

Appendices

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Appendix A – Property Owner Survey

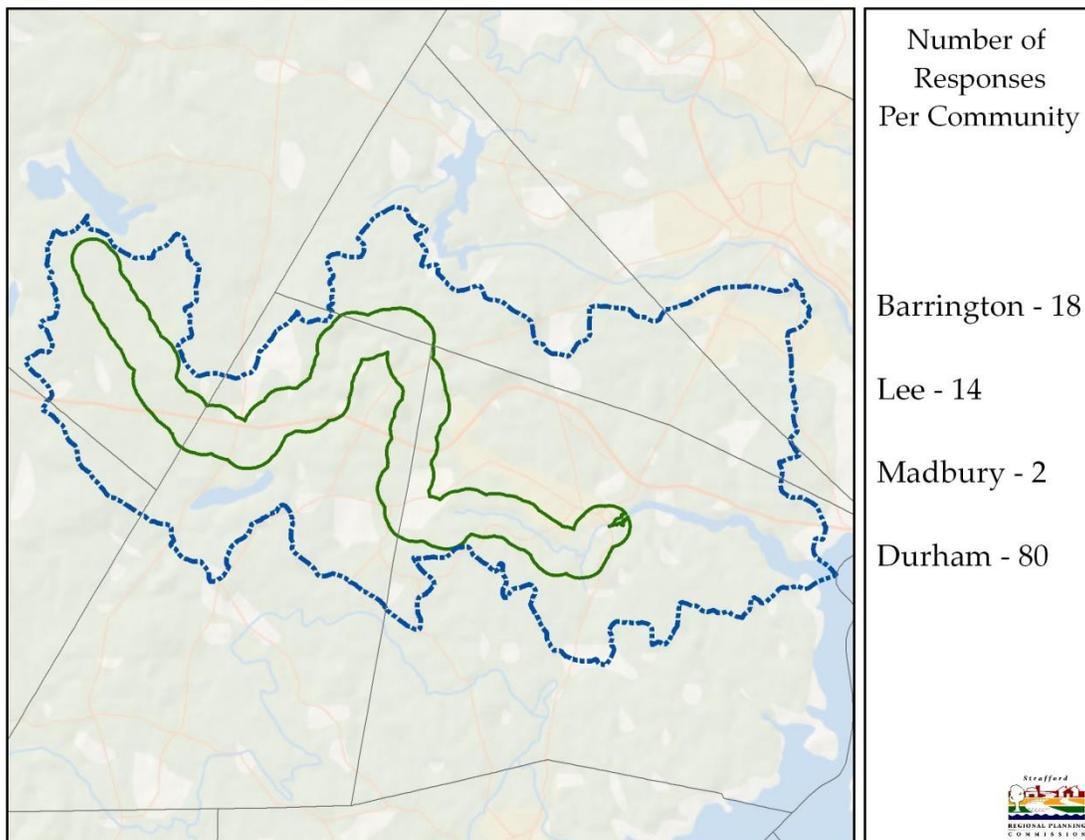
Executive Summary

In early 2014, the Oyster River Local Advisory Committee, in partnership with the Strafford Regional Planning Commission, distributed a questionnaire to property owners on or near the river as part of their information gathering component for the development of the Oyster River Corridor Management Plan. This questionnaire was created to test for changes in land use and property owner concerns from prior surveys completed in 2001 and 2009. It also included questions that were related to the corridor management plan being developed for the river.

A formal letter accompanied the survey to inform residents that the river corridor management plan, when completed, will identify short, intermediate, and long-term protection goals for the river and watershed, along with strategies to address them. The plan will be shared with towns along the corridor with recommendations as to how they might implement its goals and strategies.

Out of the 512 surveys sent out, 114 responses were received; this constitutes a 22% response rate. A breakdown for each community is represented in the map below.

Map 1: Number of Responses per Community

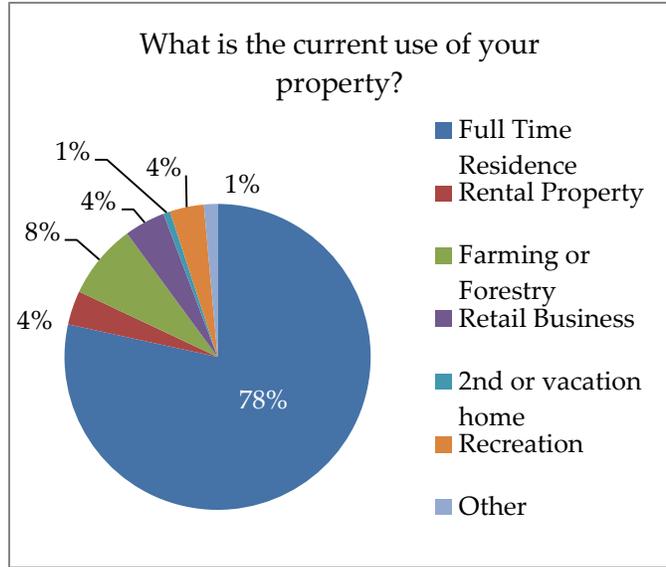


[Source: Strafford Regional Planning Commission, 2014]

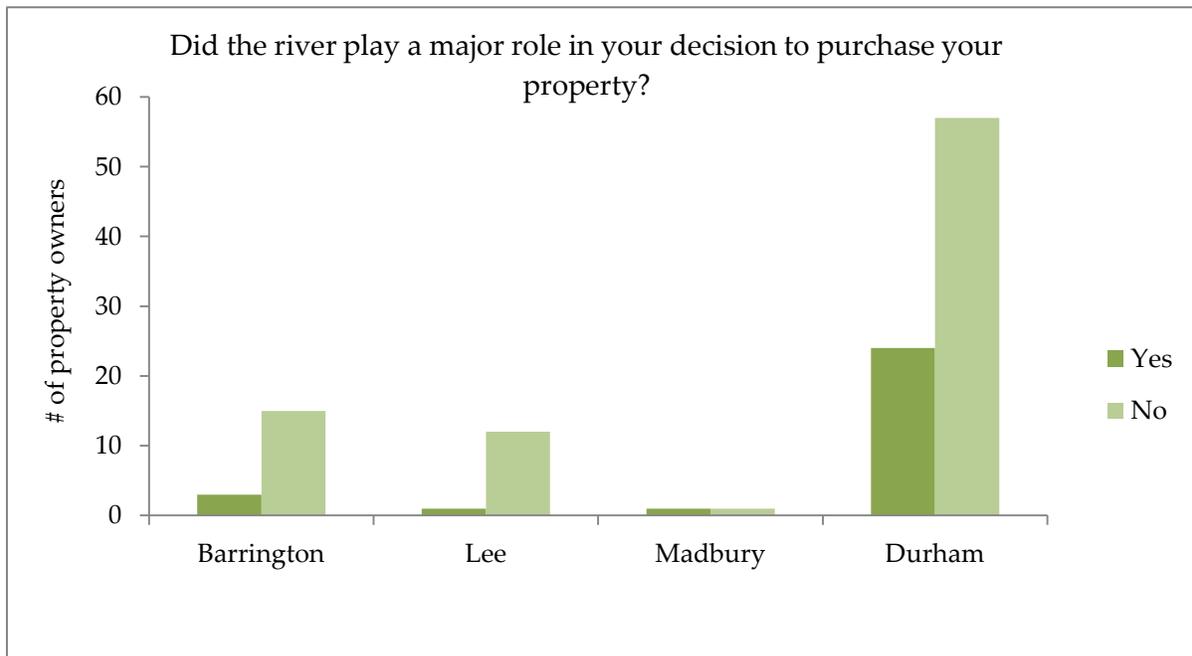
Included in this report are the results of the survey for respondents in Barrington, Lee, Madbury, and Durham who own property on the Oyster River and chose to fill out and return the survey.

Land Ownership on the River

The majority of respondents in the region owned property along the portion of the Oyster River that runs through the Town of Durham, NH. Of those, the majority were also residents of Durham, which translates into the main use of their property for full time residence. More than half of the total respondents used their property in this manner. Other areas included using the land as rental property, or for farming, retail, or other purposes. The second most popular use of land among respondents was for farming/forestry. Eight percent of respondents considered their property as rental property.

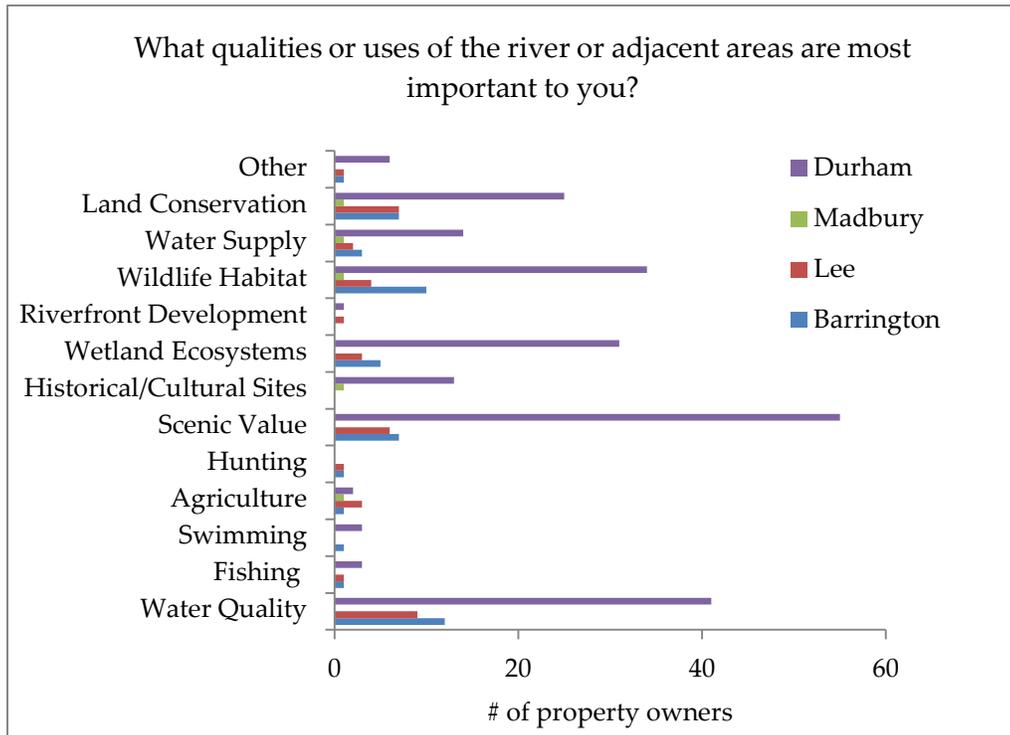


When purchasing their properties respondents did not usually consider the Oyster River as a major factor. For those that did, they identified interests in protecting water resources, being able to take advantage of recreation opportunities such as kayaking, and enjoying the scenic beauty of the area.



Qualities of the River

Respondents were asked about the qualities or uses of the river, or adjacent area that were most important to them. Responses differed by community.



The following table identifies the top qualities of the river that respondents ranked as most important.

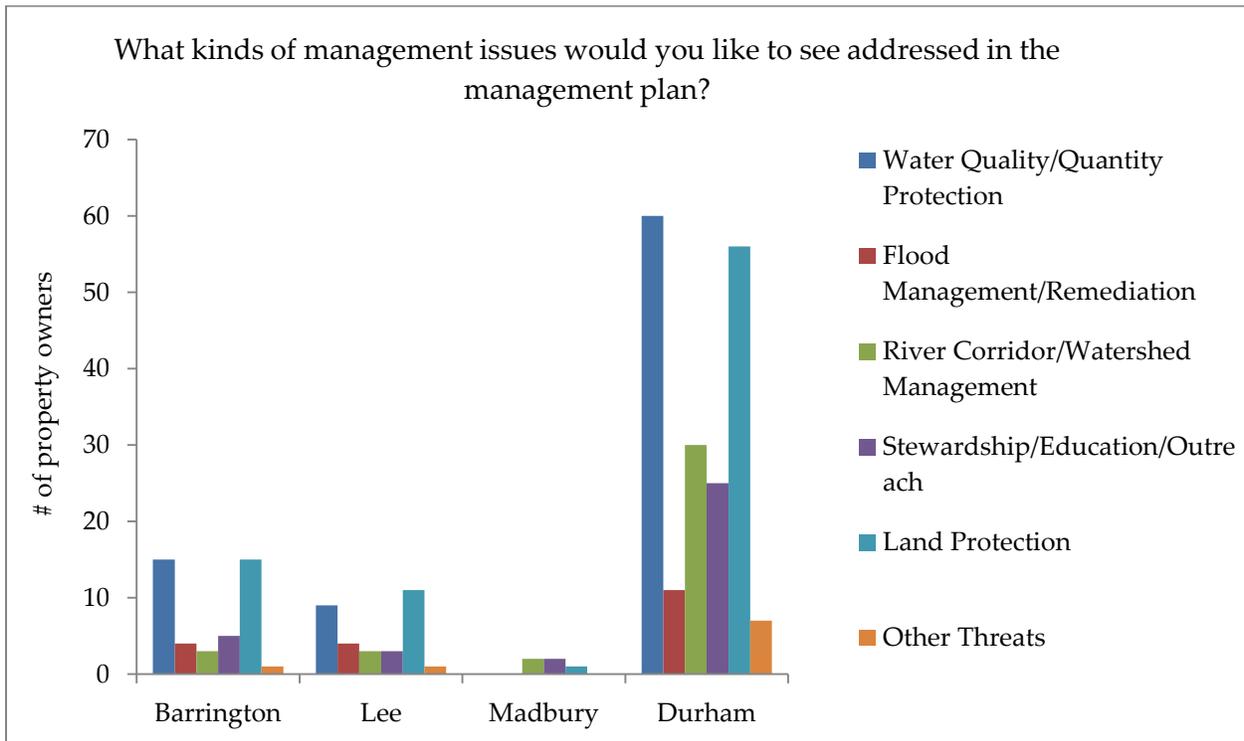
	1 st priority	2 nd priority	3 rd Priority
Durham	Scenic Value	Water Quality	Wildlife Habitat
Madbury	Both respondents were concerned with agriculture, historical/cultural sites, wildlife habitat, water supply, and land conservation		
Lee	Water Quality	Land Conservation	Scenic Value
Barrington	Water Quality	Wildlife Habitat	Scenic Value

Planning for the River

In Durham, respondents identified water quality/quantity as being most important to the planning process. This was one of the top priorities in Barrington as well, with land protection as the other. Lee agreed, listing land protection as the number one priority with Water Quality/Quantity protections as number two.

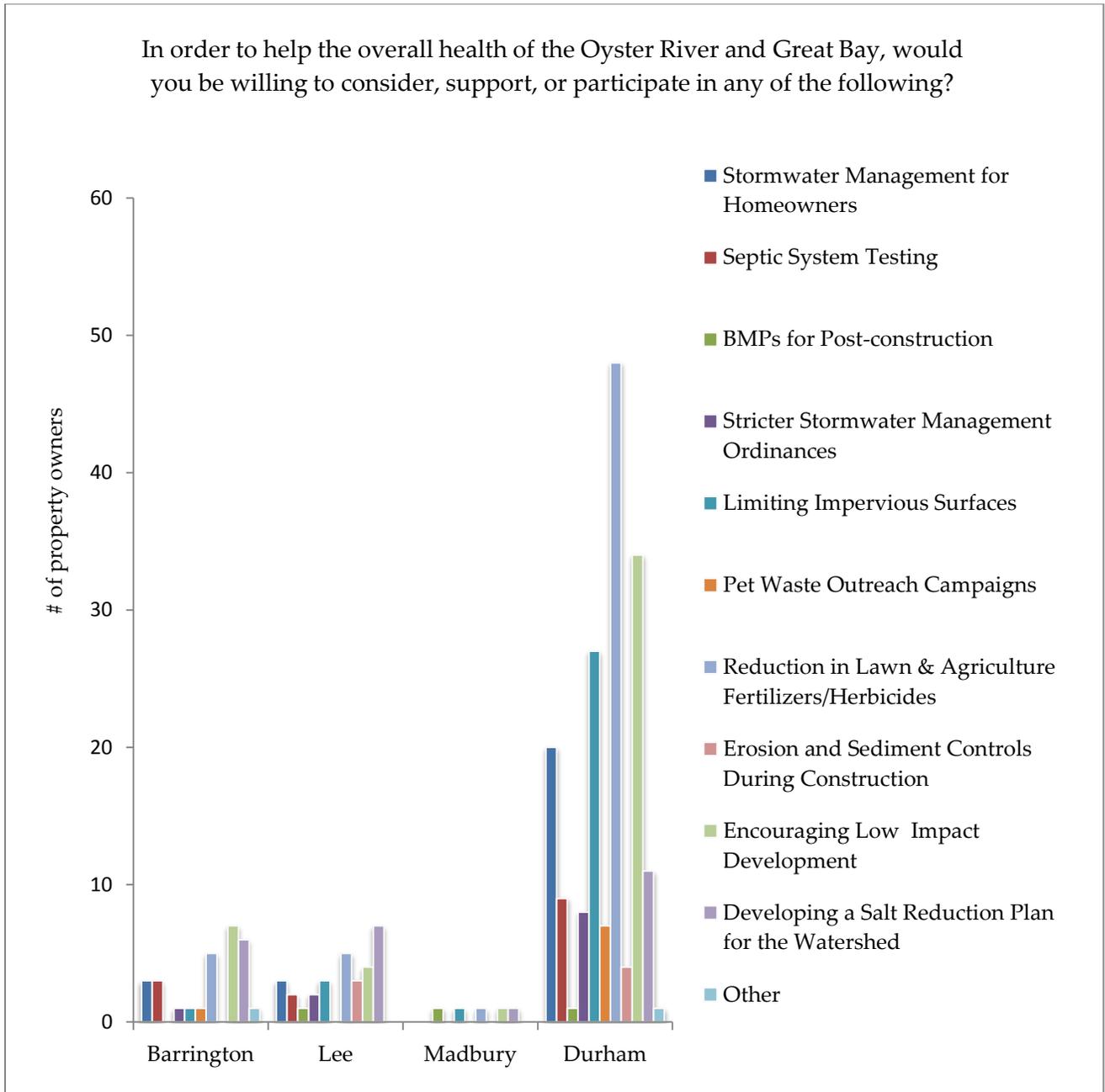
Barrington respondents also found stewardship/education/outreach important for planning (2nd priority) as well as flood management/remediation (3rd priority) to be important. Lee respondents felt similarly listing flood management/remediation as their third priority as well.

Madbury viewed river corridor/watershed management as a top priority, with stewardship/education/outreach as a second. Durham respondents found river corridor/watershed management important as well, identifying it as their third priority.



Citizen Support & Participation

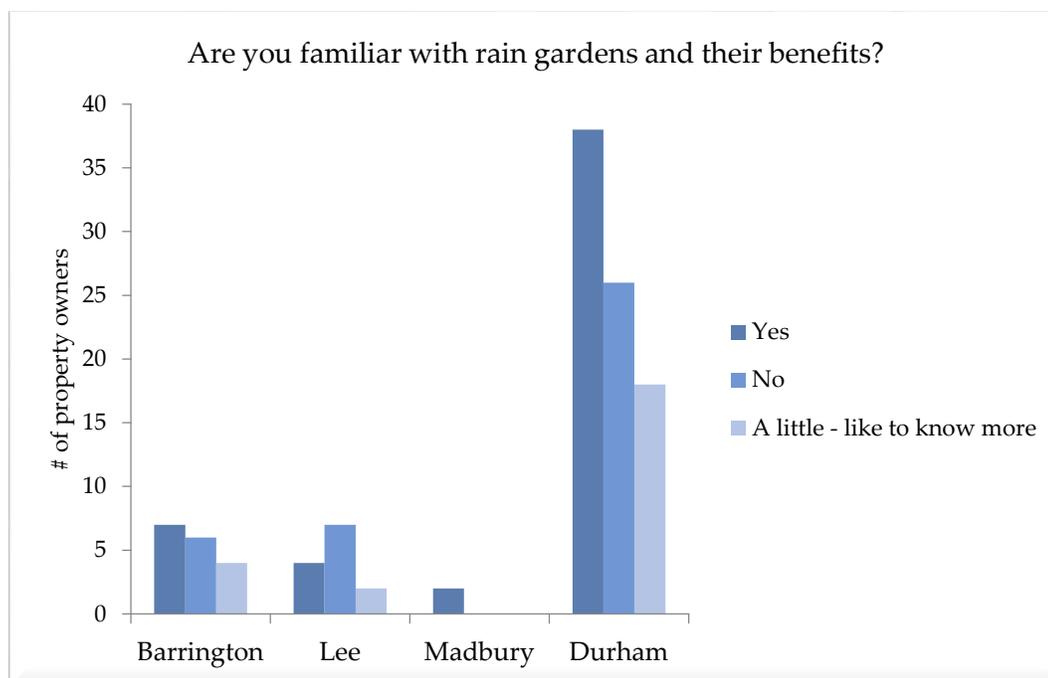
After measuring where planning efforts should be focused, the survey addressed whether or not individuals would be willing to aid in improving the overall health of the Oyster River and Great Bay by supporting or participating in certain efforts geared towards that goal. The following graph shows the responses separated by town.



	1 st priority	2 nd priority	3 rd Priority
Durham	Reduction in Lawn & Agriculture Fertilizers/Herbicides	Encouraging Low Impact Development	Limiting Impervious Surfaces
Madbury	Both respondents were interested in BMPs for Post-construction, Limiting Impervious Surfaces, Reduction in Lawn & Agriculture Fertilizers/Herbicides, Encouraging Low Impact Development, and Developing a Salt Reduction Plan for the Watershed.		
Lee	Developing a Salt Reduction Plan for the Watershed	Reduction in Lawn & Agriculture Fertilizers/Herbicides	Encouraging Low Impact Development
Barrington	Encouraging Low Impact Development	Developing a Salt Reduction Plan for the Watershed	Reduction in Lawn & Agriculture Fertilizers/Herbicides

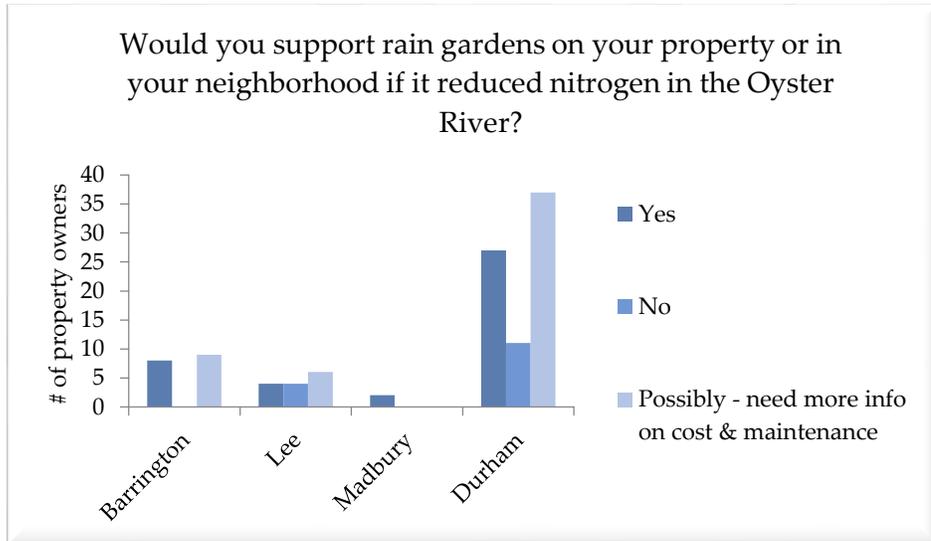
Knowledge of Management Strategies

There are simple things those living, vacationing, or owning property along the Oyster River can do in order to assist in the management of the river. One effort, rain gardens, are an easy way property owners can aid in improving the overall health of the Oyster River. Participants were asked whether they were familiar with rain gardens and their benefits, and whether they would support rain gardens on their property if the presence of one would reduce nitrogen in the Oyster River.



In every community other than Lee, more people than not, were aware of what rain gardens were. There were also a significant amount of individuals interested in learning more about rain gardens, and what their purpose is.

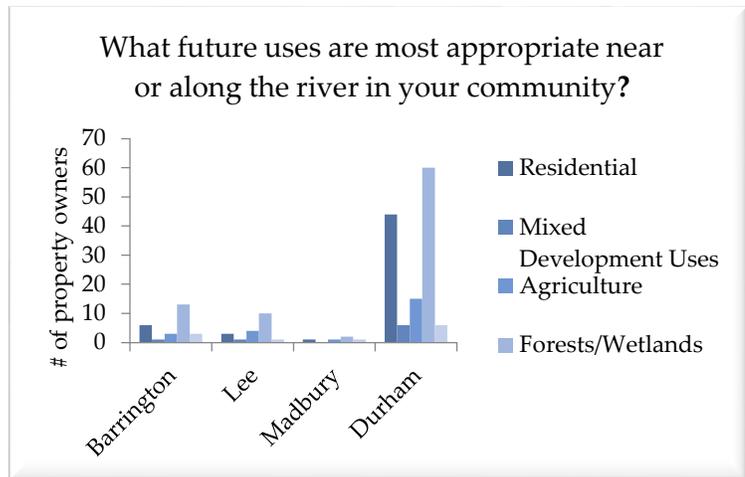
There was support for rain gardens, but almost half of respondents said they would need more information on cost and maintenance before they were in full support of the effort. There were 38% of respondents that would support it, which is a substantial number as well.



Future Uses of Riverfront Property

In gathering input for the Oyster River Management Plan it is important to identify what current property owners along the river see as appropriate future uses of their land, and other areas surrounding their property.

Participants saw value in the land being used as forest and wetlands as the best future use for the land. This was the case in every community represented. Other uses that were addressed included commercial, services & institutional, industrial, and transportation, communication & utilities (not chosen).



	1 st priority	2 nd priority	3 rd Priority
Durham	Forest/ Wetlands	Residential	Agriculture
Madbury	Forest/Wetlands	Residential, Agriculture & Other (Low till & no till agriculture with cover crop rotation & soil aeration)	
Lee	Forest/Wetlands	Agriculture	Residential
Barrington	Forest/Wetlands	Residential	Agriculture & Other (Rec, Forest Management, Conservation)

Comments and Concerns

Respondents were asked at the end of the survey to add any additional comments. The following responses were included:

Barrington

- Concern about culvert & bridge adequacy along river and major tributaries
- Save the forest log your neighborhood, timber does not come from open pit mines
- Where is the Oyster River?
- Concern about EPA or local protection overstepping homeowner's rights
- Professor at UNH teaches hydrology, stormwater management & design, and septic system design. Licensed designer. Interested in helping out. Ken Flesher.

Lee

- I am most concerned about stormwater and other pollution sources in the vicinity of the Lee Traffic Circle; There needs to be close oversight of stormwater, snow removal/management as well as wastewater treatment/disposal in the circle area.
- Focus on a working landscape with best management practices: agricultural and forestry - with concern for wildlife and water quality.
- Owner plans to sell 40 acres including the Caldwell Brook (Oyster River) to the town in 2014 for land conservation.
- Should work with property owners before enacting laws to restrict their use of property along the river front.

Durham

- Owner has concern with septic management in planned housing on Mill Road particularly ingested & digested medications in wastewater, septic systems (in sewage).
- There should be much more education & support for restoring migratory fish (river herring) in the Oyster River & recognition of the benefits of dam removals.
- Owner has the pleasure of being above the river, so they enjoy seeing the changing seasons & wildlife.
- More public low-impact riverside parks & green areas. Rehabilitation of the Durham Mill Pond, which is becoming eutrophic & soon will be a marsh/swamp.
- Are mosquitoes an issue with rain gardens?
- No student housing construction should be allowed that would affect water quality & any that does should be paid for by the landlords.
- Owner's main concern is chemistry in run off pertaining to the river from fertilizers & herbicides as well as pharmaceuticals people pour down their drains & toilets that end up in our sewage treatment plants.
- Looking forward to getting involved.
- Concerned about property rights.
- Major issues: The Mill Pond is becoming a wetland and is more marsh than running water, except in one stream area. Until the University and other sources upstream and homeowners along the Oyster River clean up the pollution eroding the Oyster River solutions down river won't be effective. All the development in town is adding to pollution and there is no stopping it. UNH says it's committed to good practices, but their actions belie their words. Given the development in Durham & chemical agents, there is no way the river can even return to its pristine nature. Mitigation is possible if financially reasonable, but with so many competing needs, I think this might be wishful thinking.

- It seems that Mill Pond has been gradually turning into a swamp over the last 10 years or so. What can be done to reverse that while not killing off the wildlife, if anything?
- Owner really has not trouble at all with a reasonable amount of development, especially residential, along the river.
- Oyster River is an important cultural & historic resource as well as a valuable component of ecosystem. The river has seen nearly 400 years of use and is an important part of our history.
- Concerned about overall health of the river and the obvious ill-health of Mill Pond.
- Rain gardens sound interesting, but since my land is full of clay it seems like too much of an effort.
- Mosquito control.
- Altering natural drainage systems and Inadequate buffers for wetlands and waterways.
- Areas defines as watershed must be maintained, not eroded by development.

Appendix B – Conservation Commission, Oyster River Advisory Committee, and Oyster River Watershed Association Meetings

Madbury Conservation Commission Meeting

January 27, 2014
7:00PM

Madbury Town Hall
13 Town Hall Road
Madbury, NH 03823

Meeting Notes

Topics of Interest & Concern:

- Salt (chloride) and sanding issues during the winter
 - Impacts on water quality
 - Strategies for road salt reduction
 - New Hampshire Green SnowPro Training and Certification
 - The UNH T² Center offers half day courses on efficient and environmentally friendly winter maintenance practices
 - Madbury is participating in the volunteer program
 - Rain gardens in Durham
- Stormwater management for development along the Oyster River (Madbury)
- Impacts on drinking water
 - Oyster River – Durham/UNH; Bellamy River – City of Portsmouth
- Fish passage and culvert infrastructure
 - Dube Brook is a concern for fish migration
 - Culvert size needs to be addressed during repair and replacement schedules
 - Handle increased flows from more intense storm events as well as an increase in development and impervious surfaces
- Flooding remediation efforts needs to take place
 - Cherry Lane & Hayes Road have been identified as problem areas (2014 Hazard Mitigation Plan)

Further discussion and Research:

- New Hampshire Green SnowPro
 - Participating Communities (2013)
 - Shane Bilodeau – NHDOT – District 6 – Durham, NH
 - Jere Calef – Town of Barrington Highway Department – Barrington, NH
 - Rick Chase – John’s Landscaping – Madbury, NH
 - John Crooks – John’s Landscaping – Madbury, NH
 - Curtis Deloy – John’s Landscaping – Madbury, NH
 - Sean Hirt – John’s Landscaping – Madbury, NH
 - James Hirt – John’s Landscaping – Madbury, NH
 - Butch Leel – Technology Transfer (T²) Center – Durham, NH
 - Mike Lockard – NHDOT – District 6 – Durham, NH
 - Jim O’Donnell – NHDOT – District 6 – Durham, NH
 - Steve Paul – Town of Barrington Highway Department – Barrington, NH
 - Fred Wallace – NHDOT District 6 – Durham, NH
 - Liability Protection through NHDES Salt Applicator Certification
 - Best Management Practices
 - Training courses covering the basics of salt reduction including:
 - Equipment calibration
 - Anti-icing

- Brine making
- Pre-wetting with brine and other liquids
- Efficient application rate changes with pavement temperature
- Effective plowing
- Emerging technologies
- Salt accounting
- Environmental impacts
- NH recommended application rates (parking lots and roads)
- Maintenance manuals
- Free salt accounting system (recording annual salt usage)

Lee Conservation Commission Meeting

February 3, 2014
7:00PM

Lee Town Office
7 Mast Road
Lee, NH 03861

Meeting Notes

Topics of Interest & Concern:

- Lee Traffic Circle's vicinity to the Oyster River
 - Water quality issues
 - Mitigation needed to handle stormwater runoff
 - Questions on the Route 4/125 safety improvements project
 - Stormwater management and drainage
 - Loss of wetlands
- Unknown tributary (Wendy's Brook) behind Wendy's restaurant has water quality issues
 - Monitoring station showing higher concentrations of pollutants
- Hydro-annotation mix-up with Dube Brook and Oyster River
- Oyster River crossing repair (culvert/bridge) at Route 125 south of gas station
 - NHDOT wetlands application
- Road salt (chloride) reduction from winter plowing
 - Green SnowPro (see notes from Madbury meeting)
 - The Town of Lee is currently not participating in this program
 - Only community along the corridor who doesn't have volunteer representation
- Oyster River has 7 major highway crossings
 - Concerns with highway drainage
 - At least 4 of those crossings are monitoring site locations (D. Weyrick)
- Increases in flooding
 - More frequent and stronger storm events
 - Avoidance of development in high risk areas
- Public outreach and awareness
 - Town E-CRIER is a good vehicle to distribute information to the public
 - Outreach should include residents outside the corridor
 - Include education efforts throughout the watershed

Further discussion and research:

- More data on NHDOT on project specific information
 - Route/125 safety improvements project (Lee Traffic Circle)
 - Route 125 crossing on the Oyster River
 - Input from SRPC transportation planner
- Analyze data from monitoring stations
 - Compare data taken from vicinity of traffic circle to other locations along the river

Barrington Conservation Commission Meeting

February 6, 2014
7:00PM

Barrington Elementary School Annex
Professional Development Center
570 Calef Highway
Barrington, NH 03861

Meeting Notes

Topics of Interest & Concern:

- Cedar Creek development
 - Contaminated bedrock groundwater with low concentrations of contaminants from the Tibbett's Road Superfund Site has migrated to the subdivision
 - Recommendations were to abandon all drinking water wells and provide water through an alternative means
 - Extended the Swain's Lake Village Water District to service the Cedar Creek development
 - Voting in March (2014) that will require any new development within the Swains Lake Water Management Zone Overlay Boundaries meet the water needs of that development from an off-site source or from the Swains Lake Village Water District (no sinking of wells)
- Tibbett's Road Superfund Site
 - See research notes below
- Proximity of Emerald Acres development to the Oyster River \Caldwell Brook confluence
- Route 4 crossing over the Oyster River and Caldwell Brook
 - Flooding concerns after heavy rains
 - Replacement of culverts
 - SRPC culvert assessment for Barrington has been completed
- Chloride from road salt entering the water
 - Green SnowPro Program
 - Jere Calf (Barrington Highway Department) is certified
 - Will contact to find out more on how that program is being implemented in Barrington
- Interested in ways to reduce nitrogen levels and lower costs (non-point sources)
 - Public education and outreach
 - Information, maps, goals, and recommendations should be online for public access
- Management plan needs to be very specific to the Oyster River to make it more useful to communities

Further discussion and research:

- There is not a large number of property owners along the headwaters of the river in Barrington
 - Samuel A. Tamposi Water Supply Reserve (1,400 acre town-owned property)
- Tibbett's Road research notes
 - [Tibbett's Road Superfund Site Summary](#)
 - [Five-Year Review Report for Tibbett's Road Superfund Site](#) – EPA (8/20/13)

Durham Conservation Commission Meeting

February 18, 2014
6:30PM

Durham Town Hall
Town Council Chambers
15 Newmarket Road
Durham, NH 03824

Meeting Notes

Topics of Interest & Concern:

- The potential renewal of the USA Springs water withdrawal permit
 - Impacts to the Oyster, Cocheco, and Lamprey Rivers
 - Opposed residents concerned about groundwater protection and the health of the bedrock aquifer
- Restoration sites on College Brook and Pettee Brook
 - Does not address runoff/stormwater
- Area behind Mill Pond Dam is an area of concern
 - There has been sedimentation issues and fill-in
 - Potential dredging may address some of these concerns
- Tidal portion of the River has seen some silting from upstream, especially after large storm events, causing shallow waters
 - Impacts on boating and recreational activities
 - May be less of an issue in recent years
- Stress the need to continue to protect and conserve riparian buffers
- Promote low impact development techniques and green infrastructure
- Use new precipitation data (Cornell Atlas)
- Septic system testing
 - Encourage homeowners
 - Educate realtors (buying and selling of new homes)
- Information on non-point nitrogen sources
 - Educate homeowners on impacts of lawn care fertilizers
 - Agricultural and pet waste
- Recommend using other river management plans in our region (Cocheco, Isinglass, Lamprey)
 - Lamprey River Management Plan was just completed
- Researching where old manufacturing buildings were located
 - Toxic chemicals
 - Historical records of tanneries
- Set targets for public consumption and frame our message for residents along the river
 - What do we want Great Bay to look like in 50 years? 100 years?

Further discussion and research:

- [Cornell Atlas of Precipitation Extremes for the Northeastern United States and Southern Canada](#)
- USA Springs Permit set to expire July 1, 2014
 - Email NHDES Groundwater Bureau to find out more information

Oyster River Local Advisory Committee Meeting #1

September 9, 2013

5:30PM

Madbury Town Hall

13 Town Hall Road

Madbury, NH 03823

Topics of Discussion

Oyster River Management Plan Updates:

- Source water grant update
- Timeline for corridor management plan
- Input and feedback on mail-out survey and outreach materials
- Watershed mapping

Oyster River Local Advisory Committee Meeting #2

March 10, 2014
5:30PM

Madbury Town Hall
13 Town Hall Road
Madbury, NH 03823

Topics of Discussion

Oyster River Management Plan Updates:

- Results from meeting with the four corridor Conservation Commissions
 - Barrington, Lee, Madbury, and Durham
- Survey results are in
 - Out of the 512 questionnaires we sent out, we received 165 with feedback (32% return rate)
- Update from VHB and the Town of Durham - Watershed Management Plan
 - Potential public informational meeting on March 27th
 - After VHB met with EPA timetable may have slowed down
 - Goal is to finalize with Durham and UNH in the next 2-3 months
 - Modeling has shown equal distribution of nitrogen (roughly 20% loading) in watershed:
 - Lawn care
 - Septic systems
 - Agricultural waste
 - Impervious cover/stormwater
 - Advocating for control measures for the reduction of nitrogen
 - Public outreach on lawn care fertilizers
 - Public education on leaking septic systems
 - Working with UNH for agricultural management
 - Stormwater treatment and BMPs
 - SRPC and VHB will be sharing resources and comparing results
- Update on drafting management plan

Next steps:

- Meet with the Oyster River Watershed Association (ORWA)
 - Can this be done through email?
- Survey results need to be analyzed
- Key interviews need to be completed
 - What types of questions need to be asked?
 - Do we model it after the survey?
 - Open discussion like the conservation commission and listen to general river concerns?
 - Barrington – Fred Brussiere, Dawn Hatch, and Tony Gaudiello
 - Madbury – Bob Sterndale
 - Lee – no names received
 - Durham – no names received
- Need minutes from September 9, 2013 LAC meeting

Oyster River Local Advisory Committee Meeting #3

June 24, 2014
5:30PM

Madbury Town Hall
13 Town Hall Road
Madbury, NH 03823

Topics of Discussion

Oyster River Management Plan Updates:

- Reviewed draft plan
- Brainstormed strategies

Oyster River Watershed Association Meeting #1

March 27, 2014
7:00PM

Madbury Public Library
9 Town Hall Road
Madbury, NH 03823

Topics of Discussion

Oyster River Management Plan Updates:

- Results from meeting with the four corridor Conservation Commissions
 - Barrington, Lee, Madbury, and Durham
 - Letter that went out explain project and more about LAC; website; monitoring data
- Survey results are in
 - Out of the 512 questionnaires we sent out, we received 114 with feedback (22% return rate)
 - Draft report
- Update from VHB and the Town of Durham – Integrated Watershed Management Plan
 - Potential draft completed by early June, 2014
 - After VHB met with EPA timetable may have slowed down
 - EPA is struggling with framework of permit and the financial benefit of going with non-point pollution control measures
 - Most likely going to see 3 m/g per liter at the Durham Wastewater Treatment Facility
 - Some Durham Town Council members are disappointed and have hit the brakes on this project – “asking why are we moving forward with the non-point project when we’re going to have to adhere to the lower standards in the permit anyway”
 - Become slightly political (some more positive than others)
 - Modeling has shown equal distribution of nitrogen (roughly 20% loading) in watershed:
 - Lawn care
 - Septic systems
 - Agricultural waste
 - Impervious cover/stormwater
 - Advocating for control measures for the reduction of nitrogen
 - Public outreach on lawn care fertilizers
 - Public education on leaking septic systems
 - Working with UNH for agricultural management
 - Stormwater treatment and BMPs
 - SRPC and VHB will be sharing resources and comparing results
- Update on drafting management plan

Next steps:

- Key interviews need to be completed
 - Barrington – Fred Brussiere, Dawn Hatch, and Tony Gaudiello
 - Madbury – Bob Sterndale

- Lee – Tom Lee, David Cedarholm
- Durham – Wesley East, John Parry, Malcolm McNeill, and Jamie Houle (UNH Stormwater Center)
- Local Developers & Engineers – Eric Chinburg, Michael Sievert

Appendix C – Key Person Interviews

During the March 10th meeting, the Oyster River Advisory Committee brainstormed a list of potential candidates and questioned to be asked during scheduled interviews as part of the Oyster River Management Plan. Not all members of the list were interviewed due to time constraints and availability.

Key Interviews:

- Barrington
 - Fred Brussiere – Barrington Selectmen
 - Dawn Hatch – Barrington Selectmen
 - Tony Gaudiello – Chair, Planning Board
- Madbury
 - Bob Sterndale – Madbury Board of Selectmen
- Lee
 - Tom Lee – Associate Professor, Forest Ecology at UNH
 - David Cedarholm – Lee Selectmen
 - Antoinette Hartgerink – Lee Conservation Commission
- Durham
 - Wesley East – UNH Water Treatment Plant
 - John Parry – Chair, Durham Conservation Commission
 - Malcolm McNeill – Retired attorney – Durham resident
 - Jamie Houle or Tim Puls - UNH Stormwater Center
- Local Developers
 - Eric Chinburg – Chinburg Properties

Potential Questions:

1. What are your biggest issues/concerns in regard to the current and future health of the Oyster River?
2. What types of management strategies would you like to see the local advisory committee address that would be most helpful in your community?
3. How would you like to see the issue of nitrogen discharging into the Great Bay addressed in this corridor management plan?
 - a. Recommendations?
 - b. Is your community doing something that you'd like to see implemented in neighboring towns?
4. What are your thoughts on current local regulations along protected rivers (Oyster)?
 - a. Are they hindering development too much?
 - b. Too much oversight?
 - c. Are costs too high for developers, which is pushing away potential growth?
 - d. Are property owners frustrated with restrictions on what they can/cannot do on their property?
 - e. Do communities need to be more stringent in their local regulations in regard to development along the river?

Toni Hartgerink – Lee, NH

March 28, 2014
11:30AM

General comments and concerns are provided as follows:

- Although the residents of Lee value protected open space, they also do not want a high tax burden. They look at commercial development as one way to maintain a viable town. With respect to developing a commercial district, the location around the traffic circle was, and is, the only option for Lee. Thus many residents have been, and still are in accord with developing this area.
- Lee zoning regulations are more stringent than those of the state, with greater setback requirements (75ft vs 50 for state) and a wetland definition (termed "wet soils") that depends on examination of soils rather than on wetland vegetation.
- The problem is that there are few-to-no lots in this area that have enough "upland" soils to allow a reasonably sized business without encroaching on the 75ft setback to wet soils boundaries. Moreover, developers who come to Lee, always point out that the State setbacks are smaller, implying that state regulations should be the standard against which to start measuring the proposed "impact". This puts pressure on the boards.
- In Lee (perhaps in all towns?), when developers request a variance for relief from the required setback to "wet soils" (at the point where the proposed construction is closest to "wet soils") the approval automatically allows, in perpetuity, that same extent of encroachment onto "wet soils setback" for the whole perimeter of "wet soils" on the property. This then becomes a perpetual permit to later extend development closer to "wet soils" in areas where such was not specifically requested at the original hearing. A few years ago, in Lee, this allowed a developer to take advantage of a previously granted permit, with the result that much more "wet soils" buffer was legally encroached upon than we all thought was allowed. The only way around this is for conservation commissions to be vigilant in always requesting, at the zoning hearing, that the permitted encroachment be "tied to the plan" that is approved at that meeting. This would then require that when a business wants to extend development on their lot, they always must get a current hearing and approval from the zoning board. This may be a topic to be considered in your master plan - perhaps an element of educating zoning boards (as well as zoning officers) on the benefits of always tying to the plan, any approved encroachment onto wet soils/wetlands setbacks.
- On another topic, the Lee Conservation Commission has difficulty in knowing what to push-for/advise to minimize impact of 1) road salt, and 2) nitrates in septic effluents.
 - Road salt - I have been to a workshop on pervious pavement and road salt. The Wentworth Douglass location in Lee is on stratified drift aquifer and has pervious pavement parking (but not on the driveways to access that parking). I have observed that in winter there is evidence of salt on the driving areas and thus also spilling over onto the pervious pavement, through which it will clearly leach into the ground water, and the rest will run off the pavement into ground water. They tried to do the best thing - but has it been at all helpful? We don't know... In Lee there is another lot, about to be under construction, where the engineer proposed regular pavement over most of the parking site -- all sloping gradually toward a pervious pavement slight depression which would allow water to infiltrate (similar to the now less-used treatment swale but shallower and without the plants). How should we LCC members advise such projects with respect to runoff and salt treatments? --- Every few years there seems to be new approach. Are they effective?
 - Nitrates - It seems they should be collected somehow. I have not learned much about this topic. What do you think about the latest - Enviro septic systems, which are suddenly going in everywhere near bodies of water? I haven't seen/heard any information that they can do anything for nitrates.
- Is there a possibility of a simple annual or biennial info sheet on the latest treatments for salt and nitrates (updated), distributed to Conservation Commissions and Zoning Board/Planning Board members in the

towns through which the Oyster River flows? I know that workshops may seem less costly but these folks have little extra time for such, whereas a simple, perhaps bulleted, sheet is more likely to be read.

- Lastly, I am under the impression that a property (immediately adjacent to the Oyster River, where it flows under Route 4 east of the circle) has been vacant for more than a year and thus it should have lost its grandfathered status. It is mostly fill, but fill (if cleared of man-made stuff) would be better than redeveloped fill. I am wishful that this area might not be approved for redevelopment but instead be reclaimed somehow. The good news is the newly acquired ownership, with conservation easement, of the Kennard property in Lee, which has frontage on the Oyster River west of Route 125 and will continue to provide a lot of buffering services over the years.

Tom Lee – Lee, NH

March 26, 2014

1:10PM

Questions:

1. What are your biggest issues/concerns in regard to the current and future health of the Oyster River?

Biggest concern in regard to the freshwater portion of the river is as follow:

- Lee Traffic Circle and Commercial District – the development and increasing impervious surfaces around the traffic circle are critical issues. I worry that, in some cases, we (both the town and state) have made allowances or exceptions for developers that do not maximize protection of the river. I can think of two examples. (1) I believe that the Family Dollar store was allowed to build with reduced wetland setback. (2) The access toad from Route 4 to the new drugstore crosses a wetland that, in its natural state, provided water management services (i.e., filtration and storage). I think we (town boards, DES) need to be minimizing developmental impacts in these areas by limiting exceptions, as much as is reasonable, to the existing rules and regulations, which are sufficiently protective as written. A second concern is Wendy’s Brook, which runs through the Lee Circle area, has high levels of bacteria and ammonium. . In the monitoring analysis completed, we have seen a high mean over time. These levels are much higher than the standards allowed for Class B waters. (see [Chapter Env-Wr 170 Surface Water Quality Regulations](#))
2. What types of management strategies would you like to see the local advisory committee address that would be most helpful in your community?

Management strategies in regard to culvert management and minimizing impervious cover should be identified, including:

- Revisiting the [Oyster River Culvert Analysis Project](#)
 - Making sure our tributaries and main stem are well connected for aquatic and terrestrial passage
- Encouraging communities to limit impervious surfaces
 - Managing those areas
 - Lee Traffic Circle and suburban area in Durham
- Examine Route 4 stream crossings
 - This stretch of roadway is heavily used and probably has high pollutant (road salt plus other substances) levels due to stormwater runoff directly discharging into the river
 - Nitrogen management over time

3. How would you like to see the issue of nitrogen discharging into the Great Bay addressed in this corridor management plan?
 - a. Recommendations?
 - b. Is your community doing something that you'd like to see implemented in neighboring towns?

Would like to see what goals and recommendations come out of the Durham Oyster River Integrated Watershed Plan. Specific recommendations could include (and should be incorporated into the river management plan):

- Rain gardens – which could be used at the traffic circle and incorporated into existing or future developments
 - Other stormwater management strategies and drainage management
4. What are your thoughts on current local regulations along protected rivers (Oyster)?
 - a. Are they hindering development too much?
 - b. Too much oversight?
 - c. Are costs too high for developers, which are pushing away potential growth?
 - d. Are property owners frustrated with restrictions on what they can/cannot do on their property?
 - e. Do communities need to be more stringent in their local regulations in regard to development along the river?

I have not seen local regulations (in Lee) hindering development. I think most of the developments proposed for the Lee Circle area have eventually been approved (although some with considerable modifications, often to reduce impact). I worry, however, that there may be a temptation for the town and state to make exceptions in order to promote development at the Lee Traffic Circle. Generally, I don't think there are high costs driving developers away.. The current regulations are strong, but they need to be applied and enforced stringently. Communities need to make sure they are not jeopardizing the river and natural environment due to development pressures. I believe that a majority of landowners do not feel frustrated with restrictions on their own properties.

Tim Puls – UNH Stormwater Center

April 2, 2014

4:15PM

Questions:

1. What are your biggest issues/concerns in regard to the current and future health of the Oyster River?

My biggest concern is existing and future development along the river corridor and/or development that drains to the river that goes untreated. The issue is that without finalization of the MS4 permit then there is no regulatory incentive to develop consistent and effective treatment strategies. Unfortunately without the regulations we do not often see communities voluntarily implement a stormwater management strategy. Although this has been changing in recent years as the MS4 release gets closer and as concerned citizens and municipal staff become aware of stormwater impacts and the options available for mitigating these impacts.

2. What types of management strategies would you like to see the local advisory committee address that would be most helpful in your community?

Routine, scheduled, and directed maintenance efforts. Maintaining existing infrastructure (i.e. catch basins, detention ponds, roads) and newly installed green infrastructure (i.e. bioretentions, gravel wetlands, tree filters) will remove pollutants from the existing infrastructure and increase the effectiveness of these systems. Without long-term commitment to maintaining stormwater infrastructure then the effectiveness of these systems is negligible. The systems will work well for the first couple years and then simply bypass pollutants to receiving waters.

3. How would you like to see the issue of nitrogen discharging into the Great Bay addressed in this corridor management plan?
 - a. Recommendations?
 - b. Is your community doing something that you'd like to see implemented in neighboring towns?

Nitrogen management efforts will need to be conducted on many fronts. Proper controls at the WWTF; identification of failing pipes, septic, etc., ordinances for spreading sludge on agricultural fields (i.e. not until after vegetation begins to grow on fields, do not apply after fields are harvested and/or ground becomes frozen); source control through stormwater management strategies to include treatment of runoff, maintenance of existing infrastructure, and street sweeping/vacuuming after snow melt and after autumn leaf fall.

I feel nitrogen is similar to many others issues we face in society today in that there will not be one solution or one approach that will help to mitigate the problem.

4. What are your thoughts on current local regulations along protected rivers (Oyster)?
- a. Are they hindering development too much?
 - b. Too much oversight?
 - c. Are costs too high for developers, which are pushing away potential growth?
 - d. Are property owners frustrated with restrictions on what they can/cannot do on their property?
 - e. Do communities need to be more stringent in their local regulations in regard to development along the river?

I think a balance needs to be found between protection of the river and allowing a community to grow and develop areas in a responsible manner. Each of the items below need to be looked at on a case-by-case basis. Certain areas along the river need to be designated as sensitive and development should be restricted, but other areas can be open to development as long as proper controls are in place to achieve the overall goal of protecting the river

Malcolm McNeill – Durham, NH

March 24, 2014
3:30PM

Foreword

In order to put this interview in context, Malcolm provided some background information on why he had spoken against the river nomination back in 2009. His career as a lawyer dealing with large scale commercial and residential development projects offers a relatively different perspective on local protection measures and environmental regulations. He spoke of his own personal experience in regard to the potential construction of a student housing development on his property, in Durham, back in 2008. Due in part to the housing crash and the current restrictions along the river, the developers weighed those factors and decided on another location. This piece of land was eventually put into a conservation easement, albeit a much lower price. Malcolm expressed his concerns on the multiple levels of control around waterbodies and feels as though they are overly restrictive, which provides a nightmare for developers. He believes there is already adequate protection from federal, state, and local restrictions (alteration of terrain and wetland permits, etc.). He mentioned that, in his opinion, Durham is excessively protective; stating that some conservation commission and planning board members, at times, make recommendations that go beyond what the current local regulations are. With all of that being said he recognizes the importance of the Oyster River and the health of Great Bay and would like to see a more reasonable approach to protection, which is more balanced with development and economic growth.

Questions:

1. Do you still have the same concerns you expressed during the nomination process?
 - a. Has the river's designation caused more oversight?
 - b. Has there been any negatives/positives you've seen from the time the river was put into the protection program?

Not having enough information to answer this question thoroughly, it was hard to say whether or not there have been any positives or negatives. It is also difficult to say with certainty that the designation has caused more oversight or not.

2. What are your biggest issues/concerns in regard to the current and future health of the Oyster River?

Not being a scientist and having all the necessary data makes it harder to answer this question. But non-point source pollution is a concern. It is hard to tell how much nitrogen is coming from those sources and the direct impacts into the Bay. There is also a concern about the associated cost to communities for the necessary upgrades that are being mandated at the federal level for wastewater treatment facilities.

3. What types of management strategies would you like to see the local advisory committee address that would be most helpful in your community?

Not being an environmental planner dealing with developing these types of strategies, it was hard to answer this question. Other than to say that currently there is an acceptable amount of regulations in place in regard to protection along the river and that the advisory committee may want to explore non-regulatory options for the management plan.

4. How would you like to see the issue of nitrogen discharging into the Great Bay addressed in this corridor management plan?
 - a. Recommendations?
 - b. Is your community doing something that you'd like to see implemented in neighboring towns?

An option could be to evaluate what Durham is already doing to address nitrogen and reference the integrated watershed management plan that is being developed by the Town engineer and a local consulting firm. While thinking regionally is always a great idea, in the end, each community controls its own destiny and will have to make local choices that best suit their needs.

5. What are your thoughts on current local regulations along protected rivers (Oyster)?
 - a. Are they hindering development too much?
 - b. Too much oversight?
 - c. Are costs too high for developers, which are pushing away potential growth?
 - d. Are property owners frustrated with restrictions on what they can/cannot do on their property?
 - e. Do communities need to be more stringent in their local regulations in regard to development along the river?

Believes that there is adequate protection along the river and there needs to be more healthy balance to satisfy the ebb and flow of environmental restrictions and economic growth.

Eric Chinburg – Chinburg Properties

April 1, 2014
1:45PM

Questions:

1. What are your biggest issues/concerns in regard to the current and future health of the Oyster River?

While understanding the importance to the health and protection of our riverine systems, I would need more information on what the current and future negative impacts are to comment on the Oyster River.

2. What types of management strategies would you like to see the local advisory committee address that would be most helpful in your community?

As a developer, I work closely with urban infill projects. These existing infrastructure projects tend to gain higher support from the public as opposed to clearing more land for new development. Currently, the myriad of regulations makes it difficult to move forward. I would like to see communities streamline their regulations and not make them so dependent on interpretation. It seems as though some communities encourage and discourage different types of development, making it harder for good sound planning projects to move ahead. In general, the regulations are in place, but in my opinion are left too much to interpretation and are often times overlapping.

3. How would you like to see the issue of nitrogen discharging into the Great Bay addressed in this corridor management plan?
 - a. Recommendations?
 - b. Is your community doing something that you'd like to see implemented in neighboring towns?

Again, this is not my field of expertise and would need to know more about the nitrogen problem. We try to meet communities in the middle in regard to stormwater management. One example is offering to include some form of landscaping to help treat pollutants. This process works a lot better when it's not mandated by an ordinance, but instead a working relationship between developer and municipality. A landscaping ordinance for example can cause higher expenses and drive developers away. But integrating best management practices and creating a bond of trust with a community goes a long way.

4. What are your thoughts on current local regulations along protected rivers (Oyster)?
 - a. Are they hindering development too much?
 - b. Too much oversight?
 - c. Are costs too high for developers, which are pushing away potential growth?
 - d. Are property owners frustrated with restrictions on what they can/cannot do on their property?
 - e. Do communities need to be more stringent in their local regulations in regard to development along the river?

Currently, I am not concerned with local regulations. I believe they are very stringent, especially when dealing with developments on or near a river or other significant waterbody. I see many of the regulations as conflicting with each other and overlapping, which makes it harder for developers to move projects ahead in a timely and cost effective manner. If possible, I would like to see these types of conflicts addressed in some way. A solid, low impact development that is well thought out is good for a community and tends to receive more support from local groups such as the advisory committee.

Dick Weyrick – Lee, NH

March 28, 2014
2:00 PM

Questions:

1. What are your biggest issues/concerns in regard to the current and future health of the Oyster River?

Largest concerns deal with various aspects of development:

- Impacts to both groundwater and surface water
 - If nothing is done, resources may get to a place where they have diminished past the point of restoration
- This will not be an issue easily solved in the future
- Commercial developments have a larger impact
 - More impervious pavement
 - Greater use density
 - Difficult to identify how developments impact the river and surrounding areas
 - It is also difficult to design developments to mimic natural setting (best filtration is from the natural environment)
 - Costly to eliminate impacts to groundwater
 - Each subsequent development continues to accumulate on top of other adverse impacts already being seen on existing larger developments
 - How do we measure these adverse impacts?
 - While it is tough to limit these kinds of development, there should be higher standards in which developers are held to

2. What types of management strategies would you like to see the local advisory committee address that would be most helpful in your community?

Useful information for non-point source pollution:

- Highway run off (stormwater)
- Agriculture
- Septic systems
- Alternatives to lawn care for homeowners

There is also an opportunity for the advisory committee or other volunteer board to take on the responsibility of public education:

- Providing and promoting testing services
- Defining a role
- Ambitious effort
- Applying for grants to accomplish recommended goals
- Awareness campaigns
 - Explaining what has been done? What is being done? And what can be done in the future?
- Difficulty arises with volunteer boards being asked to do too much
 - Limits on time, money, resources

3. How would you like to see the issue of nitrogen discharging into the Great Bay addressed in this corridor management plan?
 - a. Recommendations?
 - b. Is your community doing something that you'd like to see implemented in neighboring towns?

- Promote non-point source education
 - Durham's integrated watershed approach should be modeled
 - Other communities should be working collaboratively with each other
4. What are your thoughts on current local regulations along protected rivers (Oyster)?
- a. Are they hindering development too much?
 - b. Too much oversight?
 - c. Are costs too high for developers, which are pushing away potential growth?
 - d. Are property owners frustrated with restrictions on what they can/cannot do on their property?
 - e. Do communities need to be more stringent in their local regulations in regard to development along the river?

Towns and municipalities need to make sure developers are held accountable:

- The regulations are strong enough, but some sites fall into non-compliance after construction is completed
 - Not enough enforcement (cost associated)
 - Too lax in some cases
- There needs to be follow ups and inspections in order to ensure sites are maintained
 - Penalties for non-compliance

Appendix D – Water Quality of the Oyster River, New Hampshire, 2001 - 2011
