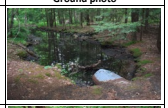
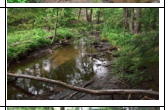
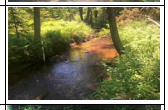
Summary of Reach Characteristics and Restoration Options on Mare Brook

Reach #	Location	Length (ft)	Conditions	Human alterations	Restoration options	Degree*/Type of improvements	Complexity/Cost†	Ground photo
1	Windorf Circle to Matthew Drive	527	- Floodplain access - Good tree canopy - Wide channel - Minimal log cover - Soft substrate	- Undersized culverts - Armoring of bed downstream of Windorf Circle - Fine sediment upstream of culverts	1) Chop and drop 2) Replace undersized culvert w/footbridge	1) Moderate - narrow channel and improve flow complexity 2) Moderate - flow impoundment eliminated; coarsen substrate	1) Very low 2) Very low to low	
2	Matthew Drive to backside of senior housing center	564	- Floodplain access - Meandering planform - Narrow channel - Minimal log cover - Good tree canopy	- Slight incision downstream of culvert	1) Chop and drop	1) Moderate - reduce incision and improve flow complexity	1) Very low	
3	Backside of senior housing center to Baribeau Drive	655	- Floodplain access - Good tree canopy - Wide channel - Fair wood loading - Sandy substrate	- Straightened(?) - Impounded reach due to undersized culvert	1) Resize Baribeau Drive culverts - multiple small culverts	1) High - extensive flow impoundment eliminated	1) Watch list - wait until culverts to be replaced	
4	Baribeau Drive to area of no access	301	- Floodplain access - Narrow channel - Fair wood loading - Good tree canopy	- Armoring of bed downstream of Baribeau Dr. culvert - Slight incision downstream of culvert	1) Remove armor	1) Low - naturalize substrate over short length	1) Very low	
5	No access area downstream to Barrows Street	1,889	- Floodplain access - Meandering planform - Good wood loading - Good tree canopy	- Floodplain in lower half constricted by fill -Barrows St. culvert undersized	1)Remove fill and replace foot bridge 2) Resize culvert	1) Moderate - flow impoundment reduced and restore floodplain 2) High - extensive flow impoundment eliminated	1) Low to moderate - depends on amount of fill removed 2) Watch list - wait until culvert to be replaced	
6	Barrows Street to a point even with Colonial Drive	389	- Narrow floodplain - Fair wood loading - Some canopy loss - Soft substrate - Multi-thread channel in places	- Armoring of bed downstream of Barrows St. culvert - Homes and road nearby	1) Remove armor 2) Wood additions or chop and drop	1) Low - naturalize substrate over short length 2) Low - increase complexity but good condition already	1) Very low 2) Very low	
7	From a point even with Colonial Dive to MacMillan Drive	206	- Narrow floodplain - Meandering planform - Narrow channel - Poor log cover - Limited canopy	- Limited wood in channel - Homes and road nearby	1) Anchored wood additions 2) Biostabilization by homes	1) Moderate - increase flow complexity and cover habitat 2) Low - only short length to be treated	1) Very low to low - need to anchor wood 2) Very low to low - depending on length to be treated	
8	MacMillan Drive to Maine Street	903	- Floodplain access - Good tree canopy - Upper half largely meandering - Lower half impounded with soft substrate	- Localized scour downstream of MacMillan Dr. culvert - Ponded upstream of culvert at Maine St. - Fill constricts channel at Maine St.	- Chop and drop - Replace Maine St. culvert	1) Moderate - improve flow complexity 2) High - eliminate flow impoundment; coarsen substrate	1) Very low 2) Watch list - wait until culvert to be replaced	
9	Maine Street to Meadowbrook Road	1,544	- Floodplain access - Good tree canopy - Meandering - Good wood loading - Firm sand and fine gravel substrate	- Severe scour downstream of Maine culvert - Fill constricts channel at Maine St.	- Chop and drop Remove fill to restore floodplain	1) Low - increase complexity but good condition already 2) High - reduce scour in narrow channel downstream of Maine St.	1) Very low 2) Moderate	
10	Meadowbrook Road to Coffin Pond	982	- Floodplain access - Good tree canopy - Meandering - Fair wood loading	- Channel widens as approach pond .	1) Chop and drop 2) Dam removal	1) Moderate - increase complexity and cover 2) High - eliminate impoundment and restore stream flow continuity	1) Very low 2) Watch list - wait until costly dam repairs needed to discuss removal	
11	Coffin Pond Dam to Harpswell Road	976	- Floodplain access - Good tree canopy - Swampy shallow channel - Numerous dead standing trees	- Entire reach largely impounded by undersized culvert at Harpswell Rd. .	1) Resize Harpswell culvert	1) High - eliminate impoundment and restore stream flow continuity	1) Watch list - wait until culvert to be replaced	
12	Harpswell Road to Navy Base fence	1,854	- Floodplain access - Good tree canopy - Meandering planform - Good wood loading	- Scour downstream of Harpswell Rd. culvert - Lower half swampy due to culvert at fence	1) Resize culvert at fence	1) High - eliminate impoundment and restore stream flow continuity	2) Moderate to high	
13	Navy Base fence to runway culvert	2,307	- Floodplain access - Limited canopy - Highly sinuous channel - Minimal log cover - Logs buried in bank	- Armoring downstream of culvert at fence - Impounded at higher level and for long duration in past	1) Remove armor 2) Wood additions in channel and on floodplain 3) Plant forested buffer	1) Low - naturalize substrate 2) Moderate - increase complexity and raise streambed 3) High - canopy for shade	1) Very low 2) Moderate to high - long length could be done in phases 3) Very low - for initial test plot	
14^	Runway culvert	3,922	N/A	-Entire reach enclosed in culvert	1) Daylight culvert	1) High - restore natural stream processes	1) Watch list - wait for major change in land use or airfield operations	
15	Runway culvert to Eagle Drive	2,112	- Higher banks than elsewhere - Limited canopy Upper half straightened - Deep pools where wood present	- High banks due to incision downstream of runway culvert - Impounded upstream of Eagle Dr. culvert	1) Wood additions in channel and on floodplain 2) Plant forested buffer 3) Replace Eagle Dr. culvert	1) Moderate - increase complexity and raise streambed 2) High - canopy for shade 3) High - eliminate impoundment	1) Moderate to high - long length could be done in phases 2) Very low - for initial test plot 3) Moderate to high	
16	Eagle Drive to confluence with Merriconeag Stream	1,547	- Floodplain access - Fair tree canopy - Meandering planform - Good wood loading	- Scour downstream of Eagle Dr. culvert	- Chop and drop	1) Low - increase complexity but already in good condition	1) Very low	
17	Merriconeag Stream confluence to Liberty Crossing	1,270	- Floodplain access Tidally influenced Limited canopy Poor log cover	- Forested berm crosses floodplain and rock crosses channel (old dam?)	- Wood additions - Remove berm	1) High - increase complexity and cover 2) Moderate - restore floodplain continuity	1) Low to moderate - depends on length and ease of access 2) High - difficult to access for fill removal	

* - Categorized as low, moderate, or high. A "low" ranking does not imply the reach is in poor condition as little improvement may result from restoring a reach already in good condition.
† - Categorized as very low (<$50k), low ($50k-$100k), moderate ($100-$200k), high ($>200k), watch list (cost and complexity likely too high to complete for restoration purposes so will need to await an additional reason to arise to complete work such as a bridge replacement to properly resize a stream crossing).
Note: Suggestions for stream crossing resizing are mentioned for only the upstream reach but typically will also be beneficial for the downstream reach.
^ The survey for Reach 14 terminates at the Samuel Adams Drive Road crossing and does not include the stream segment east of Samuel Adams Drive to the upstream runway culvert end.