TECHNICAL ADVISORY COMMITTEE MEETING #1 SUMMARY

Parsons Creek Watershed Based Plan Update

RE: Parsons Creek 2024 Watershed Based Plan (WBP) Update – TAC Meeting #1
DATE: October 23, 2024
TIME: 12:00 – 1:00 pm
LOCATION: Rye Town Hall (10 Central Rd, Rye NH)
INVITEES: Matt Scruton, Jason Rucker, Chuck Marsden, Kim Reed; Town of Rye
Sally Soule, New Hampshire Department of Environmental Services (NHDES)
Arik Jones, Rye Water District
Kalle Matso, Piscataqua Region Estuaries Partnership
Jennifer Rowden, Rockingham Planning Commission
Tracy Degnan, Rockingham County Conservation District
John Bucci, Ashley Bulseco; University of New Hampshire
Steven Borne, Danna Truslow; Rye Residents
Maggie Kosalek, Cayce Dalton; FB Environmental Associates (FBE)

PURPOSE:

The purpose of the first Technical Advisory Committee meeting is to introduce committee members, outline the project timeline, discuss the status of items in the 2011 Action Plan, and begin creating the water quality goal for Parsons Creek. We will give a brief overview of the Watershed Based Plan process and historical water quality monitoring efforts and results in Parsons Creek to orient attendees.

ACTION ITEMS:

ACTION	WHO	DUE DATE
Coordinate TAC via email between meetings, plan for next meeting.	FBE facilitates	Fall-winter 2024
Research risk of human illness from human vs non-human sources of fecal contamination.	FBE	Fall 2024
Begin drafting updated Watershed Based Plan, starting with Action Items completed since 2011.	FBE drafts, TAC reviews	11/29/2024
Report results from the watershed survey.	FBE	11/29/2024

AGENDA:

Topic	Who
1. Introductions	FBE facilitates
2. Project Timeline	FBE
3. Historical Monitoring Efforts & Water Quality Data	FBE
4. 2011 Action Plan Review	Everyone (facilitated by FBE)
5. Water Quality Goal Discussion	Everyone (facilitated by FBE)
6. Next Steps	FBE

MEETING NOTES:

Meeting slideshow here

Action Items table on pages 4-5

1. Attendees, Introductions, Affiliations
    a. Matt Scruton, Kim Reed; Town of Rye staff
    b. Steven Borne, Danna Truslow; Town of Rye residents
    c. Sally Soule, New Hampshire Department of Environmental Services (NHDES)
    d. Kalle Matso, Piscataqua Region Estuaries Partnership (PREP)
    e. Jennifer Rowden, Rockingham Planning Commission (RPC)
    f. Tracy Degnan, Rockingham County Conservation District (RCCD), resident in watershed
    g. John Bucci; University of New Hampshire (UNH)
    h. Maggie Kosalek, Cayce Dalton; FB Environmental Associates (FBE)
2. Project Timeline
    a. Maggie and Cayce presented the project overview and timeline
3. Historical Monitoring Efforts & Water Quality Data
    a. Cayce presented a brief overview of water quality monitoring and data.
        i. Parsons Creek (estuary / salt marsh portion) is pathogen impaired, meaning there's a risk of illness from water contact. Water-based recreation in the estuary is strongly discouraged.
        ii. Bacterial indicator concentrations are consistently high to very high within the estuary.
        iii. Bacteria at the downstream beaches are generally within water quality standards but occasionally exceed the standards resulting in a swimming advisory.
        iv. Parsons Creek outlet at the beach has generally good water quality but shows a degrading trend.
    b. The project team discussed past efforts to identify sources of pathogen pollution
        i. Ribotyping (rRNA, an earlier genetic fingerprinting method) by Dr Steve Jones at UNH about 15-20 years ago showed some human sources. That testing needs to be added into the watershed based plan update.
        ii. Canine detection about 10 years ago has shown human sources throughout the watershed
        iii. Optical brighteners (from laundry detergent, an inexpensive proxy for wastewater) have been attempted a few times but have never been found. They do not appear to be sensitive enough in this environment.
        iv. PhyloChip, which looked at patterns of genetic markers found five genera of bacteria which contain human pathogens in the estuary. It did not, however, appear sensitive enough in brackish New England waters, since it did not identify any sources at all (except for a "possible" match to rats and raccoons).
        v. John Bucci briefly described current single-source genetic marker testing for human, rat, and raccoon sources. The genetic marker testing is highly accurate and very sensitive. Results of this state-of-the-art source tracking will be available soon. It has been used successfully in the region. It tends to provide presence / absence results for each source tested, and sometimes provides a general indication of low/medium/high quantity.
        vi. Additional ideas for future source tracking:
            1. Urine assay (see "Yellow Tide" documentary from Cape Cod region)
            2. Artificial sweeteners like sucralose
            3. Enhanced / expanded groundwater sampling
    c. Kalle suggested follow up literature research on the differences in risk of causing human illness between non-human and human fecal sources in surface waters.

4. 2011 Action Plan Review
    a. Maggie presented FBE's research into what elements of the 2011 Action Plan have been completed or attempted. TAC members added their knowledge of actions taken. **See table below** which summarizes that discussion.
    b. Additional details from the discussion included:
        i. Kim recalled that in the second 319 grant, Rye offered free septic inspection and up to $5,000 toward repair to those who volunteered to have their system evaluated. Only 2 volunteers came forward.
        ii. Sally mentioned walking Parsons Creek behind PC-08, finding growing green vegetation in winter, a possible sign of undertreated septic effluent near the surface.
        iii. Sally stated that Rob Livingston from NHDES, who has a lot of experience tracking bacteria sources, has said that dye testing is not considered effective for identifying leaking septic systems.
        iv. Sally indicated that NHDES watershed assistance programs can provide cost share for septic system replacements, though that is more typically done in lake watersheds.
        v. Several TAC members discussed whether community septic systems (several homes on one large system) might be a useful idea to explore. They would provide "more eyes" on the system, and more likely to be professionally maintained. Sally indicated they require a large amount of land, larger setbacks, plus a reserve area. Several TAC members noted that in many areas of the watershed, there does not appear to be enough land area to implement community systems. Cayce mentioned that a septic system utility is another option which could provide professional, watershed-level management of existing individual systems. Kim will see if these can be possible action items in Rye's Master Plan.
        vi. Several TAC members indicated an interest in additional shallow groundwater testing around the estuary.
        vii. The TAC discussed Rye's existing pump-out health regulation. In the initial round of pump-outs, a municipal inspector had to be present. The pump-out requirement is being actively monitored and enforced by the town, though there are a few non-compliant properties.
5. Water Quality Goal Discussion
    a. This topic was skipped due to time constraints.
6. Next Steps
    a. See table at top of memo.

Summary of 2011 Action Items and Relevance to 2025 Plan

2011 Parson Creek Watershed Based Plan Action Items (summarized)	Status	Work Done to Date	Include in 2025 Action Plan?
Host education & outreach events	Partially complete	Public demonstration with human fecal waste tracking dogs (2013); septic outreach evetn at private residence (2014); septic social (2016)	Yes
Develop & distribute education & outreach materials	Complete & ongoing	Several brochures created and distributed through the town hall regarding septic maintenance, dog waste, etc.; Parsons Creek webpage maintained with applicable regulations, reports, outreach, etc.	Yes
Develop & maintain septic system database	Complete & ongoing	New and rebuilt septics require approval through town and are entered into database; septic survey (2012/13)	Yes (new septic survey; continue database maintenance)
Conduct site visits to identify septic failures	Partially complete	Walked along marsh by PC08 to visually investigate septics, identified 1 failure (lush grass in winter)	
Perform dye test or septic inspections at hotspot areas	Incomplete		Yes (discuss other methods of testing)
Develop a plan to identify, replace, and/or repair malfunctioning systems, using existing rules and resources	Incomplete		Yes
Update and develop new municipal ordinances to protect water quality	Complete	Septic pump out health regulation (letters sent out to those out of compliance; very few out of compliance)	Potentially (see if there are other areas that can be updated; check on status of inspection ordinance from CWSRF project)
Investigate/implement cost-share septic replacement program	Partially complete	Attempted - town offered free inspections and $5k to landowners to supplement upgrades, only 2 people did it	Yes (look into potential state/federal funding for cost-share)
Explore establishing community septic	Incomplete		Yes (more robust evaluation of if this is possible; add in septic utility idea)
Explore installation of public sewers	Complete	Haven't been able to secure funding for this, and if it could be secured, would likely just extend Portsmouth sewer lines and wouldn't reach the watershed anyway	No

2011 Parson Creek Watershed Based Plan Action Items (summarized)	Status	Work Done to Date	Include in 2025 Action Plan?
Install BMPs	Partially complete	Several buffer and infiltration trench projects completed under 319 grants; other BMPs not employed (UV light in pipe to treat bacteria, rain barrel program, etc.)	Yes (guided by watershed survey results)
Increase pet waste outreach and regulations	Complete	Waste bag stations maintained at several locations in watershed; two waste receptacles at beach during winter; more signage posted around watershed; dog waste litter fine increased to $1k	Yes (continue current efforts and incorporate into new sustained outreach)
Create designated dog parks	Incomplete		No (not of interest)
Remove portable toilets from streamside	Partially complete	Toilet by Petey's removed; DPW has one portable toilet on Wallis Ave Ext all summer	Yes?
Ensure properly functioning permanent facilities	N/A		No (no permanent opublic facilities in watershed)
Develop programs to limit pollution effects from agriculture grazing	Incomplete	Buffalo farm (in watershed at time of last WMP) has been removed.	Yes? (outreach to those who own chickens and horses)
Develop programs to repel wildlife.	Incomplete		Yes?
Develop habitat-restriction programs (discourage feeding of wildlife, install closed-lid trashcans near beaches and parks)	Incomplete	Check with Jason on closed-lid trashcans	Yes?