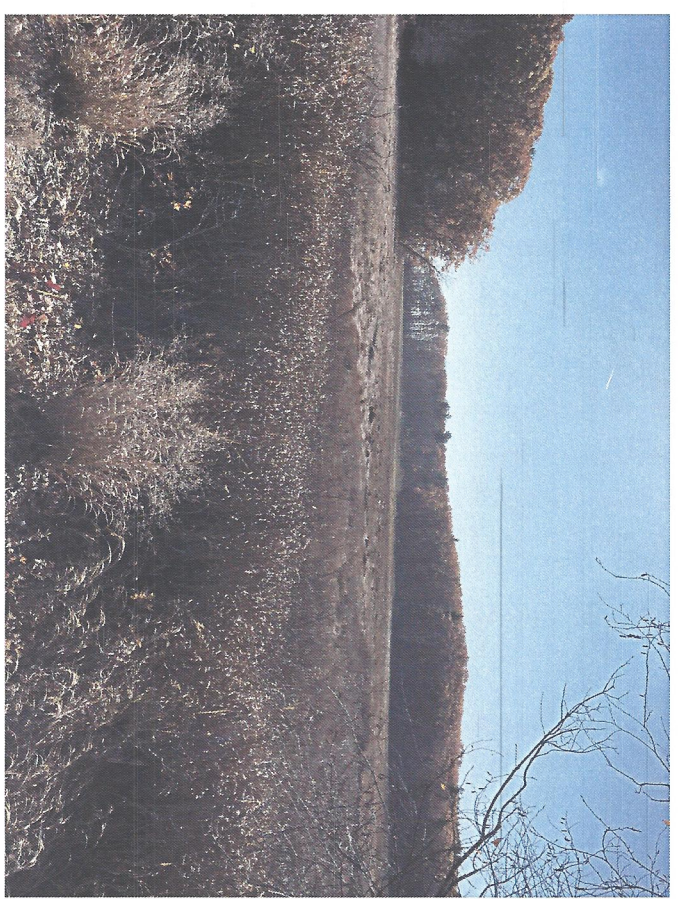


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# Parsons Creek Watershed Restoration Committee Town of Rye, NH



Report to the Board of Selectmen  
November, 2016



# Committee Members and Support Staff

Members: Chair John Riley, Chair Peter Reilly, Sam Winebaum, Jeffrey Quinn, Lynn Pincomb and Selectmen's Rep Craig Musselman.

Others Participating: Town Administrator Michael Magnant, Planning Administrator Kim Reed, Sally Soule, NH DES, F.B. Environmental, Jones and Beach, Sally King, Conservation Commission Chair and Building Inspector Peter Rowell.

The committee met monthly starting in April including a site walk on May 17th.

Thanks to the state and town staff who generously gave their time to support this committee.



# May 17 Site Walk



- Marsh Road Pond/Wetland
  - Pond poorly drained - tidal water variation on the order of 1 ft
  - Dog waste bags observed along road.
  - Resident noted that people discard dog waste along road regularly.
- The pond on Parsons Road adjacent to Brackett Road.
  - Pond has a lot of waterfowl which may contribute to downstream data results.
- Outlet of Parsons Creek at Concord Point
  - Committee members noted that at certain times, sewage smell is readily discerned.
  - Cobbles in creek bed under bridge probably originated from abutment slope stabilization. May be inhibiting tidal flow.



# Topics Discussed

- Review of Existing Sampling Data through 2016
- Automatic Posting of Parsons Creek after defined events
- Monitoring wells
- Mystery Pipe at the South end of Wallis Beach (Pirates Cove)
- Holding Tanks
- Dog Waste
- Storm Drain Survey
- Determining Septic System Performance
- Septic System Alternatives
- Public Sewer System
- Septic System Database
- What are other Communities doing to update failing and substandard septic systems?

# Review of Existing Sampling Data Through 2016

- Sampling data collected over the last several years is extensive
- Data from the same sampling locations over those periods vary dramatically from high to low and are in most cases inconsistent making it almost impossible to discern meaningful patterns and potential point sources.
- Human vs. animal source of bacteria – space available data is inconclusive.
- Data sources still provide some measure of baseline watershed water quality and it is recommended to continue monitoring.
- Recommend that all new test results in the Parson Creek Watershed area be explained by narrative on the Rye website or in the Rye Newsletter

# Automatic Posting of Parsons Creek After Defined Events

- NHDES does not require posting of Parsons Creek outlet based on data available to date.
- Data is inconsistent to date with respect to wet vs dry weather.
- Parsons Creek fecal bacteria data mostly below state standards; some are high.
- No postings required in 2016.
- York ME routinely posts its beaches after a rain event when bacteria counts are expected to be higher.
- Does Rye have a legal or public health obligation to post the Parsons Creek outlet based on data available to date?



# Monitoring Wells

- The committee discussed the installation of monitoring wells including costs.
- We concluded that unless the well is in close proximity of a leaching field and directly downstream (groundwater flow) of the septic system, their use to identify a specific failing system would be questionable.
- Multiple wells would likely be needed at each property to make sure groundwater flow is properly represented and evaluated. Costs to evaluate a single site were a concern.
- One resident gave permission for a monitoring well on his property.
- The committee decided to defer the use of monitoring wells at this time.

# Mystery Pipe at the South End of Wallis Beach (Pirates Cove)

- Committee members reported a pipe that was previously exposed originated from one of the housing lots toward the south end Wallis beach just north of the Parsons Creek mouth. Near beach seep 1 and 2.
- It is thought to be either an outfall line originating from a residential lot or the seawater suction pipe to serve the lobster pound at Petey's Restaurant.
- It was confirmed through review of town records to be abandoned, however the presence of the abandoned pipe may still create a shortcut for subsurface contaminated water to reach a beach seep.
- The Public Works Department will uncover the pipe this fall and testing will be performed to determine if this a source of fecal bacteria.

# Holding Tanks

- Pump-out ordinance actions have revealed some holding tanks.
- Permitted years ago by NHDES, many “temporary” .
- Reporting to NHDES of pump-outs was required, but not enforced.
- Many properties with holding tanks use far more water than is pumped from holding tanks.
- Enforcement is needed.
- New local ordinance regulating holding tanks may be necessary.



# Dog Waste



- All members of the committee noted the presence of animal waste in bags along the sides of roads in the Parsons Creek Watershed.
- The committee reviewed the current dog signage at the beaches as well as the current dog ordinance and discussed options.
- The committee concluded that additional signs are needed along all roads in the watershed area reminding dog owners of their obligation to properly dispose of animal waste and the fines if they do not comply.
- Suggested that this issue may deserve additional attention by the town outside of the scope of this committee.

# Storm Drain Survey



- Town of Rye and State of NH own and maintain storm drains in the watershed.
- Storm drains and catch basins can be a source of wet weather contamination if draining in areas with failed septic systems.
- Town staff reviewed known DOT storm drain locations. Existing sampling stations appear to monitor known discharge locations.
- No additional testing or action recommended.

# Determining Septic System Performance

- Septic system conformance is currently evaluated by loosely defined visual criteria and, in some cases, test pitting.
- Professionals who typically complete such evaluations include engineers, home inspectors and septic system contractors.
- These evaluations are not consistently performed and may not identify systems that are at or near failure.
- NH SB 210 creates criteria for a state certified septic system evaluator and evaluation criteria that will introduce more consistency into the process.
- Meredith, NH and the Massachusetts Title V law each have developed consistent and comprehensive inspection criteria for certified evaluators.
- Developing and implementing a consistent evaluation/inspection process within the watershed that captures the maximum amount of non-functioning systems is critical.



# System Alternatives

- The Parsons Creek Watershed contains many small lots where replacement of existing septic systems with conventional systems may not be possible.
- New technologies are available to provide a higher level of treatment than conventional septic tanks within smaller footprints.
- NHDES and Rye have approved several “higher” tech systems that require significantly smaller leaching fields.
- The committee believes that the majority of problem installations can be remedied with available State approved technologies.
- Rye is developing an RFP for a consultant to evaluate new septic system technology installations on smaller lots.

# Public Sewer System

- The committee discussed the implementation of a public sewer system as an alternative to septic systems.
- The problems in the Parson Creek Watershed were not of a scale where they could not be solved through current and proposed actions related to existing and new septic systems.
- The committee estimated that an engineering study to determine the order of magnitude construction cost and evaluation of economic feasibility of public sewerage would cost about \$90 - \$130K.
- A public sewer system may be a solution in the future should actions proposed herein prove inadequate.
- Without grants from the State and/or the Federal Government, any such system would be an extreme burden on the Rye Taxpayers.

# Septic System Database

- To date 20 letters were sent out to owners of septic systems that are of particular interest, to arrange on-site evaluations. To date, there has been one response from homeowners.
- Peter Rowell has reported that 227 homeowners out of 630 homes in the watershed have reported on the last time they had their septic tanks pumped. Peter also reported 82 septic system evaluations as of mid November.
- The level of voluntary response to date suggests that completion of the database will take a long time and limit the usefulness of the database in the near term.
- The worst systems will likely be the last to be voluntarily reported.
- Without additional ordinance requirements, detailed on-site evaluations may not be allowed by property owners.
- It was also clear during these discussions that these additional inspections required by the current septic system ordinance is a significant additional burden on existing town personnel. Additional inspection staff may be required to ensure full implementation of inspections on all systems and subsequent updating of the septic database.



# What are other Communities doing?



# Meredith Septic System Ordinance

- Meredith, NH has implemented an ordinance that requires lakeside homeowners to have their system evaluated in accordance with defined guidelines and institute repairs or replacement within a 2 year period.
- Additions and modifications to the structure requiring a building permit in the future will trigger a septic system review in accordance with defined guidelines.
- Results are submitted to NHDES.
- The homeowner is responsible for costs of a septic system evaluation and related repairs/upgrades.



# Massachusetts Title V Requirements

- Massachusetts Title V regulations require that septic systems be evaluated in accordance with defined guidelines and repairs instituted as part of the real estate sale transfer process.
- Changes in ownership outside of an outright sale are not subject to this requirement.
- The Title V inspection form is 13 pages long and requires that it is completed by a state certified septic system evaluator.
- The homeowner is responsible for costs of a septic system evaluation.
- Results are submitted to MA DEP

# Proposed Ordinance for the Parsons Creek Watershed

- The committee suggests an ordinance for Parsons Creek Watershed that requires septic system inspections in accordance with predetermined guidelines by a state certified evaluator at the time of real estate transfer, either due to sale or any other change in title. The septic system would require repairs instituted as part of the real estate sale transfer process.
- For most transactions the costs of the evaluation and repairs/upgrades can be defrayed by the proceeds of the sale.
- An ordinance for the Parsons Creek Watershed using elements of the foregoing examples in tandem with existing ordinances would facilitate thorough documentation of the septic systems and related repairs so as to improve watershed water quality.



# Proposed Ordinance for the Parsons Creek Watershed (cont'd)

- Results of the proposed inspections and repairs would be submitted to the Town of Rye and NHDES
- A cursory review by the Rye town attorney indicates that an ordinance incorporating elements of the examples described herein could be implemented in Rye.

# Committee Recommendations



# Recommendations

1. Develop an ordinance to require that properties in the Parsons Creek Watershed that transfer ownership document that the septic systems are functioning properly and, if not, repair or replace them as necessary.
2. Consult with Town Counsel to see if the town can require commercial institutions, within the watershed, to demonstrate that they are operating within permitted flow limitations.
3. Develop an inspection criteria for certified septic system evaluators that meets the needs of the watershed. For example, nitrogen loading is not considered an issue in this watershed.
4. Consider whether advanced treatment, other than septic tanks, should be required by local ordinance in close proximity to tidal areas.

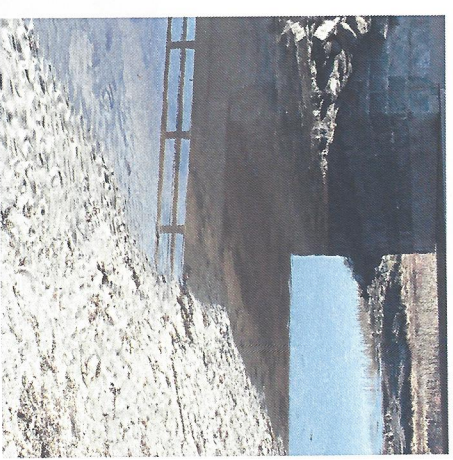


# Recommendations (cont'd)

5. Consider whether the ordinance should address permitting and enforcement of holding tanks.
6. Suggest that a new separate committee be formed to guide the ordinance through the drafting and acceptance process.
7. Quantify impact on town staff to implement the requirements of the current ordinance for septic pump outs including updating the data base and potential future staff impacts should the suggested real estate transfer ordinance be adopted and approved. Determine if additional staff are merited.
8. Apply for State 319 Grant money to continue monitoring of the watershed for 2017. Consider adding a sampling location at the outlet of Awcomin Marsh at Rye Harbor and Eel Pond for comparison purposes.

# Recommendations

(cont'd)



9. Review the current dog waste ordinance and town signage to increase visibility, awareness of fines and impacts to the watershed associated with the illegal disposal of dog waste to the dog walking public.
10. The Town should investigate buried pipes at Wallis Beach seep locations.
11. Work with DOT to evaluate and remediate channel constrictions under the route 1B bridge over Parsons creek resulting from embankment movement next to the bridge abutments
12. Recommend that all new test results in the Parsons Creek Watershed area be explained by narrative on the Rye website and/or in the Rye Newsletter



# Questions?

