and consequent wetland areas. One wetland area identified at the base of a short steep slope was clearly the location for deposition of kitchen middens including inert solid waste such as old bottles and cans. Accurate location by survey proved this to be just over the northerly property boundary.

A small beach area is also included on the property in the southwestern corner of the property.

Wetland Resources On-Site

The dominant wetland type observed on the subject property consists of forested freshwater wetlands, with inclusions of shrub-scrub vegetation. Wetlands identified near the southerly property boundary occur in wide gently sloping areas that include seeps where the seasonal high groundwater table intersects the soil surface. No waterbodies or water courses were observed within these wetlands, and areas of standing water hydrology occur as slow-moving drainages which are not indicative of vernal pool habitat.

Other wetlands, near the northeasterly property corner, consist of narrow, ‘fingered’ channels which grow deeper nearer to the ocean. A portion of these may meet criteria for inclusion as a *stream*, per Maine Department of Environmental Protection (MDEP), Natural Resource Protection Act (NRPA) standards. The more inclusive definition of *tributary stream*, per MDEP Shoreland Zoning guidelines, would apply to all portions of the drainage within the 250’ shoreland zone. As such, 75’ setbacks for construction apply. (These cannot be waived down within the shoreland zone, as may otherwise be possible with permits-by-rule under NRPA stream definition and permitting standards).

The oceanfront portions of the property include bankfront that gives way to tidal frontage abruptly. Thus, no significant areas of tidal wetland vegetation exist, and the flat in front of the lot all appears to be entirely subtidal. The subtidal soils appear to consist of hard bottom sands and gravels with ledges present, instead of more instable mud flats. Along the northerly property boundary, a wide wetland seep was also identified at the base of a short steep slope. Those wetlands identified that occur within the 250’ wide shoreland zone are considered *wetlands of special significance* per NRPA standards. No exemptions for filling activities are allowed, and wetland impacts are permitted under full Tier 3 permit review. If proposed impacts are minimal, or the wetlands are deemed by MDEP licensing staff to be isolated (i.e. not directly connected to the ocean), a “waive-down” to an expedited 30-day Tier 1 review process may be possible. This “waive-down” must be sought from MDEP officials prior to submission of an application for wetland alteration if necessary to complete a project.

Several small areas off-site were also delineated in the vicinity of the gravel access road to the property. This was done in case widening of the access is necessary for a future project. None of these included watercourses, vernal pools, or *wetlands of special significance*, so an exemption may be allowed for impacts less than 4,300 sq. ft.

Typical overstory vegetation within wetland areas includes ash and maple, while upland portions of the lot are dominated by red oak, white birch, and black cherry. Speckled alder is a typical shrub-scrub wetland vegetation on-site, while sumac is a dominant on uplands.

Soil Suitability for On-Site Wastewater Disposal

Four test pits were excavated on-site with hand shovel and soil auger, to provide preliminary suitability information regarding potential septic placement. These were located onto the plan by Nadeau Land Survey. TP 1,3 and 4 meet minimum criteria for first-time wastewater systems inside the shoreland zone, while TP 2 is too shallow-to-bedrock.

Sufficient suitable area was observed and exists for a considerable wastewater flow (500-700 gallons per day, perhaps). Additional field work is necessary to complete a full septic system design for the site, once the specific use and associated wastewater needs of a project are determined by the Town. A copy of a soil profile description for each test pit evaluated is also enclosed within this report.

I trust this and the enclosed information will assist Milone and MacBroom and the Town of Chebeague Island in determining the next course of action with regards to this unique and special property. During the survey field work necessary to complete the plan, it was discovered that wetland flagging did not extend completely to the southerly property line, since its location was not evident in the field at the time of our first visit. AFA plans to return to the site within 10-14 days to accomplish this task, under previously authorized budget limits.

Please feel free to contact me directly, should you have further questions or require additional information regarding the site.

Sincerely,

A handwritten signature in red ink, appearing to read "James Logan", with a stylized flourish at the end.

James Logan
Certified Soil Scientist #213
Licensed Site Evaluator #237
Wetland Scientist