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I appreciate the participation from the Town of Kennebunkport in the Maine Healthy Beaches Program (MHB) as well as their participation in the investigation of the source of pollution at Goose Rocks Beach. The 2005 swimming season was very challenging for the Maine Healthy Beaches Program and the Town. I see our common goals to be gaining an understanding of the problem and developing a means to address it while minimizing the economic impacts to the region. The Maine Healthy Beaches Program is pledging to continue to work with the Town on this issue.

As you are aware, the Maine Healthy Beaches Program is designed to work with local municipalities or the management entity of a public swimming area to maintain a healthy and safe swimming environment. The Program sets up a quality assured structure to monitor the water quality and provide the Town credible grounds for posting an advisory. If a threat to public health is determined from an identified water quality problem, the goal of the Maine Healthy Beaches Program is to provide support to the Town in the investigation of the source of contamination. The MHB can and will continue to work with the Town to develop a plan on further pollution source identification, but at this time we no longer have available resources to commit.

To date, the Maine Healthy Beaches Program has employed the services of the Maine Department of Conservation/ Maine Geologic Services, Maine Department of Environmental Protection, University of Maine Cooperative Extension, Maine State Planning Office, and private contractors to in excess of \$15,000 in the identification of a problem at a Town managed site. This is not a sustainable model for the Maine Healthy Beaches Program. The Program is currently working with 42 swimming beaches in the coast each with their own unique issues. Currently, the Program only allocates a very limited amount of funding to assist in the identification of the source of contamination at publicly managed swimming areas.

The 2005 season of investigation provided us with a lot of information but we are still far from fully identifying the source of contamination. Currently we know:

- Despite the hot spots identified in the Smith Brook or Beaver Brook areas from the Special Study, the Maine DEP did not identify any obviously failing septic systems, from their "sight/smell" survey, that are contributing directly to surface waters
- During the summer months and flooding high tides, there is an apparent bacteria problem in the tributaries
- From the MGS water current study, it is becoming apparent that as the tidal stage is approximately 10ft or greater (especially during spring tides) and the off-shore wave height is generally below 3ft, all scores (GR-1 to GR-5) will be high.

- Also from the MGS study, when the tidal stage is approximately 10ft or greater and off-shore wave heights are generally higher than 3 ft, the inlet samples (GR-1 and GR-5) remain high, and the beach face scores (GR-2 to GR-4) are generally reduced. This is due to increased mixing in the near shore environment at the beach samples from the higher off-shore waves. The inlet samples remain higher due to lower wave impact at the inlets because of to the presence of the sand bars at the mouth of the rivers acting as a wave attenuator. The lowest scores – for all sample sites - were generally seen when tides were in the **neap** range.
- The Maine Geologic Survey has determined that the potential source of contamination is likely from the rivers due to the bacterial score rising at the mouth of the rivers. This is observable at the times of highest tides
- The Maine Geologic Survey has offered that the *above information can provide us the ability to make predictions regarding the potential for posting of swimming advisories at Goose Rocks based on tidal stage and off-shore wave height*

The 2005 season of investigation has also left us with many unanswered questions. We still need to fully understand:

- Source of pollution, at this time it is still unknown
- The link between time of year and the level of contamination at the Beach, including the tidal stage in the off-season and visitor presence or absence
- Whether or not the tributaries (Batson and Little Rivers) are contributing pollution in the off season either during a flood high tide or neap high tide
- Whether or not the tributaries are contributing pollution in the summer season during the neap high tides
- Whether or not the sewered areas are contributing any untreated waste to the surface waters
- Whether or not the Campground is capturing all of the waste from those that connect to the system
- Whether or not the source of pollution is human or animal based

Before we can develop the means to manage the pollution affecting Goose Rocks Beach it is essential that we implement the following steps. Please note I am including who could likely complete the task.

- Fully evaluate the sewer system confirming proper function, house connections, etc though such means as pressure test, smoke test, camera the main lines, dye test, etc. (Town)
- Follow-up with the owner of the Campground to ensure they pursue Frick to map out the full septic system on the site, per DEP conversation (Town)
- Repeat the MGS Water Current study on the October flood tide forecast for October 17-19, 2005 to confirm or disprove the hypothesis that return flood currents may be concentrating bacterial at GR1 (MGS)
- Collect beach front water samples capturing the Flood tide forecast for October 17, 2005, sample at least 3x/week for 2 weeks (Town, with support from MHB)
- Further conduct the Septic Sanitary Survey in the Little River watershed (DEP has the river below Rt 9 scheduled for this fall and above Rt 9 for the spring/summer; this can be conducted by the Town if info is needed in a more timely manner)
- This fall, repeat the Special Study in the tributaries during the high and neap tides to determine the extent of pollution and if tidal stage affects water quality (Flood tide: Week of Oct 17; Neap Tide: Week of Oct 23) (Town to hire contractor, MHB to assist with analysis also provide limited funding)

- Next summer, repeat the Special Study during the neap high tides to determine the extent of the pollution in the tributaries contributing to the beaches (Town to hire contractor, MHB to assist with analysis also provide limited funding)
- Follow-up the DEP Sanitary Survey with dye testing at the residences identified by the Maine DEP as potential failing septic systems (DEP or Town with DEP assistance)
- Confirm manure storage and livestock access to the water at Hathaway farm and possibly collect WQ samples (Town, with possible Maine Dept Ag assistance)

Due to the cost associated with conducting an evaluation of bacteria origin to determine whether or not it is human or animal based, such as a microbial source tracking project (MST), we are, at this time, not recommending it to be performed. If the Town would like to pursue such an approach, the Maine Healthy Beaches Program would assist in the development, implementation and analysis of such a project. Currently, the State of Maine does not have the ability to allocate resources to conduct such a test.

I value your participation in the Maine Healthy Beaches Program and look forward to the next season. In cases where the water quality data indicates a threat to public health, the Maine Healthy Beaches Program will continue to partner with the Town to develop a plan to identify the source of contamination. Only through a well thought out plan can we move towards remediation. I hope you see that we have laid out the makings of a plan. The identification of the source of pollution and the means to address it will not happen "overnight". The Maine Healthy Beaches Program appreciates the Town's continued participation in the Program and is willing to work with the Town to identify the funding necessary to further identify the cause.

If there is anything more I can provide, please do not hesitate to contact me.

Regards,



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