PAR21B - Upper Pawcatuck River

Pawcatuck River occupies steep straight mill race channel in village of Carolina. Channel banks are built of granite blocks which confine the channel and cut off side channel access. Upstream, the impoundment is maintained by a partially breached dam, which only allows water to flow down the left mill race channel leaving the others largely dry. Propose breaching granite bank / berm (removing floodplain obstruction) and potentially using some of the blocks in the construction of instream structures. Given the gradient any wood added to the stream will require anchoring to minimize mobility.



PAR12 - Middle Pawcatuck River



Downstream of the Bradford Pond Dam, the Pawcatuck River is channelized and confined by a berm along the left bank that continues the entire length of the reach. Behind the berm a series of man-made ponds contribute water to the river through bank seeps and outflow pipes. Propose berm breaching and/or removal to allow floodplain access, reducing flood and fluvial erosion hazards in the reach and downstream while increasing bank stability and creating sediment storage opportunities.



PAR07 and 06 - Lower Pawcatuck River

Downstream of Potter Hill Dam in Ashaway, a wide shallow channel with degraded habitat and impaired geomorphic function, could benefit from instream structures designed to narrow the channel, sort and store sediment, and provide cover for aquatic organisms. A large abandoned mill building encroaching along the left bank could be removed as part of a project to establish a passive recreation area. This site also contains the discontinued Post Office Lane bridge and is adjacent to high quality habitat in the lower Ashaway River.



WOR16 and 15 - Upper Wood River

Artificially straightened channel flowing through forested land in the Arcadia Wildlife Management Area, owned and managed by the Watershed Association. This area of the Wood River is a popular fly fishing destination. Proposed design consists of marginal wood cover structures and wood additions to encourage meander formation and sediment storage to reduce downstream flooding and sediment loading while providing high quality cover habitat.



WOR09 - Upper Wood River

Artificially straightened channel downstream of Wyoming Pond Dam, flows through the village of Hope Valley along town athletic fields and residential parcels. Propose riparian buffer establishment and installation of toe wood structures. This centrally located reach, with high potential for recreational use could be enhanced by addition of marginal wood structures and possible stabilization of mass failure.

Location for buffer planting and toe wood structures





450

300

150





Example of toe wood structures from South River, MA

WOR01 - Lower Wood River 📗

Artificially straightened channel at lower end of Wood River with considerable gravel deposition that is slowly leading to meander development. Meander development could be further enhanced with addition of log jam structures on margins of channel that would deflect flow into opposite bank. Such restoration efforts would: 1) reduce downstream sediment loading by retaining sediment within reach, 2) decrease flood peaks by increasing length of flow paths and improving floodplain access, and 3) improve aquatic habitat with increased cover and flow complexity. Presence of old mill site complicates restoration because of potential for releasing toxins into river if meander growth were to extend into contaminated areas, although carefully planning the location of meander growth could reduce the potential that the ongoing natural and unplanned growth of meanders might eventually cause contamination.



GAS04 - Ashaway River

Artificially straightened channel along I-95 with abundant side channels. Proposed design includes accessing side channels through bank cutting and flow diversion to increase sediment storage, reduce downstream flooding, and improve instream and riparian habitat.



GAS01 - Ashaway River

Natural re-meandering driven by sediment deposition in a previously straightened reach of the Ashaway River has created a dynamic stream channel with high flow complexity. Propose corridor protection to conserve this important high-quality aquatic and floodplain forest habitat.









High quality instream and riparian habitat

MEB08B - Meadow Brook

Four feet of scour and channel incision has occurred downstream of the undersized culvert at Rt 138 on Meadow Brook in Richmond. Scour is exacerbated by channel straightening upstream. Propose replacing culvert with appropriately-sized bottomless arch culvert that spans full channel width and adding roughness elements in channel to encourage aggradation and reverse incision. Possible channel-spanning wood or stone structures to re-establish channel grade. Nearby elementary school and golf course provide potential project partners.

