Healthy Beaches Recommendations

KENNEBUNKPORT COMPREHENSIVE PLAN 2030

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Healthy Beaches Recommendations

The Maine Healthy Beaches (MHB) program website describes the endeavor as "a partnership between the Maine Department of Environmental Protection and local municipalities." The program is funded primarily by the US EPA. In February 2021, MHB issued a report summarizing its investigation of pollution in the vicinity of Goose Rocks Beach. The report is entitled "*Summary Report of Enhanced Monitoring and Pollution Source Tracking Efforts in the Goose Rocks Beach Watershed, Maine Department of Environmental Protection.*" The report's recommendations are as follows:

6.1 Maintain Watershed Water Quality Monitoring Program

Continue annual baseline water quality monitoring, increasing monitoring frequency and further bracketing suspect sources when possible. Consider using source-specific tools (when available) to target possible sources of human fecal contamination. This work will help verify that implementation of projects is successful, including the Town's remediation and education/outreach efforts. This data can also be used to support prioritizations of future investigative and source removal efforts and help identify new bacteria issues. As time and resources allow, MHB suggests expanding the scope of current water quality monitoring efforts to better understand bacteria impairments in the watershed and more effectively target public outreach. Examples of additional monitoring efforts include:

A) Expanding rainfall monitoring to track bacteria concentrations during dry and wet weather events. This information can be used to better understand when contamination is most likely to occur for river mouths and main beach sites and further refine the Town's preemptive rainfall advisory notification threshold (currently 1 inch of rain in 24 hours) for Kennebunkport's beaches.

B) Increasing monitoring efforts of GRB's stormwater infrastructure to identify the extent of stormwater contributions to water quality issues near Beaver Pond site BP-1, Smith Brook site SB-3, and at downstream beaches.

C) Incorporating monitoring efforts over various tidal cycles, specifically targeting spring and neap high tides to better understand the effect of tidal inundation and associated flushing of upstream marshes and tidal waterbodies on downstream water quality.

D) Integrating wind speed, direction, and wave height into beach monitoring efforts to determine any effects of sea state on FIB levels (*See Slovinski and Dickinson, 2005*). This information can be used to better inform beach management decisions including the issuance of public health advisories.

6.2 Prioritize Identification and Remediation of Human Fecal Sources

Continued integration of source specific analyses for suspect areas is recommended to support the prioritization of resources towards addressing sources of human fecal contamination. Of particular concern are the priority regions with potential wastewater issues indicated by consistently elevated FIB concentrations and the presence of human fecal DNA.

A number of source-specific test

methods exist to accomplish this work. MHB recommends that Kennebunkport continues implementing PCR and qPCR methods in partnership with UNH or a similar entity using comparable methods to provide consistency in data sets, allowing for year-to-year comparisons. When possible, this approach should include further bracketing of monitoring sites in suspect areas and the use of qPCR methods track the relative strength of the DNA source markers and better isolate contamination sources. To reduce overall project costs and prioritize limited resources, MST methods should only be used once traditional and less expensive methods to identify potential suspect areas have been conducted (FIB monitoring, stormwater toolkit, etc.). A number of samples collected during the 2018-2020 monitoring seasons, but not prioritized for immediate lab submission, remain available for analysis. Although analyzing these samples may help project partners better understand DNA source distributions and concentrations over the course of those three monitoring seasons, MHB recommends prioritizing resources for new sample collections as bacteria sources often change over time and under varying environmental conditions.

6.3 Wastewater Infrastructure Investigations and Upgrades

MHB recommends the Town continue routine maintenance and investigations of the integrity of wastewater disposal systems servicing GRB properties, particularly those in close proximity to documented priority areas where human DNA sources have been detected. Where feasible, consider expanding areas within the watershed serviced by municipal sewer to decrease the number of aging, and possibly malfunctioning, subsurface systems potentially contributing to water quality impairments. Continued maintenance of inspection and infrastructure inventory files generated over the course of this project is recommended to support future planning and assessment efforts. These actions will support current watershed water quality improvement goals and assist with preventing future pollution issues. As part of these efforts, consider:

A) Municipal Sewer

- Encouraging property owners to connect to the municipal sewer system when available by providing education regarding the impacts of failing septic systems on GRB water quality and public health. Consider financial incentives, when possible, to support participation by offsetting costs to connect.
- Continuing monitoring of municipal sewer system for any compromised infrastructure or infiltration/ exfiltration into or out of the system.

B) Private Subsurface (Septic) Systems

- Expanding current review of parcels serviced by septic systems near priority regions and continuing property surveys for suspect properties.
- Investigating septic replacement grants where applicable (See *4. Pursue Funding Opportunities – Small Community Grant Program* below).
- Encouraging regular septic system pump-outs, including the consideration of offering a septic pump-out reimbursement and/or inspection tax credit as an incentive. Examples include *Old Orchard Beach:* Reimbursement of septic waste hauler charges towards real or personal property taxes, and the *State*

of Massachusetts: Credit for repair or replacement of a failed cesspool or septic system to comply with state sewer system requirements.

6.4 Stormwater Infrastructure Inspections and Upgrades

As time and resources allow, it is recommended that Kennebunkport continues routine maintenance of stormwater infrastructure servicing areas of the GRB watershed, including the consideration of possible expansions to areas currently not serviced and upgrades of aging structures to ensure management strategies are effective at minimizing impacts to both watershed and downstream beach water quality. Efforts to map all stormwater system structures (outfalls, basins, pipes, etc.) and maintenance of inventory and property inspection files generated over the course of this project should continue to aid with future planning and assessment efforts. When feasible, consider water quality testing of identified basins and outfalls to help identify possible illicit connections or illegal dumping activities.

6.5 Establish and Maintain Collaborative Partnerships

The development and implementation of a successful management plan for the GRB watershed moving forward will be largely dependent on effective collaboration between project partners and stakeholders. By soliciting expertise from members of the community, state and federal partners, and local organizations (conservation commissions, planning and select boards, land trusts, universities etc.), Kennebunkport can increase their understanding of the GRB watershed and leverage limited resources to develop effective strategies to protect and restore water quality in the GRB watershed. Consider collaborative efforts with the City of Biddeford to identify potential pollution sources in Biddeford's portion of the GRB watershed.

6.6 Pursue Funding Opportunities

Investigate and pursue funding opportunities to support interns, continue baseline water quality monitoring and additional source tracking work, and incorporate innovative resource management and water quality monitoring strategies. Consider working with local experts and stakeholders to research opportunities and develop applications. When possible, MHB recommends enlisting the support of a local conservation district or environmental consultant to assist with these efforts as funding applications are extensive and very competitive. Depending on the grant program, municipalities may need to work with a sponsoring agency to be eligible to receive funds. Examples of existing funding opportunities include:

A) Nonpoint Source Water Pollution Control Grants – Maine Department of Environmental Protection (Maine DEP)36. Grants awarded to support communities with restoring or protecting waterbodies identified as NPS Priority Watersheds. Funding opportunities include: 604(b): Grants to develop a watershed-based management plan, and 319(h): Grants to implement a watershed-based management plan.

B) Coastal Community Grant Program (Municipal Planning Assistance Program) – Maine Department of Agriculture Conservation and Forestry

(DACF). Grant program geared towards providing technical and financial assistance to municipalities to improve Maine's economy. Examples of funded projects include but are not limited to those focused on sustainable development, water quality and land use improvements, restoring and preserving coastal habitats, and coastal resiliency.

C) Maine Outdoor Heritage Fund Grant Program – Maine Department of Inland Fisheries and Wildlife. Grant program awarding funds for projects that fall into four distinct categories including promoting conservation of fish and wildlife habitat, acquisition and management of public lands, conservation of endangered species, and conservation law enforcement. This program requires sponsorship from a Qualified Sponsoring Agency to submit an application.

D) Small Community Grant Program – Maine DEP. Grants awarded to municipalities to support replacement of malfunctioning septic systems. Proof of an existing pollution problem is required to qualify. Grants to property owners are based on annual income.

6.7 Expand Education and Outreach Initiatives

Expand current education and outreach efforts to communicate water quality findings and best practices to the general public, residents, and other interested stakeholders. This transparency will facilitate informed decision making for resource managers and beach users and will be instrumental in supporting Kennebunkport's efforts to bring awareness to water quality issues, address suspected pollution sources, and protect public health at GRB. To accomplish these objectives, MHB suggests Kennebunkport continues to work with partners (e.g., MHB, GRB Advisory Committee, Maine DEP, local K-12 schools and universities, the Conservation Commission) on outreach and education campaigns promoting best practices such as septic system maintenance, responsible pet stewardship, and stormwater management. Examples of outreach initiatives include:

A) Promoting septic system maintenance and best practices: Continue distribution of EPA factsheet, septic magnets, and other relevant materials to property owners throughout the watershed (See *Local Actions to Improve Water Quality – Education and Outreach*) and given the increase in the number of homes being utilized as rental properties in recent years, documenting these usage differences can support more effective targeting of outreach material distributions. It is possible that seasonal visitors to the area may not understand how to properly maintain a septic system if they've never owned one themselves.

B) Expand pet waste management education campaign. Continue pet waste education efforts throughout the watershed, specifically targeting regions where DNA results indicate the presence of canine DNA. These positive detections were observed for portions of each of the three GRB subwatersheds and included downstream sites (BR-1, GR-5, SB-3, CG-1, BP-1, GR-1), Sandy Pines Campground site CG-2, and several upstream locations (BR-3, LR-1). As part of these efforts, consider:

Properties at Goose Rocks that are connected to the municipal sewer system (depicted in blue) as of 2019.

Implementing pet waste specific signage or modify existing signage to educate the public regarding the impacts of undisposed of pet waste on water quality; Installing pet waste bag stations and trash cans, particularly at beach entrances, to encourage pet waste disposal; and collaborating with Sandy Pines Campground to provide pet waste best practices information to seasonal visitors.

C) Initiate stormwater public outreach program to raise awareness and educate the public regarding the benefits of stormwater management and water quality issues related to stormwater runoff. Implementing this type of program in conjunction with a pet waste education campaign is advantageous as many of the pet waste threats to water quality impairments are exacerbated by stormwater runoff. In addition to improved signage, storm drain stenciling is a simple, low-cost method to create public awareness regarding the goal to reduce stormwater pollution.

6.8 Continue Implementing Precautionary Advisories

Given the history of impaired water quality at Goose Rocks Beach, it is recommended that Kennebunkport continues to post precautionary rainfall advisories when local precipitation levels exceed 1 inch within 24 hrs. MHB recommends the advisory remains in place for at least 24 hrs. after the rainfall ends or if water quality monitoring conducted after the advisory is issued demonstrates bacteria levels below the EPA safety threshold. MHB recommends the Town continues to post permanent signage until bacteria results are consistently below the safety threshold at the high-risk portions of GRB (GR-1: mouth of the Little River and GR-5: mouth of the Batson River) where the effluent of the rivers has the greatest potential to negatively impact water quality. In 2020, Kennebunkport updated their swim advisory signs to include specific language pertaining to the swimming beaches located at the mouths of the Batson and Little Rivers.

6.9 Promote Best Practices

Kennebunkport is encouraged to implement low impact development (LID) practices throughout the watershed such as reducing impervious surfaces to allow rainwater to naturally percolate into the ground, preserving and recreating natural landscapes to treat polluted runoff, protecting natural water flow, restoring vegetative buffers (sections of vegetation adjacent to bodies of water used to minimize runoff effects), etc. Where suitable, Kennebunkport should consider implementing stormwater best management practices (BMPs) to minimize the negative impacts of storm water runoff on downstream water quality. Examples of these BMPs include, but are not limited to, biofilters, wet ponds, drywells/infiltration basins, and vegetated swales/ditches.