



Town of Bowdoinham

13 School St • Bowdoinham, ME 04008

Phone 666-5531 • Fax 666-5532

www.bowdoinham.com

Thomas K. Woodin, Town Manager

April 1, 2020

Dear Members of the Bowdoinham Planning Board,

The Town of Bowdoinham is working to redevelopment its former Public Works Property along the Cathance River. The redevelopment of the property will happen in phases. This first phase and application is for:

- the change to use of the property;
- the development of a non-motorized boat launch and associated facilities (parking, boat racks, etc);
- the development of a living shoreline; and
- the development of the trail system.

Future phases will include the overall design of the property, permitting for new development and phased construction.

Sincerely,

Nicole Briand
Director of Planning & Development
Town of Bowdoinham
nbriand@bowdoinham.com
207-666-5531



Town of Bowdoinham

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PLANNING BOARD APPLICATION

Type of Application: Shoreland Zoning Site Plan Review – Tier I Tier II Tier II
 Land Use Subdivision – Minor Major

Applicant Information:

Name: Town of Bowdoinham
Mailing Address: 13 School St, Bowdoinham
Telephone: 207-666-5531
Right, Title, Interest in Property: Owner Other

(appropriate documentation must be provided)

Owner Information:

Same as Above

Name: _____
Mailing Address: _____
Telephone: _____

Agent Information:

Name: _____
Mailing Address: _____
Telephone: _____
 Surveyor Engineer Other: _____

Property Information:

Map/Lot Number: U01-001
Property Address: 8 River Rd
Lot Size: _____ Lot Frontage: _____
Existing Lot Coverage: _____ Proposed Lot Coverage: _____
Water Service: Public Private Road Ownership: State Town Private
Floodplain: No Yes Shoreland Zoning: No Yes: General Development
Tax Program: No Agriculture Open Space Tree Growth Limited Residential Resource Protection

Project Description:

Re-develop former public works property ~~to~~ public recreation facility.
Develop living shoreline, non-motorized boat launch and trail system.

Attachments (the following items are required):

- Site Plan
- Photographs of Site
- Application Fee
- Supporting Documents as required per Land Use Ordinance

By signing this application, as the foresaid applicant:

- I certify that I have read and completely understand the application;
- I certify that the information contained in this application and it's attachments are true and correct;
- I understand that all information provided on this form and all other documents submitted as part of my proposal is a matter of public record;
- I understand that copies of this information may be supplied upon request to an interested party;
- I understand that additional funds may be required through the course of review for special studies, legal review costs, and/or engineering review;
- I understand that it is my responsibility to know and pay for any tax penalty that may result from said project;
- I understand that the information contained in this application is background information and some applications may require additional tests, maps, documentation or submissions as required by the Planning Board.

Nicole Brand
Applicant Signature

4/1/20
Date

Nicole Brand
Print Name

FOR OFFICE USE ONLY

Received On: 4/2/20

Fee Paid: waved

Nicole Brand
Signed

4/2/20
Date

Site Plan Review Approval Criteria

1. *Vehicular Access – The proposed site layout will provide for safe access to and egress from public and private roads.*

There's no proposed change to the existing access drive.

2. *Internal Vehicular Circulation – The proposed site layout will provide for the safe movement of passenger, service, and emergency vehicles through the site.*

The existing site has ample room for parking and safe movement of vehicles. This phase of the redevelopment includes parking and access for the non-motorized boat launch. Additional parking and vehicle circulation will be added in future phases of the property redevelopment.

3. *Pedestrian Circulation – The proposed site layout will provide for safe pedestrian circulation both on-site and off-site.*

As part of the property redevelopment, trails will be constructed for pedestrian circulation. Additional trails will be in future phases of the properties redevelopment.

4. *Municipal Services – The development will not have an unreasonable adverse impact on municipal services, including municipal road systems, fire department, solid waste program, schools, open spaces, recreational programs and facilities, and other municipal services and facilities.*

The proposed municipal park will not have a unreasonable adverse impact on municipal services; it will be a welcomed addition to the Town's recreation facilities.

5. *Visual Impact – The proposed development will not have an adverse effect on the scenic or natural beauty of the area, including water views and scenic views.*

The proposed park will improve the visual impact of the property by stabilizing the shoreline, planting landscaping and providing trails to scenic views.

6. *Lighting – All exterior lighting will be designed to avoid undue glare, adverse impact on neighboring properties and rights-of-ways, and the unnecessary lighting of the night sky.*

There is no proposed lighting at this time.

7. *Signage – The proposed signage will not detract from the design of the proposed development and the surrounding properties and will not constitute hazards to vehicles and pedestrians.*

At name sign is not proposed at this time. Signage may be installed for the non-motorized boat launch.

8. *Buildings – The proposed structures will relate harmoniously to the terrain and to existing buildings in the vicinity, so as to have a minimally adverse effect on the environmental and aesthetic qualities of the neighboring areas.*

No buildings are proposed at this time.

9. *Landscaping – The proposed development will provide adequate landscaping in order to define, soften, and/or screen the appearance of parking and developed areas as well as to enhance the physical design of the buildings and the overall development.*

Landscaping is proposed for the shoreline stabilization portion of the project to protect and enhance the shoreline. Additional landscaping will be proposed in future phases of the project for developed parking areas, access ways and buildings.

10. *Buffering – The proposed development will provide for the buffering of adjacent uses where there is a transition from one type of use to another use and for the screening of mechanical equipment and service and storage areas.*

No mechanical equipment or storage areas are proposed. Previous public works buildings and storage areas are under contract to be removed from the property by May 1st.

11. *Utilities – The proposed development will not impose an unreasonable burden on existing utilities.*

The property has been served by utilities for its previous uses, no new utilities are proposed at this time.

12. *Water Supply – The proposed development will be provided with an adequate supply of water.*

The property is currently served by public water, no additional usage is proposed for the proposed park.

13. Sewage Disposal – The proposed development will be provided with adequate sewage waste disposal.

No sewage disposal is proposed for the park at this time.

14. Fire Protection – The proposed development will have adequate fire protection.

The proposed development is a public park. The fire chief has expressed no concerns about the proposed project.

15. Capacity of Applicant – The applicant has the capacity to carry out the proposed project.

The Town of Bowdoinham has the capacity to carry out the proposed project in phases. The Town is applying to grants to fund various phases of the project including design and construction.

16. Special Resources –

a. Shoreland – The proposed development will be in compliance with the Town's Shoreland Zoning Ordinance.

The proposed development will be in compliance with the Town's Shoreland Zoning requirements.

b. Floodplain – The proposed development will be in compliance with the Town's Floodplain Management Ordinance.

The proposed development will be in compliance with the Town's Floodplain requirements.

c. Wetlands & Waterbodies – The proposed development will not have an adverse impact on wetlands and/or waterbodies, to the extent that is practicable.

The Town will obtain a Natural Resources Protection Act from the Maine Department of Environmental Protection proposed wetland impacts.

d. Historic & Archaeological – The proposed development will not have an adverse effect on historic and/or archaeological sites.

The proposed development will not have an adverse effect of historic or archaeological sites.

- e. *Groundwater – The proposed development will not adversely impact either the quality or quantity of groundwater available to abutting properties or to public water supply systems.*

The proposed project will not adversely impact groundwater.

- f. *Wildlife Habitat – The proposed development will not have an undue adverse effect on wildlife habitat.*

The proposed park will not have an undue adverse effect on wildlife habitat. The proposed shoreline stabilization will improve the wildlife habitat along the shoreline.

- g. *Natural Areas – The proposed development will not have an undue adverse effect on rare and irreplaceable natural areas.*

The proposed development will not have an undue adverse effect on rare and irreplaceable natural areas. The proposed project will enhance and re-establish natural areas where possible.

- 17. *Environmental Impact – The landscape will be preserved in its natural state to the extent that is practical by minimizing tree removal, disturbance of soil and retaining existing vegetation.*

The proposed project will be restoring native vegetation to previously developed areas.

- a. *Solid Waste Management – The proposed development will provide for adequate disposal of solid wastes.*

The proposed park will be carry-in, carry-out facility until future phases of development. In the future, the Town may provide and maintain trash cans for the public.

- b. *Hazardous, Special & Radioactive Materials – The proposed development will handle, store, and use all materials identified as hazardous, special or radioactive in accordance with the standards of Federal and State agencies.*

The proposed park will not involve the handling, storing or use any hazardous, special or radioactive wastes.

- c. *Air Quality – The proposed development will not result in undue air pollution or odors.*

The proposed park will not result in undue air pollution or odors.

d. Water Quality – The proposed development will not result in water pollution.

The proposed park will not result in water pollution.

e. Stormwater – The proposed development will provide for the collection and disposal of all stormwater that runs off proposed streets, parking areas, roofs, and other impervious surfaces, which must not have an adverse impact on abutting or downstream properties.

No new stormwater provisions are proposed for this phase of development.

f. Sedimentation & Erosion Control – The proposed development will take adequate measures to prevent soil erosion and the sedimentation of watercourses and waterbodies.

Sedimentation and Erosion Control measures will be used during construction phases of the project.

18. Noise – The proposed development will control noise levels so that it will not create a nuisance for neighboring properties.

The proposed park is expected to create noise levels similar to Mailly Waterfront Park.

19. Compliance with Ordinances – The proposed development conforms with the provisions of this Land Use Ordinance and other ordinances and regulations of the Town of Bowdoinham.

The proposed park will conform with the provisions of this Land Use Ordinance and other ordinances and regulations of the Town of Bowdoinham.

20. Town Plans & Vision Statements – The proposed development is consistent with the intent of the Town's Plans, including but not limited to the Comprehensive Plan, Waterfront Plan, and Transportation Vision Statement.

The proposed park is consistent with the Waterfront Plan and the Comprehensive Plan calls for the implementation of the Waterfront Plan.

Shoreland Zoning Approval Criteria

1. Will maintain safe and healthful conditions.

The proposed park will maintain and enhance safe and healthful conditions.

2. *Will not result in water pollution.*

The proposed park will not result in water pollution.

3. *Will provide adequate provisions for the collection and disposal of all stormwater that runs off proposed streets, parking areas, roofs, and other impervious surfaces.*

Sedimentation and Erosion Control measures will be used during construction phases of the project.

4. *Will take adequate measures to prevent soil erosion and the sedimentation of watercourses and waterbodies.*

Sedimentation and Erosion Control measures will be used during construction phases of the project.

5. *Will take adequate measures to avoid and to minimize having an adverse effect on wetlands and/or waterbodies.*

The Town will obtain a Natural Resources Protection Act from the Maine Department of Environmental Protection proposed wetland impacts.

6. *Will provide for the disposal of all wastewater in accordance with the State of Maine Subsurface Wastewater Disposal Rules.*

No wastewater disposal is proposed for the park at this time.

7. *Will not have an adverse impact on spawning grounds, fish, aquatic life, bird or other riparian wildlife habitat.*

The proposed park will not have an undue adverse impact on spawning grounds, fish, aquatic life, bird or other riparian wildlife habitat. The proposed shoreline stabilization will improve the habitat along the shoreline.

8. *Will conserve natural, native vegetation along the shoreline.*

The proposed shoreline stabilization will conserve and enhance the natural and native vegetation along the shoreline.

9. *Will conserve visual corridors.*

The proposed project will conserve and enhance visual corridors.

10. Will conserve access to inland and coastal waters.

The proposed project will enhance the public's access to the Cathance River.

11. Will not have an adverse effect on historic and/or archaeological sites.

The proposed development will not have an adverse effect of historic or archaeological sites.

12. Will not adversely affect existing commercial fishing or maritime activities in a Commercial Fisheries/Maritime Activities district.

The proposed project will not adversely affect existing commercial fishing or maritime activities in a Commercial Fisheries/Maritime Activities district.

13. Will be in compliance with the Town's Floodplain Management provisions.

The proposed development will be in compliance with the Town's Floodplain requirements.

14. Will be in conformance with the provisions of Article 7, Section D, Performance Standards.

The proposed project will be in conformance with the provisions of Article 7, Section D, Performance Standards.

Bowdoinham

GOVERNOR'S DEED
11887

KNOW ALL BY THESE PRESENTS that the STATE OF MAINE, acting by and through its Governor, on recommendation of the Commissioner of the Department of Transportation, under and pursuant to the provisions of 23 M.R.S.A. Section 61, in consideration of One (\$1.00) Dollar and other valuable consideration paid, releases unto the Town of Bowdoinham, whose mailing address is 13 School Street, Bowdoinham, Maine 04008, its successors and assigns forever, all its right, title, and interest in and to:

A certain lot or parcel of land situated in the Town of Bowdoinham, County of Sagadahoc, and State of Maine and being as shown on a Standard Boundary Survey & Topographic Plan, prepared by Harty Land Surveying for the Town of Bowdoinham, entitled "Central Chemical Corp. Property, 8 River Road, Bowdoinham, ME", project No HLS9802, a copy of which is attached hereto, bounded and described as follows:

BEGINNING at a point located fifty feet (50.00') south of and perpendicular to railroad engineering centerline at station 1594+65.78, said point being in the southerly railroad right-of-way line;

THENCE, easterly along a line fifty feet (50.00') south of and parallel to railroad engineering centerline a distance of Seven Hundred Ninety Nine and Three Hundredths feet (799.03'), more or less, to a point on the westerly sideline of Route 24;

THENCE, southerly along said westerly sideline of Route 24 a distance of Forty Two and Sixty Three Hundredths feet (42.63'), more or less, to a point on the southerly railroad right-of-way line;

THENCE, westerly along the southerly railroad right-of-way line a distance of Eight Hundred Three and Ninety Seven Hundredths feet (803.97') to a point Sixty Six feet (66.00') south of and perpendicular to railroad engineering centerline at station 1594+64.60;

THENCE, northerly Sixteen and Four Hundredths feet (16.04') to the POINT OF BEGINNING.

The above described land being a trapezoidal shaped parcel with an area of 23,420 square feet, more or less, upon which a portion of two railroad sidings lie.

EXCEPTING AND RESERVING from the above lot or parcel of land, the railroad track lying within the above described land, and the perpetual right to operate trains for the movement of goods and/or people.

BK 1649PG 157

12-14-98
12-30-98

41-2

1000

N/A

✓

41-1

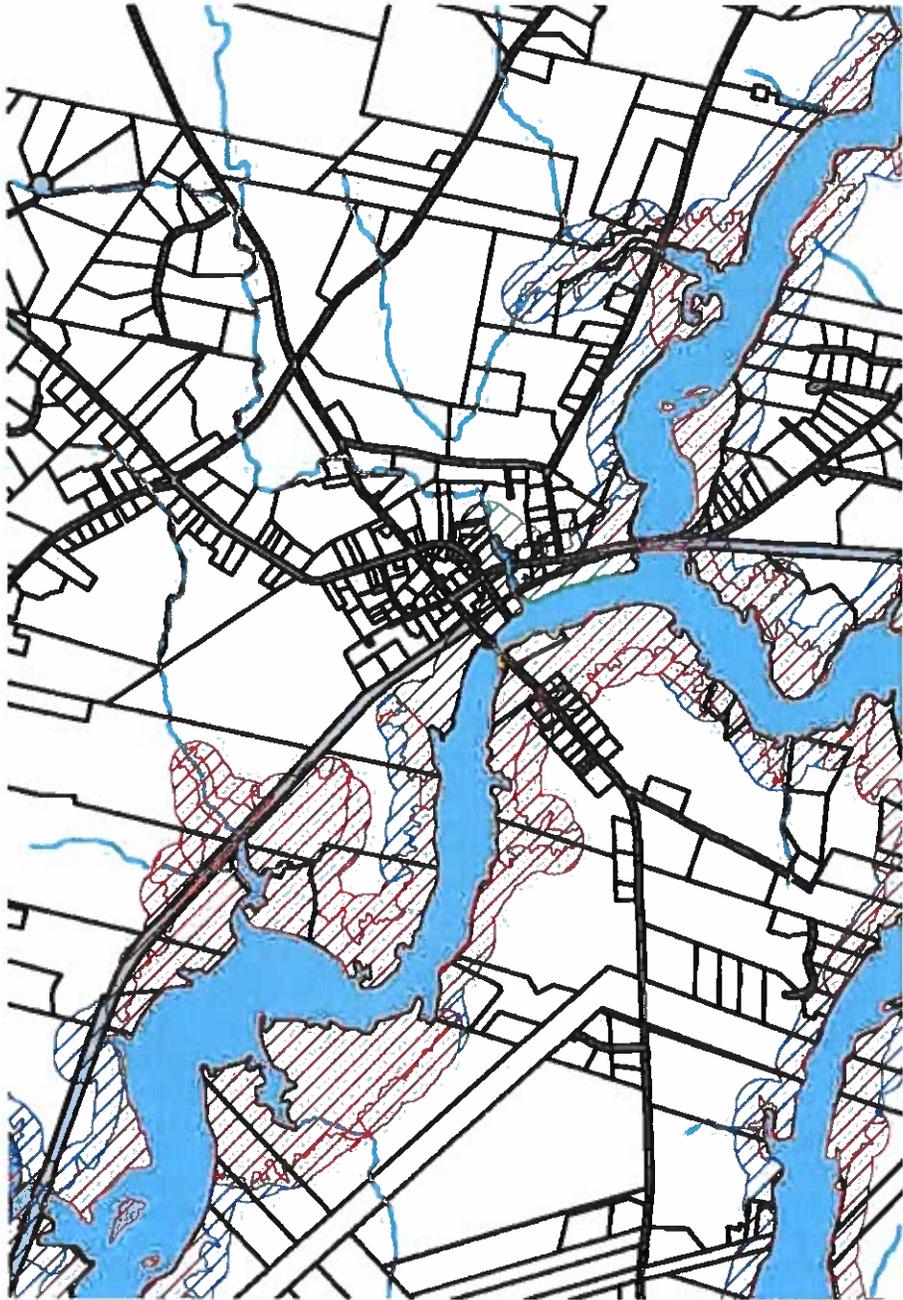
199

BK 1649PG158

This conveyance is subject to all above ground and underground utility easements and installations located on the above described premises, including those shown on the herein referred to Standard Boundary Survey. By acceptance of this deed, Grantee agrees to take title subject to those rights which any utility enjoys over the subject premises for maintenance, location or relocation of poles and other installations.

The State makes no representations or warranties with respect to the premises conveyed. The representations and warranties so excluded encompass, but are not limited to, those pertaining to: land use and environmental matters; fitness of the premises or any portion thereof for any particular purpose; water quality or quantity; the condition or quality of the soil; inchoate or unrecorded liens; or the existence, status, or condition of access to, or public utilities serving, the premises.

Said parcel of land was conveyed to the State of Maine by deed of Maine Central Railroad Company recorded at the Sagadahoc County Registry of Deeds in Book 1050, Page 86.



PROPERTY MAP
BOWDOINHAM
 MAINE

2016
 (As of April 1st)

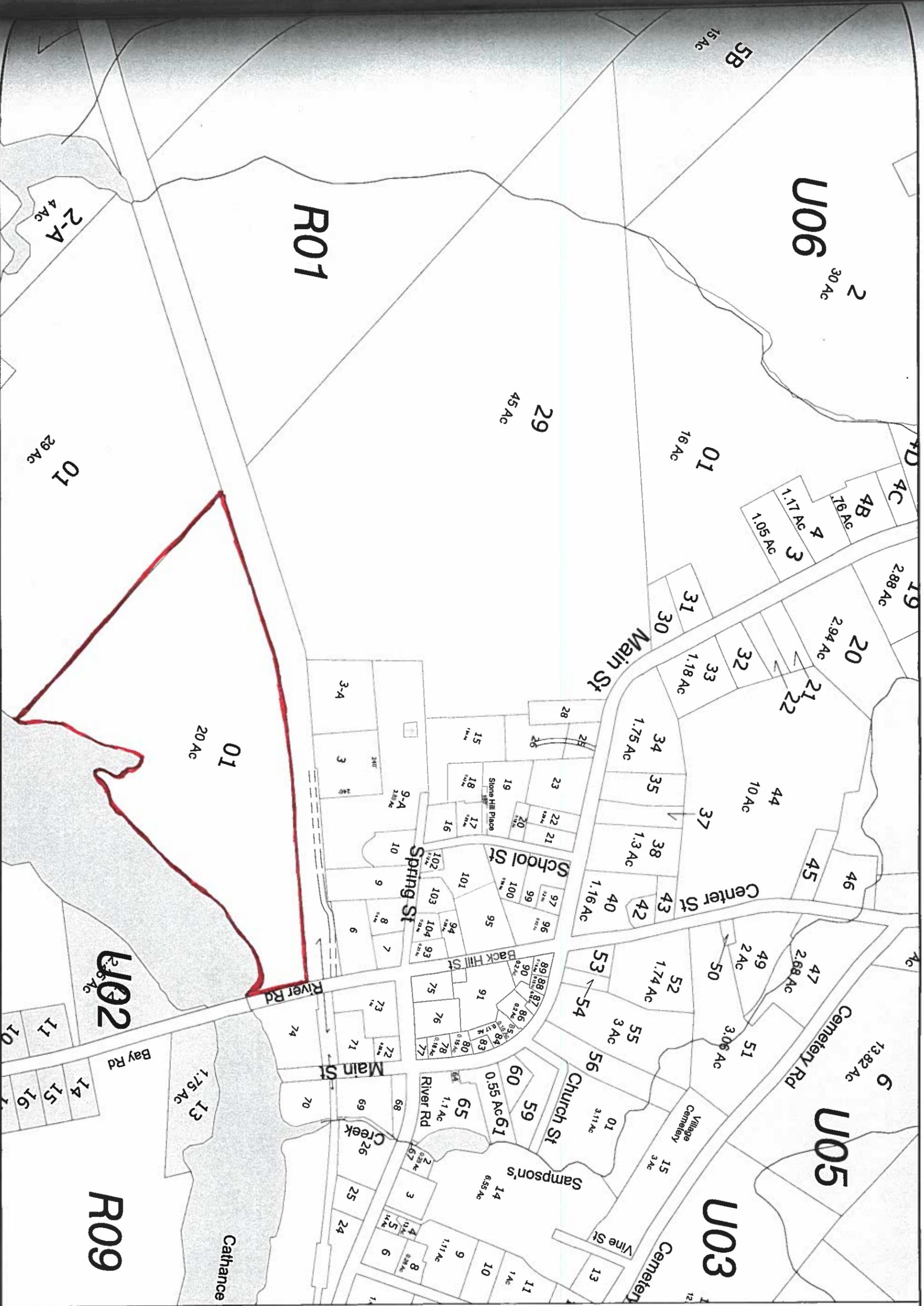


APRITTING MAP NO. 22
 PARTIAL NUMBER
 SUBDIVISION LOT NO.
 U01
 156' LOT DIMENSION
 156' PROPERTY CORNER
 1' RIGHT OF WAY
 1' EASEMENT

SCALE IN FEET
 0 150 300

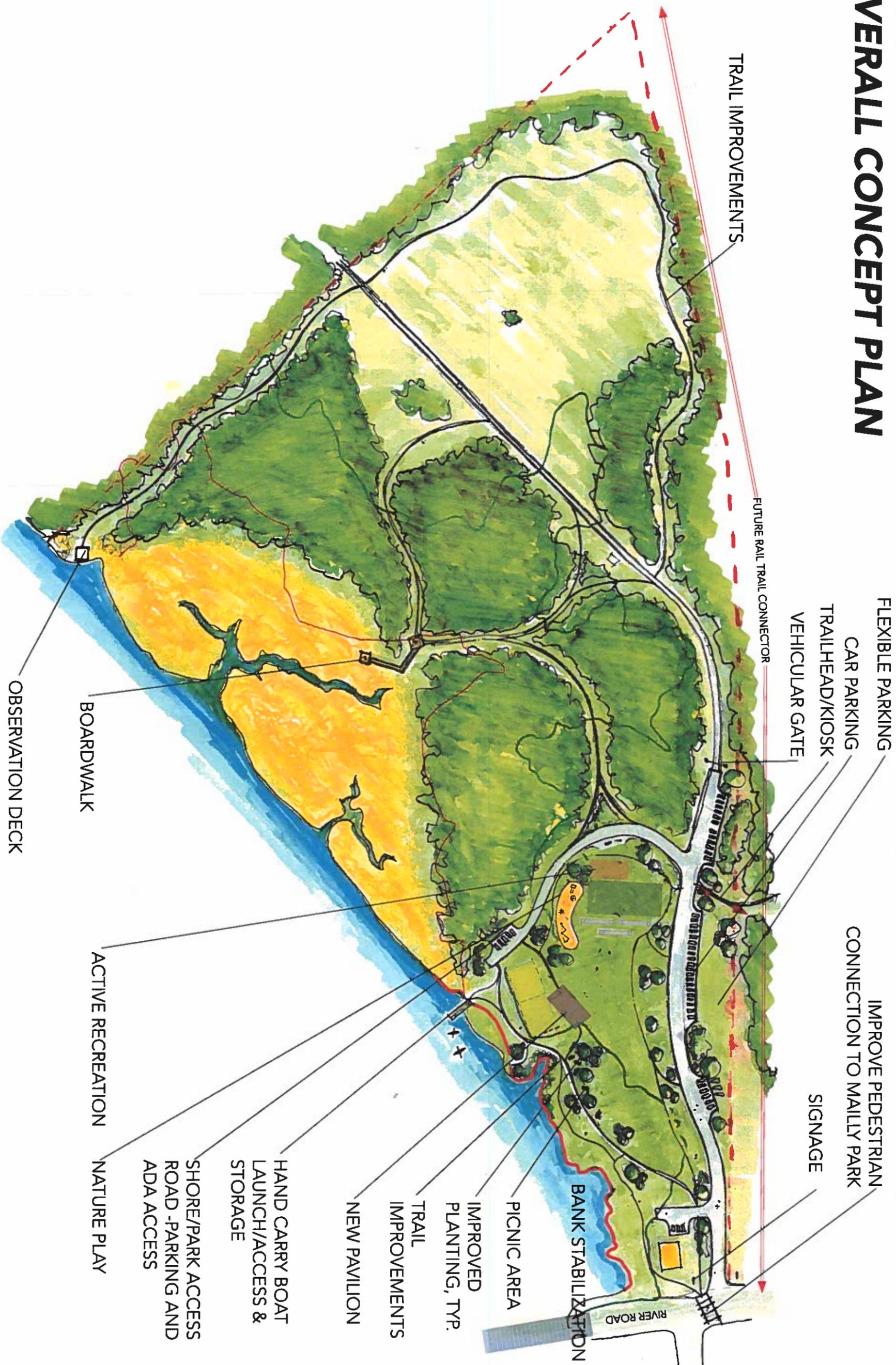
James H. Thomas
 GIS Solutions of Maine
 Cumberland, Maine 04021
 jht@maine.gis.com

NOT FOR PROPERTY CONVEYANCE
 FOR ASSESSMENT PURPOSES ONLY



U01

OVERALL CONCEPT PLAN



BAKER DESIGN CONSULTANTS
 Civil, Marine, and Structural Engineering
 7 Space Road, Freetown, MA 01032, 207-845-9724, info@bakerdcs.com

CONCEPT PLAN Overall
 Public Works Site Redevelopment
 Town of Bowdoinham, ME

Scale: 1"=60' (original drawing size)
 Original Drawing Size: 24" x 36"

Richardson & Associates, Landscape Architects
 Original Issue Date: _____
 Issued for: _____
 Revision Dates: 1.





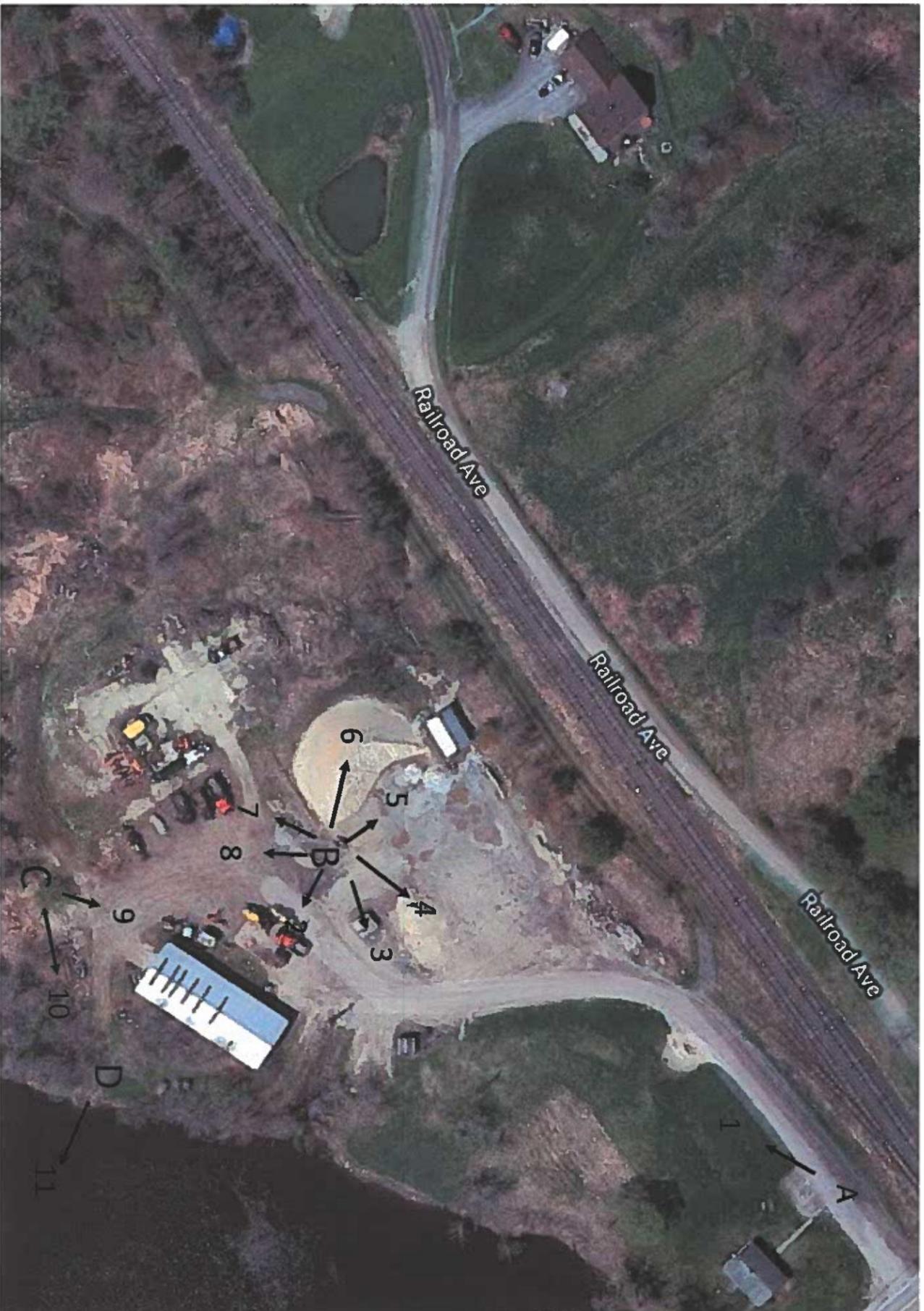
1 Location A



2 Location B



3 Location B



4 Location B



5 Location B



6 Location B



7 Location B



11 Location D



10 Location C



9 Location C



8 Location B

HANDCARRY BOAT LAUNCH					
ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
0.01	EROSION CONTROL	LS	1	\$6,300.00	\$6,300.00
0.02	COMMON EXCAVATION	CY	1100	\$15.00	\$16,500.00
1.01	RIVERBED CLEANUP	SY	150	\$50.00	\$7,500.00
2;01	18" AGGREGATE BASE TYPE "D" - PARKING AREA	CY	240	\$45.00	\$10,800.00
2.02	3.5" - 12.5 MM HMA PARKING AREA	TON	90	\$125.00	\$11,250.00
2.03	PAVEMENT MARKINGS	LS	1	\$1,200.00	\$1,200.00
3.01	LOAM & SEED	SY	440	\$10.00	\$4,400.00
4.01	BOAT RACK (8 BOAT STORAGE - EACH RACK)	EA	3	\$2,500.00	\$7,500.00
4.02	SIGN & POST	EA	6	\$350.00	\$2,100.00
4.03	REMOVABLE BOLLAD	EA	3	\$1,000.00	\$3,000.00
5.01	6' x 16' TIMBER FLOAT	EA	4	\$5,500.00	\$22,000.00
5.02	12' x 18' ADA FLOAT W/ BOAT LAUNCH	EA	1	\$16,000.00	\$16,000.00
5.03	TIMBER GUIDE PILE	EA	3	\$2,000.00	\$6,000.00
5.04	CONCRETE FLOAT ABUTMENT	EA	1	\$7,500.00	\$7,500.00
5.05	18" X 12' PRE-CAST CONCRETE PLANK (FULL DEPTH)	EA	42	\$340.00	\$14,280.00
5.06	VERTICAL CURB	LF	126	\$55.00	\$6,930.00
5.07	HEAVY RIPRAP SHORELINE STABILIZATION (FULL DEPT)	SY	150	\$100.00	\$15,000.00
6.01	MOBILIZATION / DEMOBILIZATION	LS	1	\$14,326.00	\$14,326.00
SUBTOTAL					\$172,586.00
30% CONSTRUCTION CONTINGENCY					\$51,780.00
TOTAL					\$224,366.00

Bowdoinham Waterfront

Bowdoinham, ME

Masterplan - Estimate of Probable Construction Costs

March 6, 2020

Note: This estimate is for the improvement recommendations identified on the Masterplan Phase Landscape Plans for the Bowdoinham Waterfront. Because of the preliminary nature of these documents, the cost estimate inherently makes assumptions about the specific nature of existing conditions, and the type, quantity, and quality of materials. A 10% contingency has been added for this purpose. It does not include professional fees for design and engineering, permitting costs, or in-house, or in-kind services or materials. This estimate is only intended to identify the general magnitude of costs associated with the elements of the plan. All costs should be verified as specific plans are developed for each recommended improvement.

Planting

Symbol	Scientific Name	Common Name	Size	Root Size	Quantity	Unit	Unit Price	Subtotal (Plants)	Subtotal (Incl. labor)
Trees									
NS	<i>Nyssa sylvatica</i>	Blackgum	1.5" - 2" dia (10'-14')	20" - 24"	8	ea.	\$275.00	\$2,200.00	\$6,600.00
SN	<i>Salix Nigra</i>	Black Willow	1" dia (6'-10')	12" - 18"	2	ea.	\$32.10	\$64.20	\$192.60
AS	<i>Acer saccharum</i>	Sugar Maple	2" dia (10'-14')	20" - 24"	7	ea.	\$310.00	\$2,170.00	\$6,510.00
AR	<i>Acer rubrum</i>	Red Maple	2" dia (10'-14')	20" - 24"	7	ea.	\$245.00	\$1,715.00	\$5,145.00
AC	<i>Amelanchier canadensis</i>	Shadblow / Serviceberry	1" dia (6'-10')	12" - 18"	18	ea.	\$75.00	\$1,350.00	\$4,050.00
HIA	<i>Hamamelis X intermedia 'Arnold Promise'</i>	Witchhazel	1" dia (6'-10')	12" - 18"	2	ea.	\$75.00	\$150.00	\$450.00
								Subtotal	\$22,497.60
Shrub Mix 1									
KA	<i>Kalmia angustifolia</i>	Sheep Laurel	3 gal	3 gal	195	ea.	\$20.80	\$4,056.00	\$12,168.00
IVN	<i>Ilex verticillata 'Red Sprite'</i>	Winterberry	3 gal	3 gal	84	ea.	\$15.60	\$1,310.40	\$3,931.20
IVJ	<i>Ilex verticillata 'Jim Dandy'</i>	Winterberry (male)	3 gal	3 gal	11	ea.	\$19.70	\$216.70	\$650.10
AM	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal	3 gal	38	ea.	\$18.40	\$699.20	\$2,097.60
								Subtotal	\$18,846.90
Shrub Mix 2									
KA	<i>Kalmia angustifolia</i>	Sheep Laurel	3 gal	3 gal	5	ea.	\$20.80	\$104.00	\$312.00
VA	<i>Vaccinium angustifolium</i>	Lowbush Blueberry	1 gal	1 gal	5	ea.	\$9.40	\$47.00	\$141.00
VP	<i>Vaccinium parvifolium</i>	Huckleberry	1 gal	1 gal	8	ea.	\$30.00	\$240.00	\$720.00
CC	<i>Cornus canadensis</i>	Bunchberry	1 gal	1 gal	33	ea.	\$10.00	\$330.00	\$990.00
IVN	<i>Ilex verticillata 'Red Sprite'</i>	Winterberry	3 gal	3 gal	14	ea.	\$15.60	\$218.40	\$655.20
IVJ	<i>Ilex verticillata 'Jim Dandy'</i>	Winterberry (male)	3 gal	3 gal	2	ea.	\$19.70	\$39.40	\$118.20
CA	<i>Clethra alnifolia 'Tom's Compact'</i>	Summersweet Clethra	3 gal	3 gal	12	ea.	\$32.00	\$384.00	\$1,152.00
VD	<i>Viburnum dentatum 'Blue Muffin'</i>	Arrowwood viburnum	3 gal	3 gal	5	ea.	\$30.70	\$153.50	\$460.50
								Subtotal	\$4,548.90
Shrub Mix 3									
LB	<i>Lindera Benzoin</i>	Spicebush	5 gal	5 gal	14	ea.	\$28.00	\$392.00	\$1,176.00
AM	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal	3 gal	108	ea.	\$30.00	\$3,240.00	\$9,720.00
AB	<i>Aronia arbutifolia 'briliantissima'</i>	Chokeberry	3 gal	3 gal	55	ea.	\$18.40	\$1,012.00	\$3,036.00
VA	<i>Vaccinium angustifolia</i>	Lowbush Blueberry	1 gal	1 gal	125	ea.	\$25.00	\$3,125.00	\$9,375.00
CC	<i>Cornus canadensis</i>	Bunchberry	1 gal	1 gal	166	ea.	\$18.40	\$3,054.40	\$9,163.20
								Subtotal	\$32,470.20
Aquatic Plants									
LB	<i>Iris versicolor</i>	Blue Flag Iris	Plug	Plug	120	ea.	\$1.20	\$144.00	\$432.00
AM	<i>Lobelia siphilitica</i>	Great Blue Lobelia	Plug	Plug	25	ea.	\$1.20	\$30.00	\$90.00
AB	<i>Lobelia cardinalis</i>	Lobelia / Cardinal Flower	Plug	Plug	25	ea.	\$1.20	\$30.00	\$90.00
VA	<i>Pontederia cordata</i>	Pickerel weed	Plug	Plug	20	ea.	\$1.20	\$24.00	\$72.00
								Subtotal	\$684.00
Seed Mixes									
Upland Mix			7040 sf		3.8 lbs		\$75.00	\$300.00	\$6,000.00
Bottomland Mix			3740 sf		1.6 lbs		\$135.00	\$270.00	\$5,400.00
Wetland Mix			3920 sf		1.7 lbs		\$75.00	\$150.00	\$3,000.00
Lawn					30825 sf.		\$0.10	\$3,082.50	\$9,247.50
								Subtotal	\$23,647.50

Planting Total **\$102,695.10**

Furnishings & Paving

Category	Item	Material	Quantity	Unit	Unit Cost	Subtotal HIGH	Subtotal LOW
Furnishing							
	Benches		5	ea.	\$ 500.00	\$ 2,500.00	\$ 1,875.00
	Signs		5	ea.	\$ 1,500.00	\$ 7,500.00	\$ 5,625.00
	Bike rack		1	ea.	\$ 1,500.00	\$ 1,500.00	\$ 1,125.00
	Kayak Racks		4	ea.	\$ 5,000.00	\$ 20,000.00	\$ 15,000.00
						Subtotal	\$ 23,625.00
Paving							
	Reclaimed Stone Paving		4200	sf.	\$ 7.00	\$ 29,400.00	\$ 22,050.00
						Subtotal	\$ 29,400.00

Furnishings & Paving Total **\$ 60,900.00** **\$ 45,675.00**

Landscape Subtotal \$163,595.10
 Contingency (10%) \$16,359.51

Estimated Landscape Cost (High/Low) **\$179,954.61** **\$163,207.11**

**Town of Bowdoinham
Recreational Trail Plan**

Phases outlined in the Master Site Plan:

Phase 1:

- General site restoration
- Minimal shore stabilization
- Limited trails
- Hand carry boat parking, access, & racks
- Picnic area
- Car & boat trailer parking
- Access road
- Signage
- Crosswalk/ safety
- Landscape planting
- Connections to rail trail

KELT has put together the following recommendations to assist the Town of Bowdoinham with the **Trails and Signage** portion of **Phase 1** of their Master Site Plan.

Trail Improvements and Signage Recommendations:

The very first step in the project will be to improve the trail system that is already in place.

Clear the existing trail. Project duration: one or two people over a couple hours. See **Map 2.**

- Pick up sticks, and brush off other debris (can use the side of a shoe).
- Use a rake if some areas have collected a lot of leaf litter.
- Use hand snips or loppers to cut back branches or small shrubs growing into the trail. Avoid leaving any sharp projections or stumps; branches should be trimmed all the way back to the last branch or trunk, and stumps should be cut as close to the ground as possible.

Define the existing trail. Project duration: two people over a few hours. See **Map 3.**

- Place logs along the side of the trail where it is unclear or curves sharply, like this:



Note: the entire trail should not be lined. Only add definition where it is needed.

- Update faded blazes and add new blazes where they are needed.
 - You will need two small cans of paint, two 2" wide foam brushes, and two paint scrapers. Use the paint scraper to remove lichen or uneven bark. Dip the foam brush in the paint and outline a rectangle (2" wide by 6" tall), then fill in the outline with paint. The blaze should be roughly 5.5-6' from the ground. Each blaze should be visible from the previous blaze. Have one person stand at a blaze and guide the next person to the next location; "leapfrog" down the trail in this manner with two people blazing at the same time. Blaze all the way down the trail, then turn around and blaze all the way back.
- Install boundary signs where the trail approaches private land. Let visitors know that they should respect private landowners and should remain on the town trail.

Improve water crossings. Project duration: three or four people over a few hours. See **Map 4.**

- Finish adding stones to the three stream crossings.
- Decide if the wet areas need bridges. Follow the Bog Bridge Guide.

The next step will be to add signage.

Build a kiosk. Project duration: two or three people over two afternoons. If using concrete, wait 24 hours before standing the kiosk. Standing the kiosk may take three people.

- See Kiosk Guide or Squam Creek Kiosk Design for possible layouts.
- Add signage. Sign ideas: history of the park, rules and guidelines, dog policies, contact info for Bowdoinham Town Recreation, information about ticks, etc.

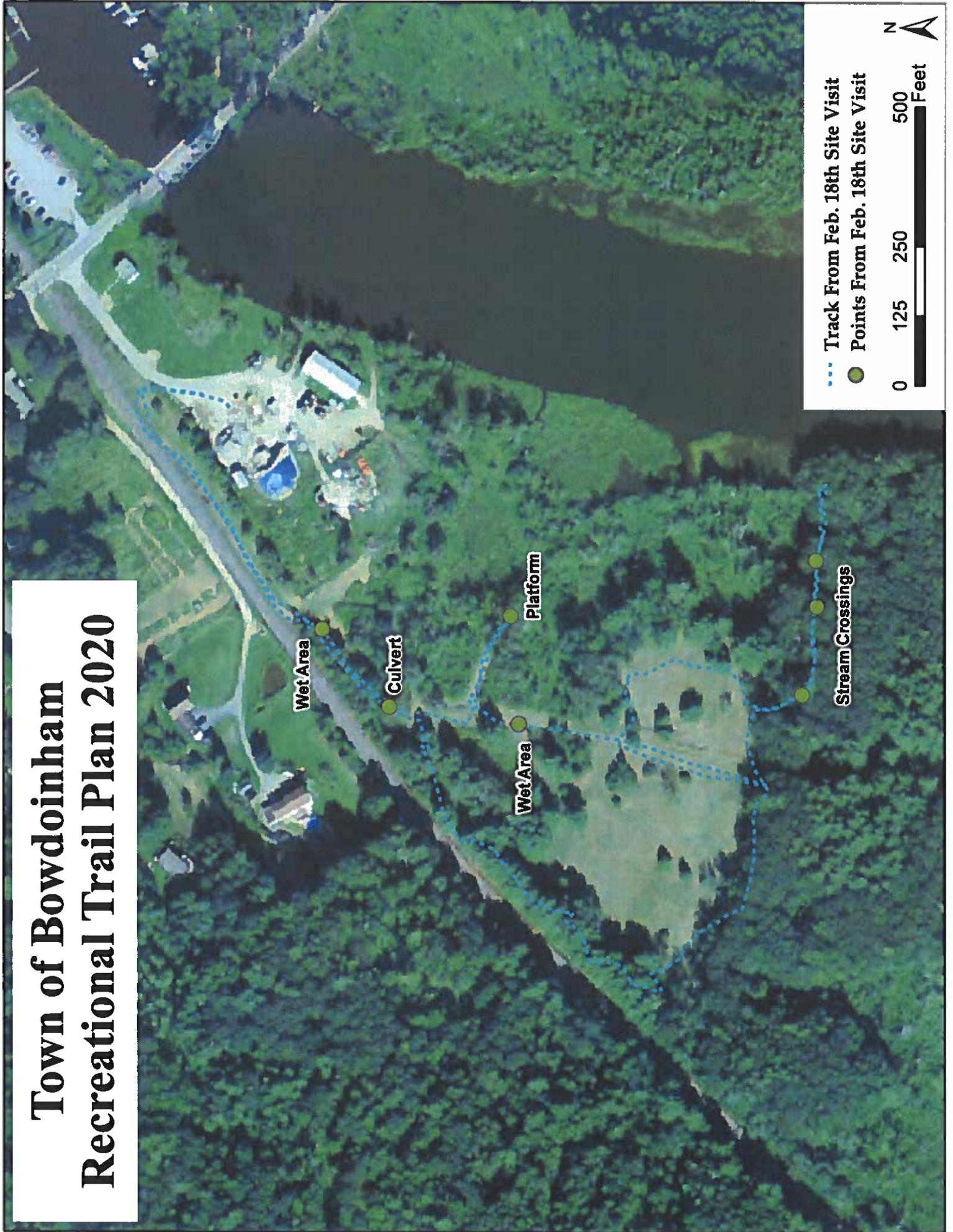
The next step is to begin long term projects.

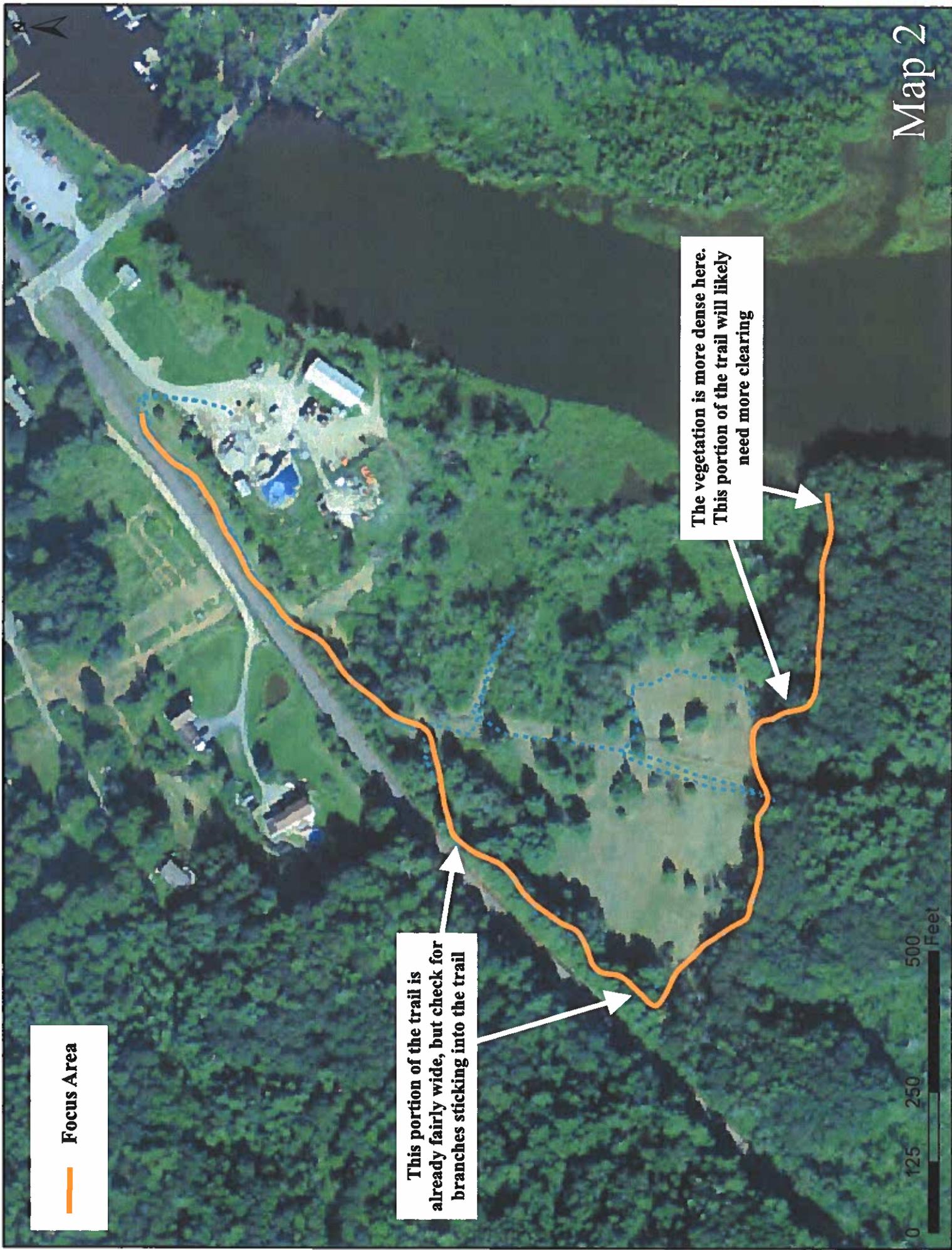
Begin invasive species removal. Project duration: several people over several days. See **Map 5.**

- Begin removing invasive plants. Use the Invasive Species Quick Identification Guide for plant identification, and follow recommendations in the Invasive Species Factsheet.
 - Plan at least three work days over the summer. Advise people to wear close-toe shoes and long pants, and either provide or ask people to bring thick gloves, water, and snacks. Plan work days for about three hours (such as 9:00-12:00).
 - If the plants have started to produce seeds prior to the work day, bring large black contractor bags to fill with plants. This will ensure the seeds will not spread.
- Invasive species removal is a multi-year project. Continue to check for regrowth for at least five years.
- Plan to replant the area with native shrubs in future years.

Plan additional trails. During the February 18th walk, we were unable to assess additional trail possibilities due to the ground conditions. An additional walk at the property will be required before we can plan out the other trails on the Master Site Plan. We recommend late April or May for our second walk.

Town of Bowdoinham Recreational Trail Plan 2020



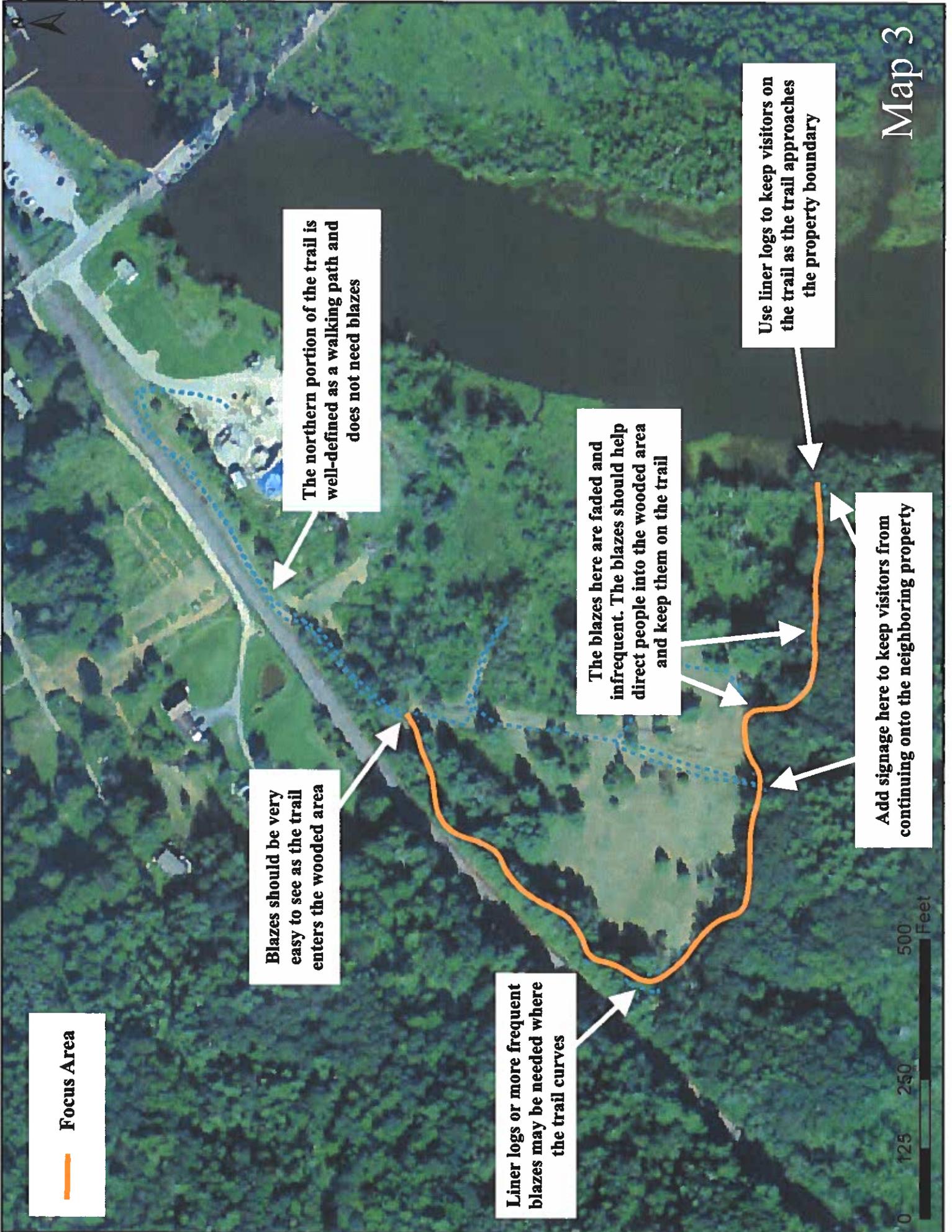


 Focus Area

This portion of the trail is already fairly wide, but check for branches sticking into the trail

The vegetation is more dense here. This portion of the trail will likely need more clearing





Focus Area

Blazes should be very easy to see as the trail enters the wooded area

The northern portion of the trail is well-defined as a walking path and does not need blazes

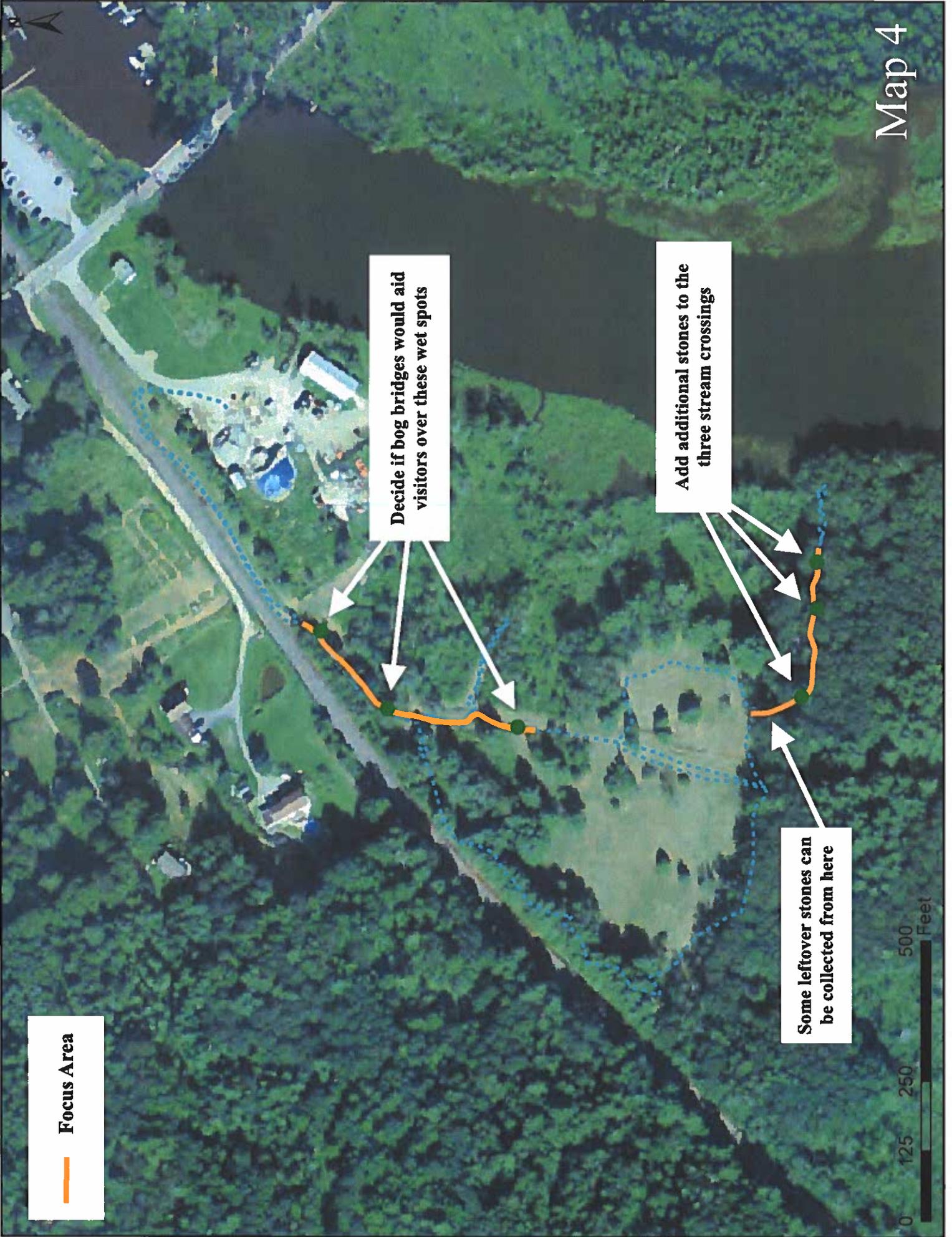
Liner logs or more frequent blazes may be needed where the trail curves

The blazes here are faded and infrequent. The blazes should help direct people into the wooded area and keep them on the trail

Use liner logs to keep visitors on the trail as the trail approaches the property boundary

Add signage here to keep visitors from continuing onto the neighboring property





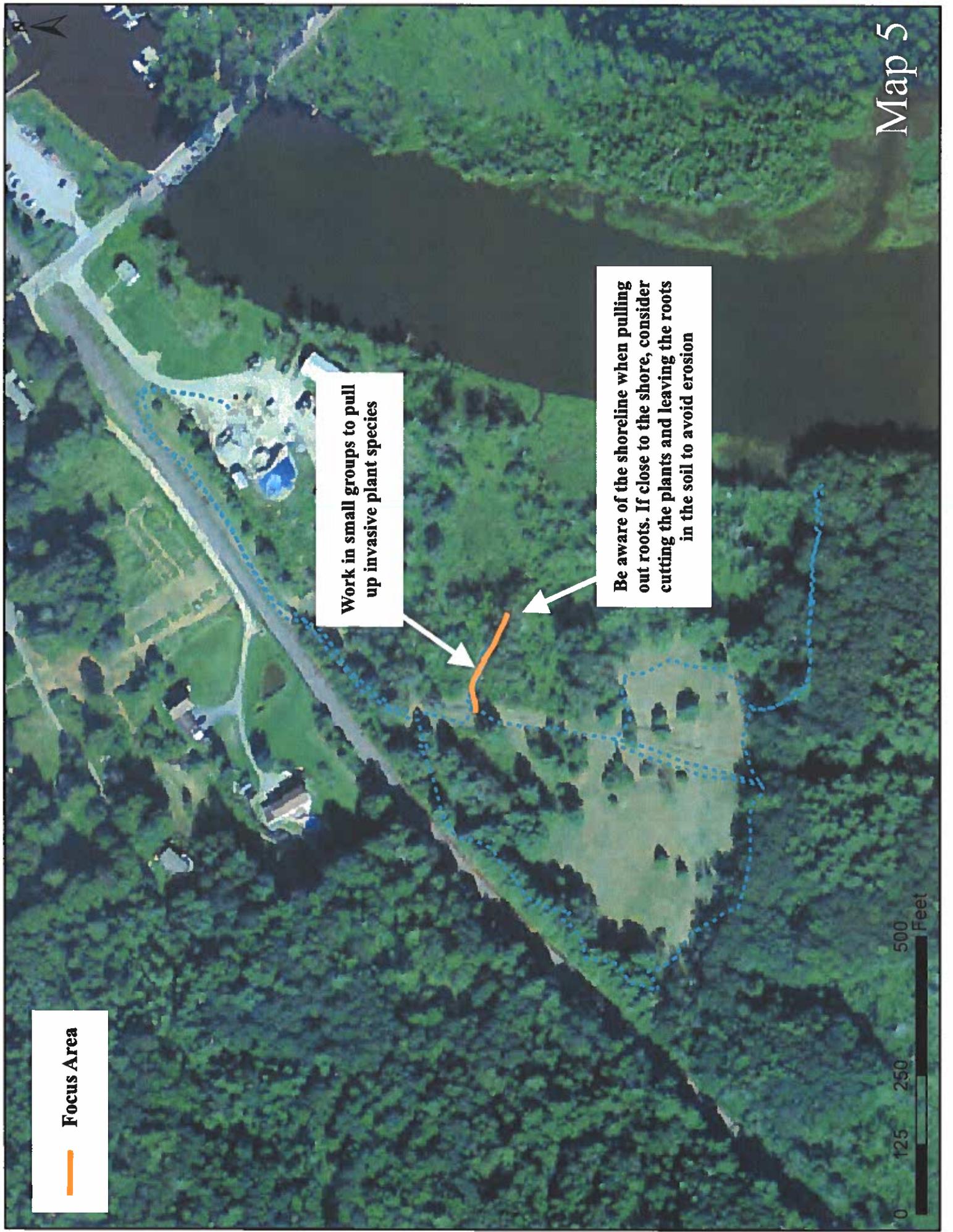
Focus Area

Decide if bog bridges would aid visitors over these wet spots

Add additional stones to the three stream crossings

Some leftover stones can be collected from here





 Focus Area

Work in small groups to pull up invasive plant species

Be aware of the shoreline when pulling out roots. If close to the shore, consider cutting the plants and leaving the roots in the soil to avoid erosion

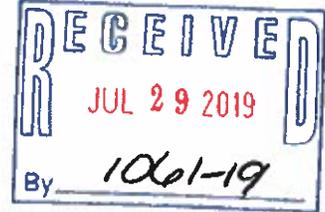
0 125 250 500 Feet



Town of Bowdoinham

13 School St • Bowdoinham, ME 04008
Phone 666-5531 • Fax 666-5532
www.bowdoinham.com

Nicole Briand, Interim Town Manager



July 24, 2019

Kirk F. Mohney
Director, Maine Historic Preservation Commission
55 Capitol Street, 65 State House Station,
Augusta, ME, 04333-0065

Request for Project Review

Dear Mr. Mohney,

The Town of Bowdoinham is working to redevelopment its former Public Works Property along the Cathance River. Please find enclosed our Site Master Plan, Boating Fund Grant application, project location map and photographs for the subject project.

The Town of Topsham is applying for funding assistance from the Maine Bureau of Parks and Lands Boating Facilities Fund program in support of installation of a new hand carry boat launch system and parking on the Cathance River in Bowdoinham, Maine. MaineDACF funding for this program requires that you be informed of the proposed project and given the opportunity to provide comment on historic or archeological impacts.

Please reply with any comments directly to me.

Sincerely,

Nicole Briand
Director of Planning & Development
Town of Bowdoinham
nbriand@bowdoinham.com
207-666-5531

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney,
State Historic Preservation Officer
Maine Historic Preservation Commission

8/19/19
Date

Enclosed – Location Map, Project Boundary Survey, Boating Fund Grant Application, Site Master Plan, Photographs



STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041



October 17, 2019

Nicole Briand
Town of Bowdoinham
13 School Street
Bowdoinham, ME 04008

RE: Information Request - Living Shoreline Stabilization, Bowdoinham

Dear Nicole:

Per your request received October 08, 2019, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Living Shoreline Stabilization Project* in Bowdoinham.

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be affected by your project. Additionally, our Department has not mapped any Essential Habitats that would be directly affected by your project.

Significant Wildlife Habitat

Inland Waterfowl and Wading Bird Habitats

This project intersects with Inland Waterfowl and Wading Bird Habitat (IWWH), which are considered Significant Wildlife Habitat under Maine's Natural Resources Protection Act. These habitats provide important breeding, feeding, migration, staging, and wintering habitat for waterfowl and wading bird species. High and moderate value IWWHs within the study area includes both the wetland complex and a 250-foot upland zone. We recommend that these resources be avoided, including no additional clearing within the 250-foot upland zone from the wetland edge. To minimize impacts to breeding waterfowl, we recommend that shoreline stabilization activities not occur between April 1 and July 15.

Fisheries Habitat

Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that

Letter to Nicole Briand
Comments RE: Living Shoreline Stabilization, Bowdoinham
October 17, 2019

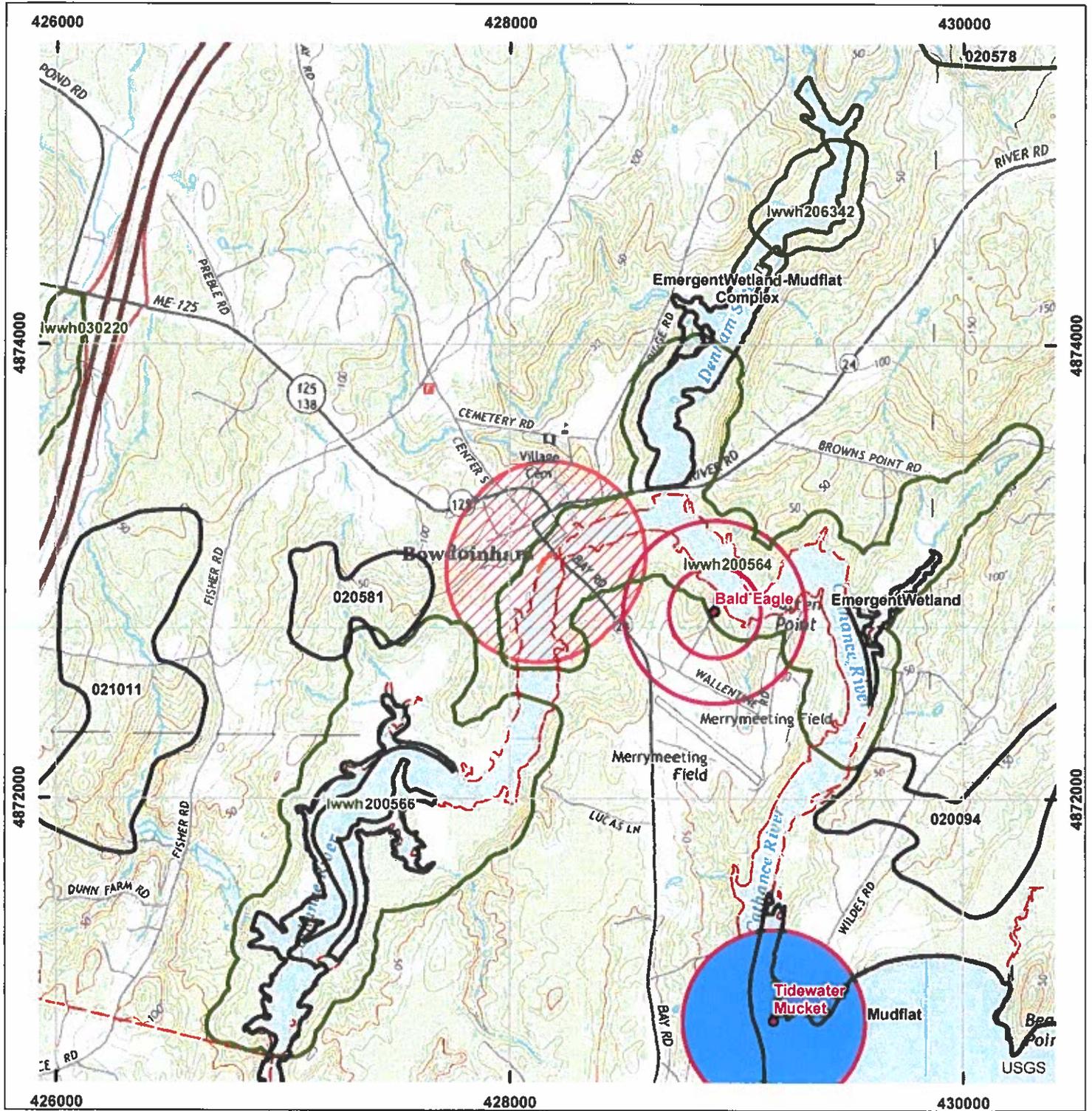
may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

A handwritten signature in black ink, appearing to read 'Becca Settele', with a large, stylized initial 'B'.

Becca Settele
Wildlife Biologist

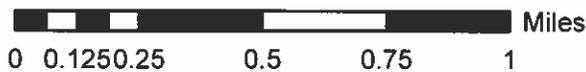


Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Bowdoinham, Living Shoreline Stabilization (Version 1)



Maine Department of
Inland Fisheries and Wildlife



Projection: UTM, NAD83, Zone 19N

Date: 10/9/2019

Project Points	Deer Winter Area	Roseate Tern
Project Lines	LUPC p-fw	Piping Plover and Least Tern
Project Polys	Cooperative DWAs	Aquatic ETSc - 2.5 mi review
Project Search Areas	Seabird Nesting Islands	Rare Mussels - 5 mi review
	Shorebird Areas	Maine Heritage Fish Waters
	Inland Waterfowl and Wading Bird	Arctic Charr Habitat
	2008 lwwh - Shoreland Zoning	Redfin Pickerel and Swamp Darter Habitats - buffer100ft
	Tidal Waterfowl and Wading Bird	Special Concern occupied habitats - 100ft buffer
	Significant Vernal Pools	Wild Lake Trout Habitats
	Environmental Review Polygons	



Bowdoinham Living Shoreline Project Cathance River, Bowdoinham

Site Visit Summary Maine Natural Areas Program, 2019

MNAP Ecologist Kristen Puryear walked the area proposed for living shoreline and redevelopment within the Bowdoinham public works property along the Cathance River on November 6, 2019. The primary focus of the survey was to evaluate current vegetation and site conditions in order to provide recommendations on appropriate plantings or vegetation management that may be included as part of the waterfront and living shoreline design.

From North to South along the shoreline, overall vegetation communities are described within each of the drafted management or stabilization zones as per the July 2019 Shoreline Stabilization Plan. Note the survey was done after the first frost, significantly limiting identifiable vegetation on site.

Zone 1: “Option 4: Armored Slope”: The shoreline is eroded and scoured out at the base of the bridge footing. In the intertidal area, dominant plants include soft-stemmed bulrush (*Schoenoplectus tabernaemontani*), wild rice (*Zizania palustris* or *aquatica*), northern water-plantain (*Alisma triviale*), and pickerelweed (*Pontedaria cordata*). These species are typical of Freshwater Tidal Marsh, and are found all along the public works property shoreline, ranging from pockets and thin margins against the bank to a more broad, contiguous, and diverse natural community (such as the area mapped by MNAP just to the south of the Public Works garage). Plants along the bank above the intertidal area are typical of the rest of the site and include ruderal species such as hawkweeds, asters, plantain, clovers, and dandelion. Notably, a wrack line from higher tides/flooding was evident several feet in from the edge of the existing bank.

Zone 2: “Option 3: Vegetated Retaining Wall”: This is a larger area and includes a wider variety of vegetation as well as trees and shrubs. Although generally open, there are a couple of trees surrounded by tight clusters of shrubs. Species include black willow (*Salix nigra*) as well as non-native invasive multiflora rose (*Rosa multiflora*), Morrow’s honeysuckle (*Lonicera morrowii*), and Norway maple (*Acer platanoides*). Notable native species include meadowsweet (*Spiraea latifolia*), silky dogwood (*Cornus amomum*) sensitive fern (*Onoclea sensibilis*), and again asters and other herbs (both native and non-native).

Zone 3: “Option 2: Rootwad Stabilization”: This zone includes a wetland swale area (mapped as PEM by Stantec) close to the shoreline. Common herbs here include Canada bluejoint (*Calamagrostis canadensis*), sensitive fern, a sedge (*Carex cf lacustris*), northern water-horehound (*Lycopus uniflorus*), and tall meadowrue (*Thalictrum pubescens*). Other species include low shrubs such as maple-leaved viburnum (*Viburnum acerifolium*) and meadowsweet.

It was also noted within this region that a high wrack line has been deposited as much as 20' in from the existing stream bank, and the wrack includes fragments of Japanese knotweed (*Fallopia japonica*) which has become established in stands nearby though not within the project area. Plant fragments from multiple species of invasives can become established when transported either by water or soil disturbance (such as excavation). Caution should be used when any ground disturbance is done along the shore, as plants and propagules of very invasive plants like Japanese knotweed could take advantage of any freshly disturbed soil and become very difficult to manage.

Recommendations

Based on this field survey, the Maine Natural Areas Program does not have any concerns about disturbance to rare plants or rare natural communities within the area depicted within the shoreline stabilization plan.

Species that may be considered for planting or as part of the project design include those native plants currently found on site, such as meadowsweet, silky dogwood, tall meadow-rue, sensitive fern, and various asters such as calico aster. Other species appropriate for the site (depending on soils, hydrology, flooding potential, and aesthetic needs) may include choke cherry (*Prunus virginiana*), nannyberry (*Viburnum lentago*), red maple (*Acer rubrum*), native shrub willows, speckled alder (*Alnus incana*), witch-hazel (*Hamamelis virginiana*), and herbs such as spotted touch-me-not (*Impatiens capensis*), cinnamon fern (*Osmunda cinnamomea*), interrupted fern (*Osmunda claytoniana*), and others. A list of native species can be found via various resources such as the University of Maine Cooperative Extension Publication #2502, Native Plants: A Maine Source List. Plants appropriate for the intertidal zone include those currently found there to include soft-stemmed bulrush, wild rice, northern water-plantain, three-square bulrush (*Schoenoplectus pungens*) and pickerelweed.