WPWA January 18, 2018 Board Workshop
Attending: Alan Desbonnet, Donna Walsh, Tom Ferio, Joe MacAndrew, Brenda Rashleigh, Chris Fox (ED), Matt (guest)

The board, staff, and guest, discussed the WPWA water quality monitoring program with the intent of defining a 3-year strategy for implementation, including support of the program on a sustainable basis. The following are the result of that dialog.

Ten (10) water quality monitoring stations are listed below, and are considered critical for support on a sustainable basis. Combined, these locations provide reasonable coverage as sentinel sites by which to assess overall conditions and trends in water quality throughout the Wood-Pawcatuck watershed hydrologic system, for the reasons as listed.

The following stations will be monitored with the financial support of WPWA in 2018:

1. Shunock River at I-95 off of Route 49 (Shunock River subwatershed)
    a. This is a Tier 1 site and is being supported as the site sits at the confluence of Shunock and Pawcatuck Rivers. This site is therefore a good integrator of several waterways and their associated watershed.
2. Ashaway River at Route 216 (Ashaway River subwatershed)
    a. This is a Tier 1 site and is being supported as it is located just above the confluence with the Pawcatuck River and is therefore a good integrator of the subwatershed as it joins the Pawcatuck River.
3. Alton Pond (lower Wood River subwatershed)
    a. This is a Tier 1 site and is being supported as it has been continuously monitored for 26 years, and is at the bottom portion of the drainage basin making it a good integrator of the landscape. This site also is in a more developed area, and has shown considerable variability over time in monitored parameters, and therefore is worthwhile to keep tabs on.
4. Beaver River at Route 138 (Beaver River subwatershed)
    a. This is a Tier 1 site and is being supported as it is the only such monitoring site in this subwatersed. USGS gage site is located close to this monitoring site, providing the opportunity for accessory data to be available.
5. Glen Rock Reservoir / Queen River at Usquepaugh (Queen River subwatershed)
    a. This is a Tier 1 site and is being supported as it has been continuously sampled for 27 years, and has shown a slow but continuing trend towards improved water quality. It is therefore worthwhile to keeps tabs on this site as an indicator of improving conditions over time.
6. Chipuxet River at Route 138/Taylor's Landing (Chipuxet River subwatershed)
    a. This is a Tier 1 site and is being supported because it is in the proximity of several stressors, mainly the University of Rhode Island Kingston Campus, several turf farms, the Town of West Kingston, and the Amtrak Kingston Station. There also is a USGS gage station in close proximity, providing the opportunity for accessory data to be available for the site.
7. Pawcatuck River at Biscuit City Road (Usquepaugh River subwatersed)

    a. This is a Tier 1 site and is being supported because it captures the Usquepaugh/Queens Rivers just as they join the Pawcatuck River, and is above possible stressors located downstream (e.g., Kenyon Industries). A USGS gage is in close proximity, providing the opportunity for accessory data to be available for this site.
8. Pawcatuck River below Kenyon Industries (Usquepaugh River subwatershed)
    a. This is a Tier 1 site and is supported because it integrates possible impacts resulting from Kenyon Industries, located on the river. This site has shown high phosphorus values in the past, and recently has seen a trend of improved water quality, making it worthwhile to keep tabs on.
9. Pawcatuck River at Route 91 (Tomaquag subwatershed)
    a. This is a Tier 1 site and is supported because it integrates a subwatershed area with the larger Pawcatuck River, and because a USGS gage is located at the site, providing the opportunity for accessory data to be available.
10. Pawcatuck River at the USGS Stream Gage site (Lower Pawcatuck watershed)
    a. This is a Tier 1 site and is supported because it is a good integrator of the entire Pawcatuck River watershed, and a USGS gage is located at the site, providing for the opportunity for accessory data to be available.

The following water quality monitoring stations are located in the watershed, adding to the diversity of sites being assessed, and adding further richness to the data available by which to judge conditions and trends. Because these sites are supported by entities outside of WPWA, they are not incorporated into the WPWA 3-year strategic plan for water quality monitoring. Should these sites not be supported as noted below in the future, WPWA will at that time assess the strategic importance of a site according to existing monitoring efforts, and include or exclude from the overall WPWA water quality monitoring program, as appropriate. These sites are:

- Upper Wood River is being monitored with the support of Trout Unlimited on the Falls River at Step Stone Falls and at Twin Bridges; both are Tier 1 sites
- Barber Pond is being monitored by US EPA, and is a Tier 1 site
- Shickasheen Brook at Route 2 is being monitored with support by Watershed Watch
- URI (Tom Boving) may be conducting study of White Horn Brook---we should check to see if this is true, and if so, what specifically is being done and over what time frame.

It is agreed that temperature is an important, and relatively easy, environmental variable to record on a regular and sustainable basis. Temperature data are easy to collect and will be useful in assessing impacts of changing climate/warming on the riparian ecosystem. Therefore, temperature will be recorded at all water quality monitoring stations beginning in the 2018 sampling season, or as is practical, with the intent of temperature data collection as soon as is reasonable within the overall scope of the monitoring program.

At present, there are 12 continuously recording temperature/conductivity meters in use in the watershed. The data from these recorders augment existing water quality monitoring data being collected through Watershed Watch. These meters will be kept in functional condition by

WPWA, to reasonable extent, and will deployed **(as noted in the Flood Control Plan? What defines where they are now? We should site that here)**

This 3-year strategic plan for water quality monitoring in the Wood-Pawcatuck watershed does not provide support for any sites located on watershed ponds and lakes. The reasoning behind this decision is that the 10 supported Tier 1 sites provide a reasonable, and affordable, overview of conditions and trends throughout the entirety of the Wood-Pawcauck watershed, while pond and lake sites tend to assess conditions and trends only in the watershed directly linked to that enclosed waterbody.

While WPWA agrees that the health and well-being of lakes and ponds in the watershed is important, support of these sites was deemed not strategically possible in the 3-year period of this plan, and perhaps not into the future. WPWA will, over the course of 2018, reach out to and meet with, as is practical, any and all lake and pond associations located in the watershed to engage them in supporting water quality monitoring of their designated waterbody. Lake and pond/homeowner associations have a vested interest in the waterbody they reside on, and it is reasonable to expect that they support improved understanding of that aquatic ecosystem, and the trends expressed over time in the waterbody. Ideally, for the 2019 monitoring season, lake and pond/homeowner associations would be supporting those stillwater-ecosystems once part of the Watershed Watch program. (**we should have a list of those stations/sites here**)

To sustainably support the 10 designated Tier 1 sentinel sites noted previously, WPWA will focus effort on expanding the number of its' Business Membership patrons. During 2017 WPWA initiated a Business Membership Campaign, and attracted 2 new business members. Interaction with these new business members led to positive learning experiences; 2018 will see a more vigorous and more aggressive campaign to bolster business memberships.

- Each business member will be assigned a site that they will be acknowledged as supporting on the WPWA website, and in other public media, as appropriate.
- WPWA will convene business members at least once per year to provide an update on monitoring efforts and findings, and any trends or interesting findings.
- WPWA will meet individually with business members at least once per year to discuss their business membership and its' benefits, and to determine how we might adjust their benefits, within reason and as possible, to ensure their continued support of water quality monitoring.
- It will be the 2018 goal to attract 10 business memberships, in total, at the level of $1,000 per membership.

WPWA will have check points in April and June to assess the ongoing success of the Business Membership Campaign, adjusting the strategic approach as necessary. By November 2018 WPWA will make a full assessment of the robustness of this approach to sustaining the WPWA water quality monitoring program. This assessment will be used to change its approach, if needed and as necessary, for 2019, and to determine if monitoring sites should be added, removed, or held at present level of 10 stations.