

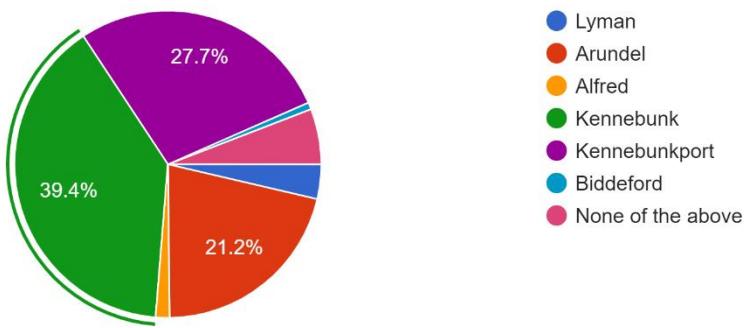
Kennebunk River Watershed-based Management Plan Engagement Summary
October 2, 2020, Annie Cox, Wells National Estuarine Research Reserve

In August 2020, the Clean Water Kennebunk River Story Map was developed to share about the Kennebunk River Watershed-based Management Plan project and findings from the Kennebunk River Water Quality Report & Watershed Stressor Guide (FB Environmental Associates, August 2020). Participants were asked to take a survey after reading the Story Map and to join a community-led Zoom discussion. Below are the findings from the survey and highlights from the Zoom Discussions.

Survey Results

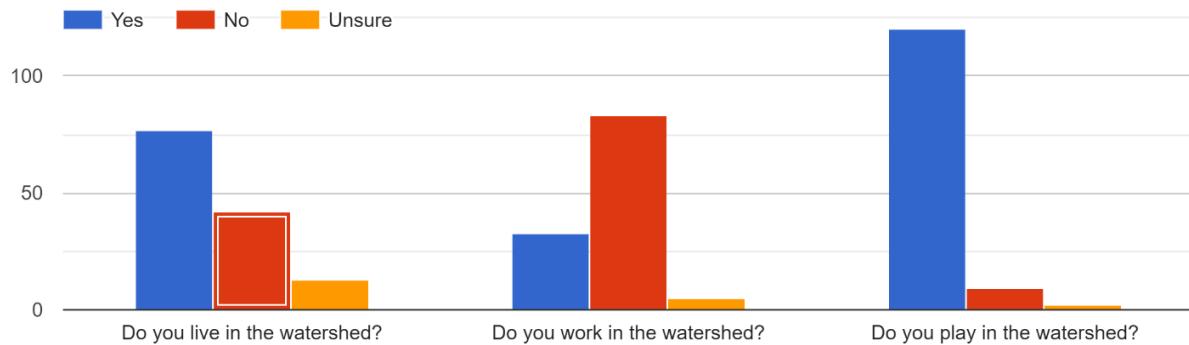
In which town do you live?

137 responses



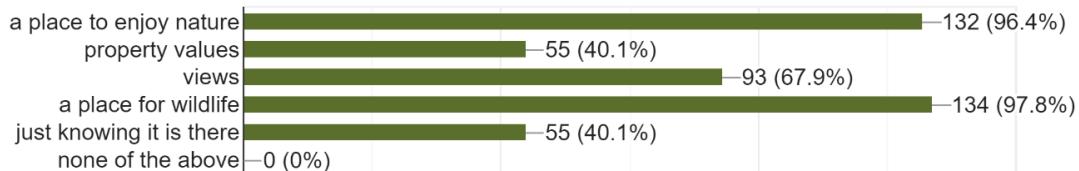
None of the above: 5.8% (8); Biddeford: 0.7% (1); Lyman 3.65 (5)

The Kennebunk River watershed is nearly 60 square miles from Kennebunk Pond in Lyman to where the river meets the sea at Gooch's Beach.



Please share why the river is important to you, check all that apply:

137 responses

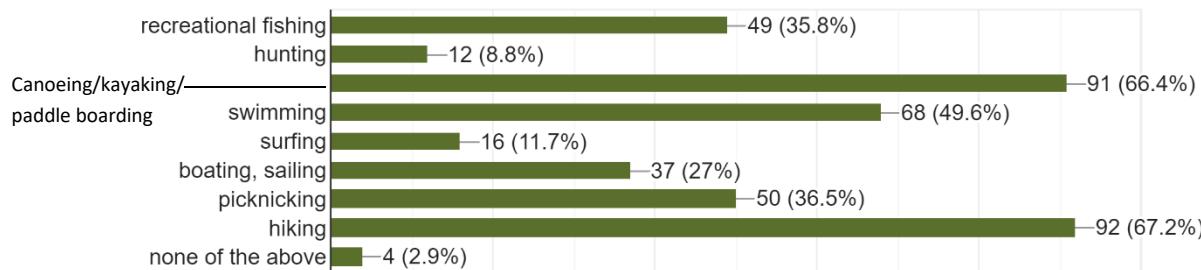


Other (fill in):

- Spiritual Sustenance
- its place in the overall health of the region
- A measure of good practices regarding land use and development in the watershed
- ecosystem services it provides!
- Clean watershed means cleaner ocean
- It is a gift of nature.
- It's part of the natural geo habitat.
- general health of the environment. Would love to swim in it.
- historical and educational value - student field trips!
- Protection of water supply and quality for the health and safety of our community and future generations
- clean river is important for clean ocean
- ecosystem services provided by the river and its watershed like water filtration, flood prevention and carbon storage
- Every citizen should be concerned about water quality, no matter where they live
- Property has river frontage
- I love the ocean, and Maine is sacred ground for me/us.
- Family history
- An important part of our ecosystem
- Water health quality
- Water is life.
- nat. resources
- water quality of ocean

3. Please share how you recreate in the watershed , check all that apply:

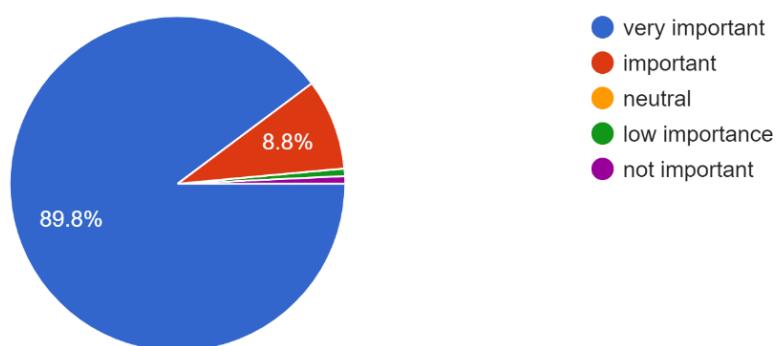
137 responses



Other:

- stargazing, water-gazing
- beach walks
- Really just wandering about with my dog, enjoying nature.
- Just being near.
- Just plain walking
- bird and nature watching
- Mountain Biking
- Walk on the beaches
- bird watching and nature photography
- The watershed is an integral part of my land and my life
- I haven't canoed or swam in the watershed for a few years but I would want it to be clean no matter what
- Bird watching
- Golf
- sitting in a chair on the banks of the river in the evening

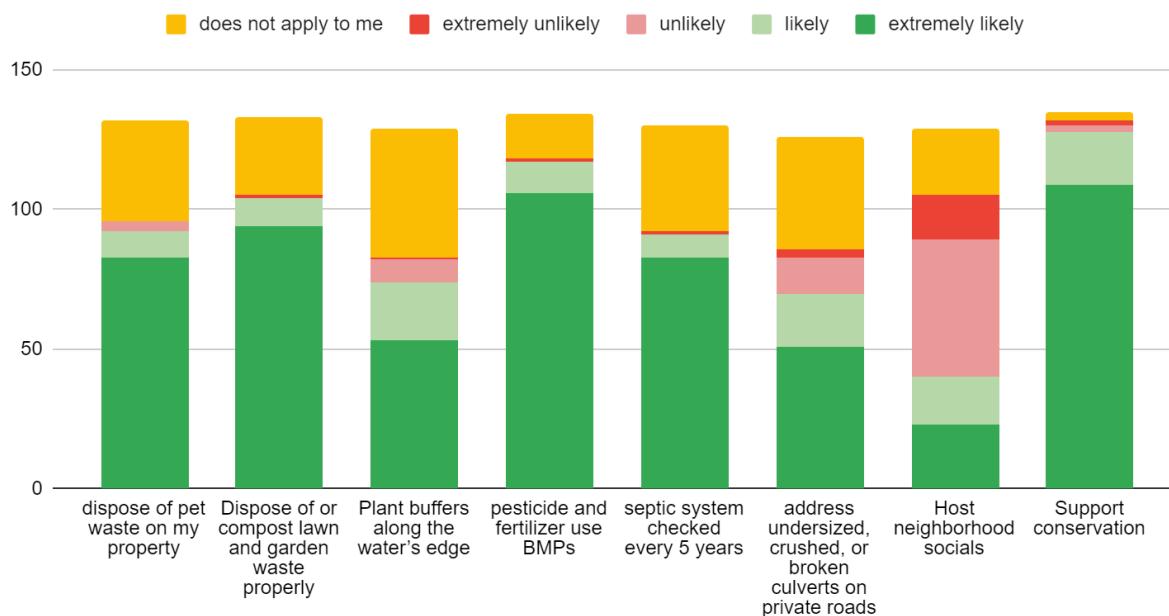
The River main stem is expected to be classified by the State as impaired for aquatic life. Water quality testing since 1995 has shown the River has pollutants and bacteria entering it. How important is cleaning up these sources to you?



How likely are you to take the following actions on your property to reduce and prevent pollution that affects the Kennebunk River?

- Pick up and dispose of pet waste on my property
- Dispose of or compost lawn and garden waste properly (e.g., not in or next to the river)
- Plant buffers along the water's edge
- Follow pesticide and fertilizer use best management practices
- Have my septic system checked every 5 years
- Work with my neighbors to address undersized, crushed, or broken culverts on private roads
- Host neighborhood socials to educate residents on the connection of small tributaries to the Kennebunk River.
- Support conservation of land in areas focused on water resource protection

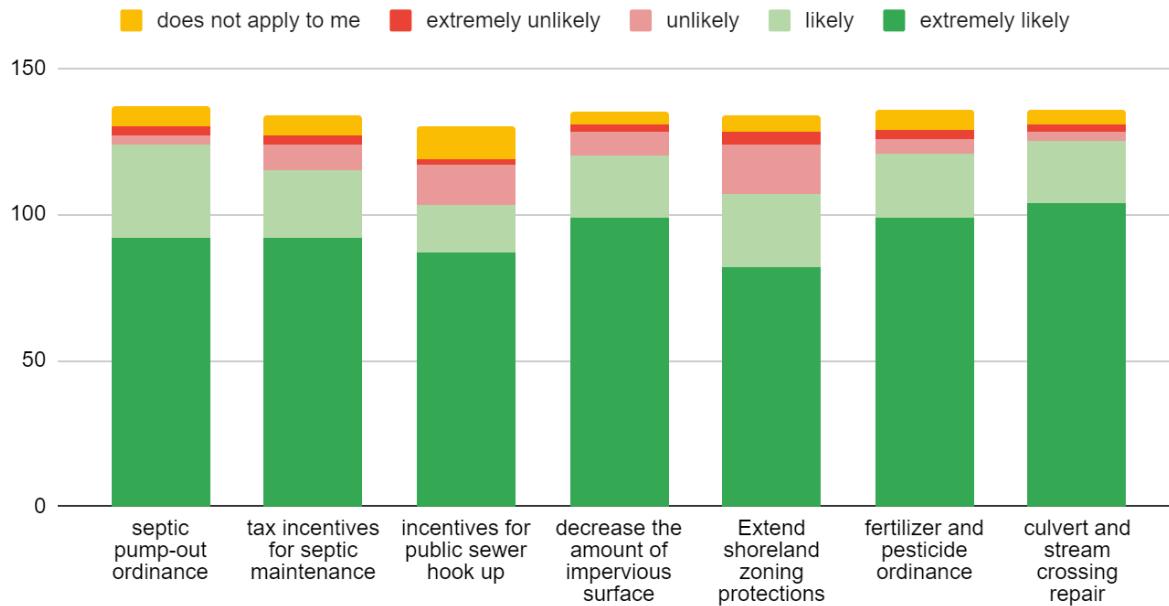
How likely are you to take the following actions on your property to reduce and prevent pollution that affects the Kennebunk River?



How likely are you to support the following efforts by your town to reduce and prevent pollution that affects the Kennebunk River?

- Reduce pollution caused by septic leaks through changes to local ordinances, such as a septic pump-out ordinance
- Reduce pollution caused by septic leaks through tax incentives for septic maintenance
- Provide incentives to homeowners and businesses to hook-up to public sewer
- Reduce pollution runoff into the watershed through ordinances that would decrease the amount of impervious surface
- Extend shoreland zoning protections further than state requirements.
- Reduce algae and pesticide runoff through a fertilizer and pesticide ordinance
- Support municipal funding of culvert and stream crossing repair

How likely are you to support the following efforts by your town to reduce and prevent pollution that affects the Kennebunk River?

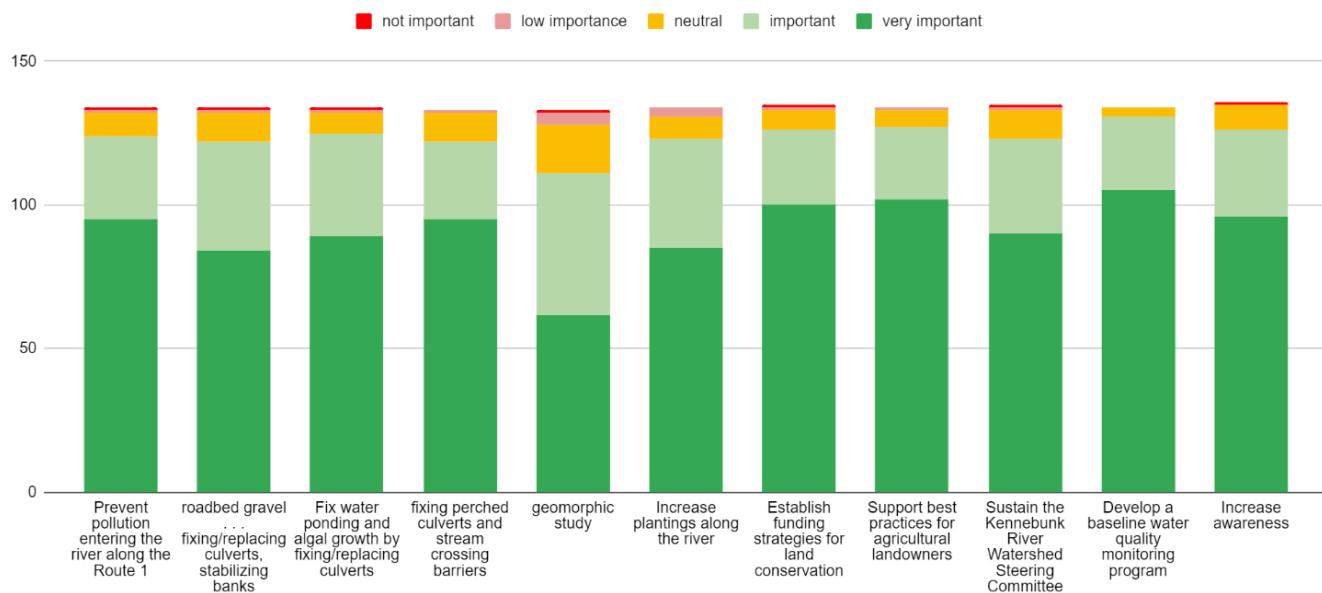


The following is a list of action items identified to help reduce and prevent pollution and bacteria entering into the Kennebunk River. Please help us prioritize the following actions for development of the watershed-based plan.

- Prevent rainwater from picking up sediment, pollution, and debris before entering the river along the Route 1 developed corridor
- Prevent roadbed gravel entering the river by fixing and replacing culverts, stabilizing banks
- Fix water ponding and algal growth by fixing and replacing culverts
- Allow fish to move up and down streams by fixing perched culverts and stream crossing barriers.

- Determine mainstem riverbank erosion cause by studying physical processes responsible for shaping the character of the river (e.g., geomorphic study)
- Increase plantings along the river to stabilize riverbank from erosion and prevent pollution, bacteria and debris from entering it.
- Establish funding strategies (and/or support land trusts) for land conservation and protection in all four communities. Land open for recreation and protected from development, absorbs and cleans water before entering our streams and rivers.
- Support best practices for agricultural landowners (e.g., a working group to seek funding to support nutrient management plans, soil conservation plans, manure storage).
- Sustain the Kennebunk River Watershed Steering Committee to implement Kennebunk River Watershed-based Management Plan Actions. For example: hold annual meetings to re-visit milestones and action items identified in the forthcoming Plan; Apply for state and federal grants and/or seek other funding to support implementation of planning recommendations in the action plan
- Develop and implement a baseline water quality monitoring program to measure if pollution and bacteria reduction efforts are working over time.
- Increase awareness around the importance of septic system maintenance through educational campaigns or outreach events.

The following is a list of action items identified to help reduce and prevent pollution and bacteria entering into the Kennebunk River. Please help us prioritize the following actions for development of the watershed-based plan.



Please use the following space to share your thoughts or concerns about developing the Watershed Based Management Plan for the Kennebunk River Watershed. Responses (edited to keep anonymity)

- Thank you for all your hard work. I would like to help you in your effort
- I live in both Kennebunk and Lyman (summers at Kennebunk Pond); 3rd generation in this situation.
- The Kennebunk River is vital to our towns for many reasons. We all should be responsible stewards in caring for such a beautiful gift of nature.
- No concerns, it is important to develop this plan!
- As a Planning Board member, we have the ability to propose changes to regulations that would provide additional protections for both the Kennebunk and Mousam River watersheds.
- I worked for a water district for a number of years and worked closely with the water scientists there and saw the difference they had during my time there. I agree that the watershed needs to be protected and definitely has room for improvement based on the findings. I will say as someone who works within the regs of shore land zoning, I would not recommend trying to be more strict than what the state already has in place. That being said I love the Kennebunk river and have been working and fishing it my entire life, I support whatever measures group recommends.
- I think most people want to be good stewards of the watershed, but need leadership from their towns, and state/federal funding incentives to follow through.
- The Kennebunk River is a very important but easily overlooked natural asset that in many ways helps define the character of the towns it passes through on its way to the sea. Its ability to support and sustain biodiversity and recreation is now at a tipping point. If polluted any more, it will become even harder and more expensive to bring back to life. This is the time to act with determination and purpose.
- The presence of Phosphorous and Bacteria will be most effectively reduced by insuring Agricultural and Residential Lawn Maintenance Best Practices regarding fertilizers including manures. Restrict livestock from entering tributaries and the river by fencing. Maintain a healthy Riparian Barrier along entire length of river and its tributaries. Educate home owners and Lawn Maintenance Companies adjacent to the river and its tributaries in particular to Best Practices in the vicinity of a waterway...ie, maintaining a robust Riparian Barrier; the use of low phosphorous fertilizers; fertilizing prohibition within twenty feet of waterway; the use of rotary spreader guards when in proximity of waterway. A healthy leach field will not endanger a waterway. Pumping of tanks every five years as a minimum is good practice, but may not be needed if a healthy bacteria is active in the tank. I do not see this as a significant contributor to bacteria bloom or high phosphorous content in the river.
- I am all for promoting conservation and reducing pollution from unsustainable practices. However, if mandates regarding home septic tanks are implemented, there needs to be financial assistance and incentive. It is time the town/state invests in conservation and helps residents change their ways or update their systems.
- I love to swim in the ocean, one of the reasons I chose to live in Kennebunk. However I am very skeptical about the water quality at Gooch's Beach. I fear the bacteria level is often very high. I once developed a severe intestinal issue after swimming there. So I never swim after heavy rain or when the waves are brown!!! There does not seem to be any regular monitoring of the bacteria count. That is not safe.

- I think it is important to specifically identify the source of pollutants. Is it primarily septic overflow? Or agriculture runoff? Or culvert damage/quality? Before specific remedial actions are taken, in order for money spent in remediation be best allocated for greatest positive effect.
- We already spend far too much money through taxes towards feel good projects that all too often do absolutely nothing but make us think we're doing so much good. We in Kennebunk at least have good practices and land management already in place. And we have a sufficient number of acreages already set aside for trails and tree growth without taking more land off the tax roles for more walking/hiking trails.
- A plan should also be developed to deal with the PFAS chemical contamination that is in the river. The water is unsafe to drink!
- I'd like to see a reduction in pesticide use on home lawns and home gardens. I don't know if it will happen voluntarily and I would support an ordinance that restricts pesticide use.
- I'm so happy to see this is being looked at.
- I think this is great that something like this is finally coming to light. I've lived on the main river for many years. As a kid we would swim in the river all the time and I would not do that now. Too many years of people throwing their landscaping debris and junk into the river and it is very sad.
- Need to STOP building on the waterfront! More protected land, less yachts coming into the river! Also need to reduce dog waste by banning dogs on beaches.
- I think most people really don't know anything about how all of this works. We live on the river in dock square so this is important to us. I look forward to learning and getting involved in ways that would be available based on my limited knowledge. Thank you for all of the time you spent on your research and education.
- We have many residents and visitors using the river for recreation. If this is hazardous to health we need to get the word out AND fix it! We cannot have a polluted river being the centerpoint of our communities.
- Being smart about development is important. Having higher density developments that then keep 'common space' or conservation space near the river are important. Everyone have 2-5 acre lots is part of the problem.
- I'd like to see a reduction in pesticide use on home lawns and home gardens. I don't know if it will happen voluntarily and I would support an ordinance that restricts pesticide use.
- My father in law tells me about how beautiful the river used to be when he was a child and that once Kennebunk got built up it changed. The fish died off and the water isn't as clear. He says you can't see the fish swimming like you used to.
- I am very concerned about the flow of water that comes from Summer Street as well as Summerfield's and Cheshire Meadows and has eroded the riverbank to quite extreme levels.
- A very serious problem exists with the use of poisonous pesticides. Central Maine Power and many other agencies use Round Up as a general pesticide. It is used in watershed areas as well. Round Up is Agent Orange and causes cancer. This pesticide MUST be declared illegal in all of the towns along the KBK River.

- A recent survey by Maine Audubon and Maine Dept of Fish and Wildlife found sea run brooke trout use the Kennebunk River to spawn. This native species needs clean water to continue to survive as Maines iconic native fresh water fish.
- Please include opportunities for continuing engagement with students in the district - There is a long history of the "Kennebunk River Trip" for grade 2 at KCS plus macroinvertebrate sampling in 7th grade science at MSK, for example.
- I think Lake Brook should be included.
- I don't feel that I am equipped to prioritize the action items above but feel it is incredibly important to take action. As a local builder, I have seen the effects of having local ordinances differ from statewide practices and it can be a nightmare, which is why I would likely not support increased shoreland zoning measures, although I am open to that idea depending on what they are. I think it would be better if it could be a statewide initiative vs. town to town for more consistency. It would also be more likely to succeed in that case, in my opinion.
- Most important to issue MORATORIUM ON SYNTHETIC PESTICIDES LIKE OTHER TOWNS!!
- development causes water pollution
- Dogs should be banned on all the beaches as their fecal matter has to be adding to the problem.
- Thank you for the opportunity to participate. The story map was informative and easy to understand. The survey allowed me to provide input that would have been impossible because of the pandemic. I hope this method reaches even more people that would normally be reached by in person meetings.
- This community action is long overdue.
- Thanks for pursuing this important effort!
- Education...not ordinances...
- I believe the best thing any town/state can do to protect its waters is to ban fertilizers and weed killers (RoundUp, etc) that are non organic or contain toxic materials that increase algae growth. Secondly, there should be continual trash clean up on our streets, around the rivers, etc that is implemented as part of city workers jobs or by having prison workers do it like they do along highways, or by encouraging local groups to volunteer to do weekly trash clean ups. As a town/city/state, we should use more permeable paving solutions where applicable and possible so that the oil run off doesn't get to the rivers.
- I am a board member of a condominium association. Due to the urging of many our residents, we have very recently changed our practice regarding lawn maintenance, since runoff from our property inevitably ends up in the River. This is an accomplishment for us, albeit long overdue. We have identified several erosion issues, with the assistance of the YCS&W district. I look forward to your discussion.
- Thanks for preserving Maine for us.
- I feel strongly that education needs to come first if you're going to get more support from the river communities. I have to admit that even though I live on the river I was unaware that pollution was a problem in the river and I would like to know more.
- Education and avoiding "one requirement fits all" thinking will be most important in my opinion. Septic system repair is a very touchy thing and can be quite expensive, depending upon the age of home. We had our system checked because the wetlands (that a few houses in our neighborhood

share) smelled bad. We had our system pumped, and we were told there was virtually nothing in the tank (after 15 years of use). The neighbor next door simply suggested we "get used to the smell."

This project is so important, but the tenseness in the neighborhoods now over the differences of opinion on presidential candidates and political parties and activism and Q Anon will be a major factor.

- Happy to help
- "Use the local newspaper to have regular articles and maybe a weekly column.
- Coordinate with other like minded groups (conservation commissions, land trusts)
- Organize a resource list or website with links to state and federal agencies, etc.; The US Water Alliance would be a valuable source. From my personal watershed/environmental planning experience, I know how tough it is to get consensus from diverse stakeholders in a watershed; the pro-environment people will turn out but development/ business interests are hard to get to the table until they are personally impacted.
- Identify some case studies of successful plans in similar watersheds — no need to reinvent the wheel!
- Pick a couple initiatives to focus on and don't get spread too thin. For example, your septic tank ideas may be a high gain area (FYI, innovative septic tank management is a huge issue on Cape Cod.) I would be interested in seeing data on the number and location of unsewered homes in the watershed communities.
- I am 100% in support of cleaning up the Kennebunk River Watershed, as well as all rivers in our bioregion. This effort should be across all towns. I applaud you for initiating it. Thank you.
- Kennebunk High School students perform and interpret water quality testing.
- 1) Need septic inspection program mandated every 2 years along lake & river; 2) Need impact (no impact) statement for new or renovated properties that their is zero or low impact as measured by run off of development; 3) need baseline monitoring at source and various locations along river to coast. I own two tracts on Kennebunk Pond 35 & 37 acres and would be willing to conserve the 37 acre tract via KLT. No nitrogen pesticides/fertilizers. Include Rt 111, Rt 35 & turnpike in the Rt 1 developed corridor pollution prevention action

Community-Specific Zoom Discussions

Meeting Purpose & Objectives

- Provide participants an opportunity to engage with the Kennebunk River Watershed Steering Committee about:
 - The Kennebunk River Watershed-Based Management Plan Project
 - The Kennebunk River Watershed Water Quality Monitoring History & Results
 - Actions survey respondents support
- Provide an opportunity for participants to make recommendations and prioritization for actions in the forthcoming Watershed-Based Management Plan

Agenda

- Welcome (Wells Reserve)
- Introduction to project (York County Soil & Water Conservation District)
- Kennebunk River Water Quality Overview with focus on invited community: Lyman, Arundel, Kennebunk & Kennebunkport (Technical Advisory Committee Member: ME DEP or FB Environmental)
 - Question & Answers, Discussion
- What we heard from the survey (Wells Reserve)
- Action Item Discussion, Prioritization, Feasibility
- Wrap Up & Next Steps

Kennebunk River Watershed Engagement Session: Lyman Notes

August 25, 2020, 7-8PM. 10 participants.

Are the watershed issues similar to other watersheds in Maine?

Similar to other in Maine—difference with Kennebunk River Watershed was that it was recently meeting state class standards. Upstream of Route 1 has a lot of insects—but too many of the wrong kind. Large watershed, large scope.

Pet waste/farm waste . . . what are the solutions?

Pet waste = pick up after dog (or horse), particularly if on a trail (E.T.) or your yard—but that still washed off into streams.

Farms—many farmers are doing great work. Or need help, financial or technical assistance, e.g., for fencing cattle out of a ditch.

Septics aren't really spoken about here and that's a possible source but not highlighted because bacteria has been high *after* rain, which points to it coming off the land.

How to get people to care?

Education to help with people understanding issue (e.g., pet waste) is a problem.

Impaired River, what does that mean for communities?

DEP will have to work with communities to improve the stream. Come up with a plan. TDMR Report will have to be put together. Management Plan will guide implementation to improve impairments.

Survey—small amount of survey respondents from Lyman, so participants were asked to pick their top 3 action strategies. Results:

- Prevent roadbed gravel entering the river by fixing and replacing culverts, stabilizing banks (3 votes)
- Fix water ponding and algal growth by fixing and replacing culverts (0 votes)
- Allow fish to move up and down streams by fixing perched culverts and stream crossing barriers. (1 vote)
- Determine mainstem riverbank erosion cause by studying physical processes responsible for shaping the character of the river (e.g., geomorphic study) (3 votes)
- Increase plantings along the river to stabilize riverbank from erosion and prevent pollution, bacteria and debris from entering it. (2 votes)
- Establish funding strategies (and/or support land trusts) for land conservation and protection in all four communities. Land open for recreation and protected from development, absorbs and cleans water before entering our streams and rivers. (1 vote)
- Support best practices for agricultural landowners (e.g., a working group to seek funding to support nutrient management plans, soil conservation plans, manure storage). (1 vote)
- Sustain the Kennebunk River Watershed Steering Committee to implement Kennebunk River Watershed-based Management Plan Actions. For example: hold annual meetings to re-visit milestones and action items identified in the forthcoming Plan; Apply for state and federal grants and/or seek other funding to support implementation of planning recommendations in the action plan (1 vote)
- Develop and implement a baseline water quality monitoring program to measure if pollution and bacteria reduction efforts are working over time. (0 votes)
- Increase awareness around the importance of septic system maintenance through educational campaigns or outreach events. (1 vote)

Discussion

River erosion during Spring in Arundel, plantings along edge would help with erosion.
Clay soil.

What would a geomorphic study look like? Hire a consultant to look at problem issues, e.g., erosion. Culvert impacts. Get an idea of issues and locations. Grant funding available.

Problems with river with high bacteria? Yes, high bacteria and high nutrients, could be same or separate sources. Erosion of bank part of that? Yes, source of nutrients (clay=phosphorous)

Missing actions?

Feels like plantings along the river is the 'end-of-the-line' solution. Carlisle Brook is jumping its bank yearly (used to be 4-5 yrs) and flooding fields. Have greater volume of water, more extreme precipitation events. Do not have enough vegetation all over the place as there used to be, to help with slowing down water velocity. Change in landscape overtime to manicured lawn and removal of trees and roots. Need more places to absorb water and filter. Logging was referenced in survey. Not opposed to it, do logging myself. Need a Logging Smart program (like Lake Smart). There are programs in place, but it's only as good as it is enforced. Need more pervious surfaces.

YCS&WCD has provided workshop for small woodlot owners. Absolutely promote working with a forester before logging, help with best management practices in place before, during and after an operation.

Plenty of beavers in Lyman, right now as we speak damning Carlisle Brook, all farmers here have a beaver problem. Uptick in already high beaver activity.

Kennebunk River Watershed Engagement Session: Arundel Notes

August 27, 2020, 7-8PM. 34 participants.

- Impacts of Sod farms on Water Quality?
- Overboard Discharge Impacts
- Concern about use of fertilizers on the golf course
 - Mentioned that they are part of SC and value the water quality of the river
 - There may have been previous discussions with YCSWCD on this issue
- Concern about waterfowl as a potential source of bacteria and nutrients
- Current surveys show river not meeting aquatic life standards on route 1 crossing and above
- Question about most problematic area, Meagan mentioned Duck Brook has shown most concerning bacteria levels

- Potential sources include pet and horse waste, Eastern Trail runoff, wildlife, beavers
- Question about overgrown trees/too many trees along shoreline creating issues?
- Concern about boat pump-outs
 - Currently none in watershed
- How does Kennebunk River compare to Mousam River in terms of water quality?
 - Mentioned Kennebunk Mousam Rivers Alliance and Jacob Aman at the Wells Reserve at resources
- Discussed potential septic system ordinance requiring cleaning every 5 years
 - Several citizens voiced concern that this would be unenforceable and not feasible/necessary for everyone
 - York has a 2 year pump out ordinance for Cape Neddick River Watershed
- Discussed culvert repair on town roads vs private
 - In town it is on an as-needed basis
- Question about Alewife Brook and Pond
 - Issues with beaver dams blocking fish passage
- Impact of reduced shoreland setbacks
- How to address beaver contributions
- Impacts of heavy development/well drilling on groundwater and stream WQ
- PFAS being monitored as part of this project? Do we know what impacts those are having on WQ?

Kennebunk River Watershed Engagement Session: Kennebunk and Kennebunkport Notes

August 31, 2020, 7-8PM. 49 participants.

Water quality issues the same throughout the state?

Bacteria issues are common in rivers in southern Maine and midcoast Maine. Contrast of rural headwaters to urban outlets. Guided the sub watershed approach, helps with management issues. Stormwater issues and solutions are different from rural areas to more urban—for example route 1 corridor, where space is limited and need more engineered designs to infiltrate stormwaters.

Overload discharge permits along river Kennebunk mapped as well?

State has them mapped

Category of Wonderbrook? Condo Association runoff goes all to that brook which has water only part of the year.

Don't have Water Quality Data there. York County Soil & Water CD has worked there on erosion issues

Brown Slime on rocks in river? High bacteria count in river?

Dry periods this summer & warm temperatures. Benthic, bottom growth of algae. May or may not be connected. Could be higher nutrients. Likely parrophyte growth. Algae growth increases in warm weather and in places where riparian vegetation has been cleared.

Is it only bacteria that we are monitoring? Where do pesticides come in? Are non-natural chemicals being monitored as well and are they part of these results?

Pesticides are challenging because they are expensive to monitor, so they are not part of these results. Looking into it as part of another FB Environmental project in another Maine River. Maine Board of Pesticide Control has recommendations on key chemicals you can look at, but even such its hard and expensive to monitor and trace. For this plan looking at stressors on aquatic organisms that you typically see: nutrients, Oxygen, temp, Optical Brighteners, bacteria. Less expensive and can leverage resource to get a picture of the river, but it doesn't mean that things like pesticides aren't an issue.

Comment on impacts of limited setbacks in lower village business district?

Zone in town, back when it was amended in early 90s, have reduced setback because of water front uses and a lot of land use was already in place. Traditional Shoreland Zone has a 75-foot setback, we get down to 25-feet, town got that in place because their providing a higher level of wetlands protection. But as development occurs, we're not under realm of DEP WQ standards. Times have changed, know we don't have a great way of monitoring it, this is a challenge on our radar—not proximity so much, but how we look at redevelopment activities because those land uses already exist. A challenge we hope to better understand and take away from this project.

Community Education and Awareness Initiative Taking Place?

- High School Beach Profile Monitoring
- Wonderbrook Condominium Workgroup with York County Soil & Water Conservation District
- Education & Outreach will be a large component of the next phase for the plan
- Middle School does river trips and testing

Lake Brook/Gooch's Creek be added to this planning? Yes, will be added in final plan, didn't survey.

Publish water quality monitoring results in media?

Have shared in the past, they are not always interested in publishing our press releases.
The plan release will be shared with Media.

Top Pollution sources, and mediation plan to address those?

Know some issues particular to area, but a lot questions left & research needed. Ground research looking at culverts and erosion. Gives a starting place. Start small. Good handle on how to do that, no smoking gun.

Thanks to Town of Kennebunk for funding bacteria testing, Nelson Analytical Lab analyzing test at reduced price over 11 years, Idexx providing sampling equipment to get a greater discounted rate.

DNA testing for identifying fecal matter?

Great tool, Maine Healthy Beaches uses it with communities. Look at DNA and co-indicator parameters: ammonia, phosphorous, bacteria, DNA, bacteria is variable, gives you a handle on issues. DNA tells if its human, dog, cattle. Expensive. Use co-indicators to home in on trouble areas and bring in DNA to look further. Did some DNA in 2018.