JUNE 2024

# Ashburnham Site Visits NbS Action Recommendations

The following recommendations are the result of the FY24-25 MVP Nature-based Solutions Project and will help set the stage for obtaining follow-on grants to design and implement the priority NbS projects, whether they are pursued by the municipalities themselves, or through the coordination of the NRWA with the municipalities.

NASHUA RIVER WATERSHED ASSOCIATION

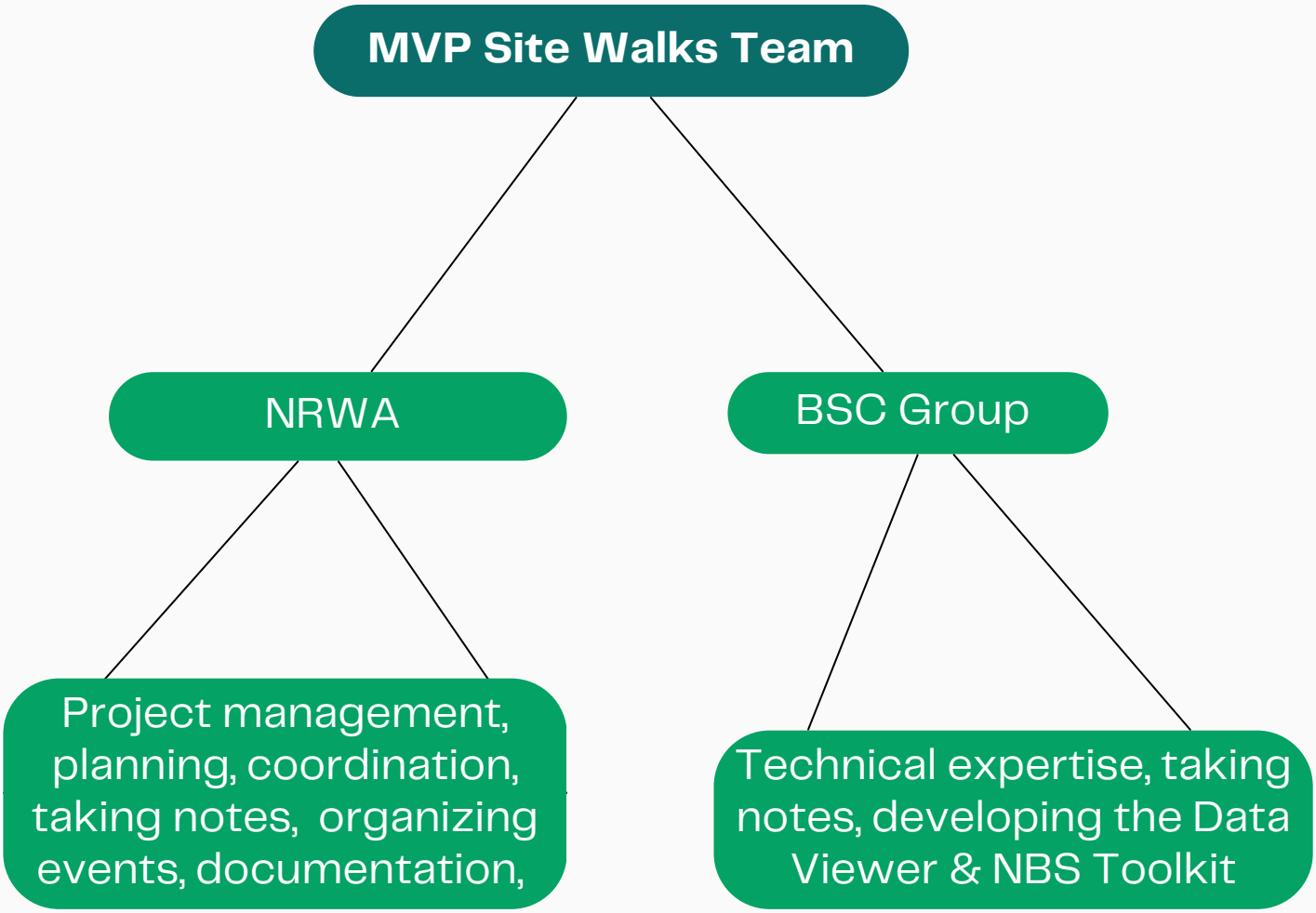
With contributions from Regenerative Design Group and BSC Group

Dr. Ralph Baker's photo of the Ashburnham Site Walk: Naukeag Lake / Page Ave.

# Table of Contents


| | |
|---|---|
| MVP Site Walks Team | pg. 1 |
| Sweeney Park, Pump Station | pg. 2 |
| Phillips Brook / Residential Area, High St. / Cushing St. | pg. 3 |
| Page Ave., Dump / Transfer Station, South Branch Souhegan River, Brickford and Marden Fields | pg. 4 |
| Site Walk Photos of Ashburnham | pgs. 5 – 9 |
| List of MVP Project Resources | pg. 10 |

**Following the Municipal Kickoff Meetings, Community Meeting 1, & Community Meeting 2 -- residents and officials in each community were invited to participate in the Site Walks during March and April. We captured the resulting discussions in our notes, taking into account considerations such as feasibility, potential impact, and parcel ownership to narrow down the list of "problem areas" to an actionable shortlist.**




**Stacey Chilcoat**
Education Director, Manager

**Sara Singh**
Project Manager

**Paulina Torres**
Educator

**Jen Keegan**
Executive Director, Environmental Attorney

**Dr. Ralph Baker**
Board President, Soil Scientist

**Bob Pine**
Board Member, Soil Scientist

**Wynne Treanor-Kvenvold**
Community Programs Director, Outreach Lead

**Tom Groves**
Sr. Botanist

**Emily Derrig**
Civil Engineer

**Casey-Lee Bastien**
Sr. Landscape Architect & Ecologist

**Lindsey Carle**
Climate Adaptation & Resilience Specialist, Certified Erosion, Sediment and Stormwater Inspector

**Matt Burne**
Professional Wetland Scientist & Sr. Ecologist

# Ashburnham

Priority Sites 1 - 2

**29 Memoranda work orders for NBS interventions, including Pedestrian Safety & Bike Access, Soft Trails, Pervious Parking & Walking Areas, Stormwater Treatment Wetlands, Species Crossing Protections, Lighting Modifications, Invasive Species Management, Culvert Improvements, & Stream Flow Alterations.**

## Sweeney Park

Sweeney Park on South Main St. in South Ashburnham is located in a flood plain and within an industrial zone; it borders the Whitman River. Along South Pleasant St., on the other side of the river from the park, water main breaks and flood events have been continuously reported. Removing the chain link fence along the river would create more accessible space; this fence could be replaced with safety signage or a different type of barrier. We recommend planting shade trees along the walking path, and around the basketball court. The basketball court is cracking; when it is due to be resurfaced, we recommend exploring porous pavement options which would improve drainage. The infiltration basins upstream of this location need to be mapped to identify areas where filtration can be improved.

With a neighboring oil business in Zone A of the floodplain, verification is needed regarding the effectiveness of their detention basins. Historically, the Conservation Commission regularly issued enforcement orders to this business for washing their trucks next to the brook. Cutting a channel to the brook, or similar interventions, could facilitate drainage. We recommend the creation of an unmowed buffer area between the road and the park to prevent the buildup of auto exhaust in the park. Where the flagpole is located, a pollinator garden would add wildlife habitat and reduce the need for mowing. The current playground equipment is highly used but doesn't meet standards (no trees, minimal grass, excessive pavement); it should be replaced with more inviting and nature-based play elements. The soils around Sweeney Park are highly degraded; the interventions described in the Healthy Soils Report would restore soil health.

## Pump Station

This is the main sewage pump station in the town, and serves both the Oakmont Regional Schools and Cushing Academy. The town frequently has to hire trucks to transport the wastewater to the treatment plant due to flooding during times of high rain and stormwater runoff that incapacitates the pumps. The town is investigating moving the pumping station controls out of their current underground position to reduce the incidence of the pumps shutting off. Flooding is occurring during times of high rain and stormwater runoff, and residents are pumping water from their basement sumps into their sewage hookups – this adds to the town's burden. A bylaw could be adopted to mandate the discharge of sump pump water outside on the ground instead of into the sewage system. It would be desirable to have the schools and other large contributors investigate the possibility of installing on-site sewage disposal systems with leach fields, which would greatly reduce the burden and cost of the town's sewage system.

In the new FEMA maps, this pump station is located in the floodplain area. This area tends to overflow into the Whitman River, and there is substantial groundwater beneath the tanks; it might be worthwhile to consider relocating the pump station. This area remains one of the highest priorities due to the frequency and severity of flooding.

# Ashburnham

## Priority Sites 3 - 4



### Phillips Brook / Residential Area off Main St.

This small park on River St., immediately north of Main St. could be restored. The Conway School of Design produced a detailed habitat restoration plan for floodplain restoration, removal of invasive plants and replanting of floodplain species; we recommend revisiting their plan. Temporary or green roof pavilion options could make it more inviting for people to use the park for farmers markets, etc. Removal of the old pool concrete wall could enable a more natural bank. The soils around this residential area are highly degraded; the interventions described in the Healthy Soils Report would restore soil health.

There are multiple dams on Phillips Brook. Formerly a town swimming pool, it was abandoned due to beaver activity upstream. There are viewsheds into Phillips Brook that could be improved or expanded for scenic value. There are potential trail connections to the Rail Trail along Phillips Brook.

Most of the property is in the Riverfront Area, on existing wetlands. Many invasives were removed by NRWA on this property but ongoing maintenance is needed. The Open Space & Recreation Committee as well as the community are keen to put this property to good use. Because it is highly visible from Main St., any improvements here are certain to catch people's attention and attract interest.

### High St. / Cushing St.

This area is described by some residents as "Meeting House Hill." A former water storage pond is present, offering the possibility of a series of tiered pools to reduce downstream stormwater impacts. There is an abandoned town dam that has been breached and seeps from the base. Very little water is held behind it; we recommend dam removal via hydraulic fracturing or heavy equipment. Invasive plant species removal is needed; these should be replaced with native varieties. The culvert at High St, southwest of the pond, could present options for retention areas. This area tends to remain very wet and was probably once an extensive wetland area. The soils around High St. and Cushing St. are highly degraded; the interventions described in the Healthy Soils Report would restore soil health.

Although it was supported by concrete walls, this old town reservoir breached during the hurricane of 1938. The water here is a tributary to Phillips Brook, and heavy rains tend to send a deluge of rock, soil, sand, and oil down Cushing St. and High St., towards Main St. This event occurred 3 to 4 times in 2023. The water filled a whole (new) detention pond in one summer. There is an open culvert on High St. that jettisons water out into the wetland behind a homeowner's property, very forcefully. The root issue is drainage on Cushing St. and High St. The town has already restructured one culvert that collapsed here.

# Ashburnham

## Priority Sites 5 - 8



| | |
|---|---|
| **Page Ave.** | This area is owned by the Lower Naukeag Lake Association. We recommend removal of the pavement in the Right of Way / lake access area, and installation of a more narrow pedestrian walkway with swales / retention areas on both sides to help prevent stormwater from discharging sand into the lake. The Conservation Commission has expressed concern about the need for better management of stormwater runoff at the right of way to the beach. The Commission approved improvements to this right of way to the beach from Page Ave, and agreed to slow-the-flow techniques. This issue will likely be raised again, and should be straightforward to resolve. Although these are private roads, on private property, we included this site because the neighborhood association is likely to be open and motivated to correct the runoff and sedimentation issues. |
| **Dump / Transfer Station** | Invasive species surround the perimeter of the old dump; these plants are threatening the wetland complex. The dump site has the potential to be reused for ball fields, recreation areas, possible grassland habitat for birds, or solar field options. The back of the property remains unused. Waste Management trucks everything out – except for brush, which gets burned. This station might close, or it might regionalize (in which case, locals will have to send their trash to Winchendon). The City did renew the contract with Waste Management for one more year. There is potential for ecological restoration here if the contract with Waste Management does not get renewed again. |
| **South Branch Souhegan River** | From Rindge Turnpike to the intersection of Old Ashby Rd. and Old Steele Rd., flooding can inundate the roadway. We recommend removing asphalt in this area and creating either a dirt roadway section or a one lane road that will slow down traffic to protect Blanding's Turtle habitat and enhance water infiltration. Beaver deceivers could be installed where the culverts are located. Undersized culverts should be enlarged and unburied to meet MA River and Stream Crossing Standards for wildlife.<br><br>Flooding tends to occur between Marble and Billy Ward Ponds on Ashby Road; the culvert here may be in danger of collapse. The Conservation Commission received a letter from the property owner saying that the culvert caused problems and created wetlands, but old maps show pre-existing wetlands. If the culvert has a structural integrity issue, then that should be attended to. This is an important ecosystem that serves as a habitat for Blanding's Turtles, and also as a connectivity node for many flora and fauna. |
| **Brickford & Marden Fields** | Invasive species are present along Phillips Brook adjacent to these playing fields. We recommend creating trail networks for passive recreation during games, and replacing Japanese knotweed with edible plants like blueberries and huckleberries. Enlisting volunteers would help with invasive plant control. Phillips Brook from Puffer St. and Maple St. is channelized, and could be restored as a more natural looking stream. It is worth investigating the possibility that the factory west of the ballfields is discharging hot water into the wetlands. |

Dr. Ralph Baker's Site Walk photos: Phillips Brook

Dr. Ralph Baker’s Site Walk photos: Sweeney Park

Dr. Ralph Baker's Site Walk photos: Phillips Brook & the Town's Sewage Pump Station

Sara Singh's Site Walk photos: South Branch Souhegan River & High St. / Cushing St. Area

Sara Singh's Site Walk photo: Bickford & Marden Fields area

# MVP RESOURCES

- Site Visits NbS Action Recommendations
- NBS Toolkit (memos, site maps, matrix)
- Data Viewer
- Healthy Soils Report
- NRWA’s MVP City/Town Webpages
- Comprehensive Report (coming soon)

Sara Singh's photo of the Ashburnham Site Walk

# Now you are ready to begin putting these insights into practice with the accompanying MVP tools

**Reach out to us if you have any questions.**

NRWA@nashuariverwatershed.org

NASHUA RIVER WATERSHED ASSOCIATION