

Riverfront Woods Preserve **Management Plan**

Yarmouth, Maine

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**Prepared by Yarmouth Community Services Staff
and the Parks and Lands Committee for the Yarmouth Town Council**

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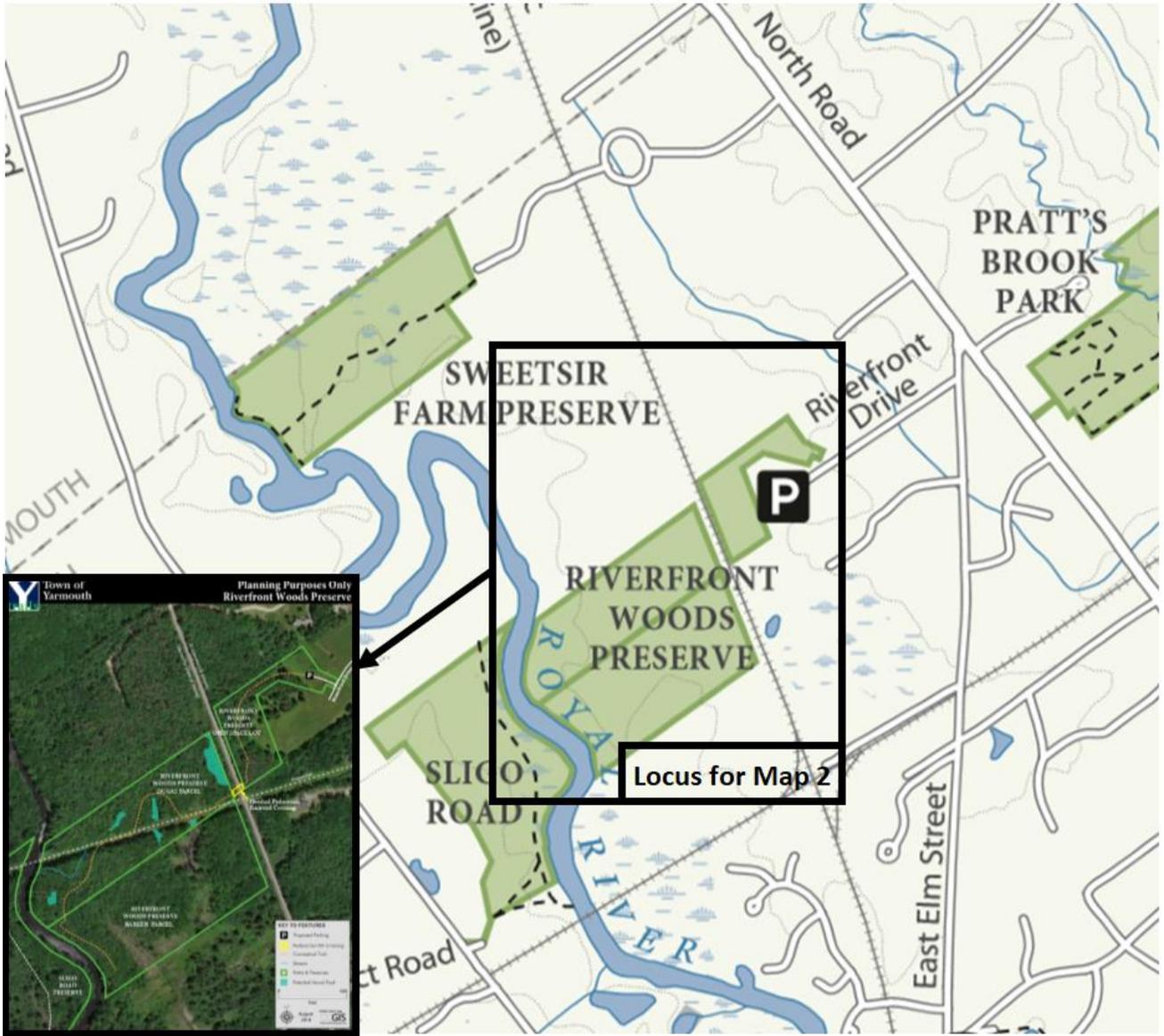
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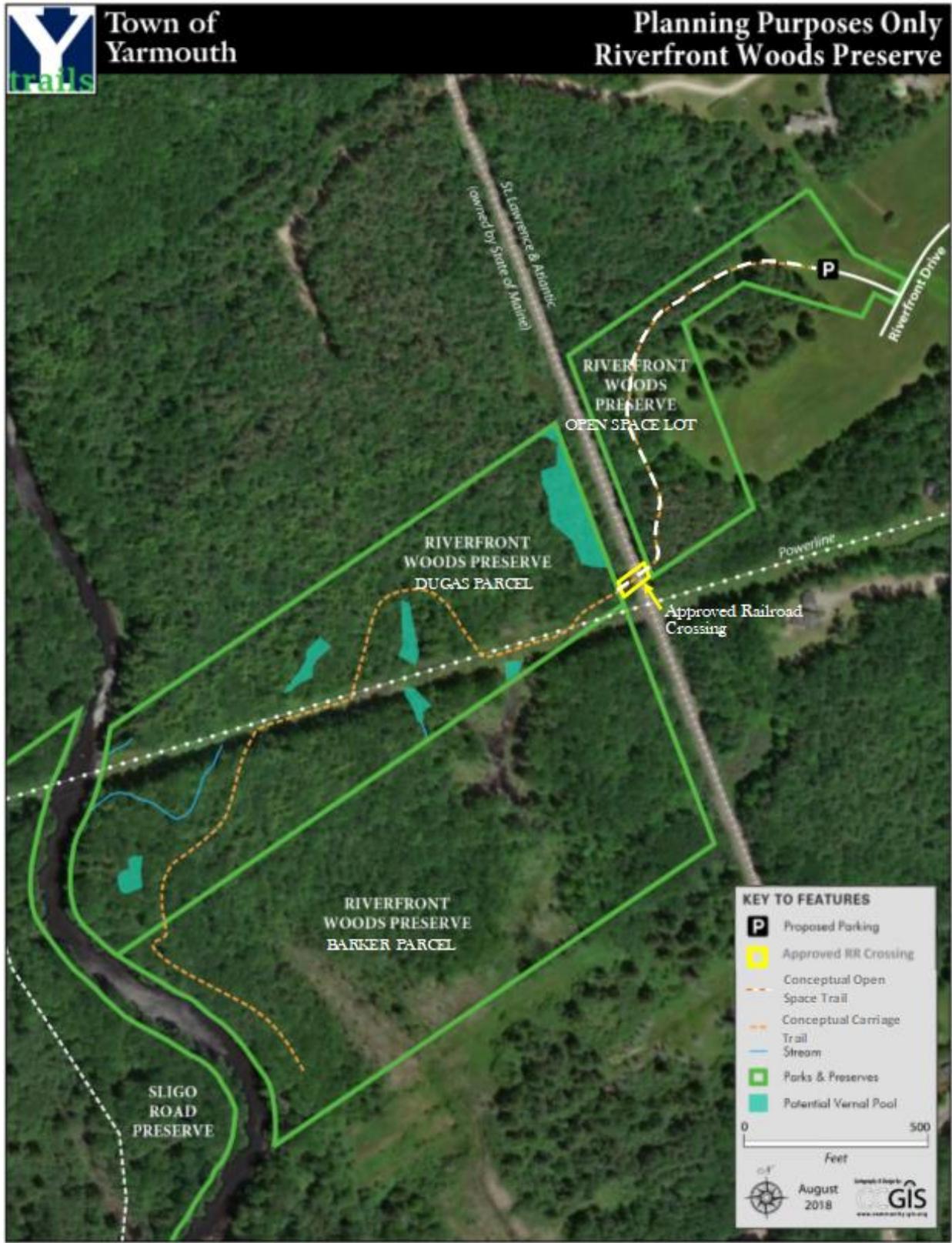
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Map 1: Context Map for Riverfront Woods Preserve



Map 2: Aerial View of Riverfront Woods Preserve with parcel IDs, potential vernal pools, Conceptual "Carriage Trail", and Conceptual Open Space Trail



Goals of the Management Plan

Overview: This management plan provides guidance for three properties known as Riverfront Woods Preserve: Barker Preserve parcel, Dugas parcel, and an open space lot at the end of Riverfront Drive. In 2017, Yarmouth Town Councilors voted to approve the use of Land Acquisition Funds towards the purchase of the Dugas property. Through the town's Land Acquisition Reserve and other sources, the Town of Yarmouth purchased the parcel of land from Steven and Greg Dugas (dba Riverboat LLC). In 2019, the Dugas property along with an open space lot and the adjacent town owned Barker Preserve were permanently protected through two conservation easements held by Royal River Conservation Trust (RRCT) and a Land for Maine's Future (LMF) project agreement. Support and fundraising by RRCT, funding from Land for Maine's Future, and widespread approval and generosity from the public helped make this project a reality.

The goal of this plan is to govern the use and stewardship of the newly created RWP, while ensuring compliance with the conservation easements, LMF project agreement, and other deed restrictions. This plan is the result of considerable effort to gauge public opinion, to study the land's natural and social history, and to carefully balance the town's expressed interests in conservation, recreation, and community.

Management of RWP requires the town to be proactive in order to reduce visitor use conflicts and to ensure compliance with conservation easements held by RRCT; the LMF project agreement; and deed restrictions on the adjacent town-owned Barker Preserve. This management plan for RWP outlines the known activities and processes that are of ongoing concern and interest to the town. The plan also provides a set of allowances and restrictions to govern the property, these allowances and restrictions are designed to maintain and enhance the property's resource values, while providing the public with recreational opportunities in keeping with the intent of low-impact, contemplative and scenic enjoyment of the property.

This management plan is intended to satisfy the LMF project agreement requirement to develop a "Multi-Resource" management plan and, as a requirement of that agreement, this plan will be reviewed and updated at least once every ten years and submitted to the Maine Department of Agriculture, Conservation, and Forestry for review and approval. This plan will also inform partner organizations, including RRCT; and provide guidance to town staff, contractors and volunteers who conduct on-the-ground management activities, in accordance with the restrictions in the conservation easements, project agreement, and any associated deeds.

Property Description

RWP in Yarmouth, Maine is made up of various town-owned parcels: a.) 7.2-acre parcel of open space deeded by the Riverboat LLC subdivision; b.) the 19.5-acre parcel purchased from Steven and Greg Dugas dba Riverboat LLC; and c.) the 24-acre parcel known as Barker Preserve.

These properties provide an ideal site for low-impact, quiet, contemplative and scenic outdoor recreation and enjoyment by the general public. RWP is an important undeveloped scenic and natural buffer that enhances the primitive experience of recreational users of the Royal River.

RWP is located within the Royal River watershed and protection of this watershed is of vital importance to the overall health of the Royal River ecosystem for reasons including the property's significant vernal pools, undeveloped tributary streams, and mature riparian forests.

The Town recognizes the uniqueness of the property and the importance of conserving its high-quality wildlife habitat and its scenic, natural, and low-impact recreational values.

Property Bounds (See Map 2 on Page 4): RWP is partially bounded by, but also bisected on the east by a railroad currently owned by the State of Maine and leased to the St. Lawrence & Atlantic Railroad. A publicly deeded right of way over the railroad tracks connects the RWP open space lot (bounded by private residential parcels) to the rest of the preserve. RWP is further bounded on the west by the Royal River, and on the north and south by private undeveloped properties. It is bisected by a powerline easement granted to Central Maine Power Company (CMP). There are utility poles, utility lines and associated structures as well as a poorly maintained culvert and an unpaved access for CMP service vehicles in the CMP Easement Area. Outside of this area, most of the Preserve is undeveloped forest, wetland, and riparian zone.

RWP benefits from an access easement across certain Riverfront Drive residential lots, for the purpose of emergency and management access (See Appendix K).

Riverfront Woods Preserve Objectives

RWP has the potential to benefit the local community for many years to come. These parcels will make many natural contributions to our town:

- Provide outdoor recreational and educational opportunities;
- Protect significant vernal pools and associated critical terrestrial habitat
- Protect other significant wildlife habitat and natural areas;
- Support the town's open space vision;
- Maintain the area's scenic and rural character; and
- Protect water quality in the Royal River watershed.

Management and oversight of Riverfront Woods Preserve (See Appendix C)

Management and stewardship decisions for RWP will be made by Yarmouth Community Services, with guidance and on-the-ground management suggestions by the Royal River Conservation Trust and the Yarmouth Parks and Lands Committee (PLC) to ensure compliance with the properties' conservation easements and this management plan. As an additional requirement of the LMF project agreement, a monitoring report will be filed annually with the appropriate designated state agency.

The management plan shall at least meet minimum standards related to the conservation easements, project agreement, deed restrictions, and permit approval conditions, if the plan fails to do so the most restrictive of these conditions will still apply.

The conservation easements protecting the property describe several areas of the property that are unique or particularly sensitive, and therefore require special treatment. Natural communities that are uncommon or rare will be managed in a more sensitive manner to allow habitats that contribute to statewide biodiversity to persist into the future. Areas around wetlands, streams, and the Royal River will also be managed in accordance with the conservation easements to protect water quality and aquatic habitat. Further on-the-ground assessments may reveal additional sensitive areas for plants, wildlife, and other conservation purposes.

(See Appendix C for more detailed Conservation Easement Restrictions and corresponding Management Actions)

Trail Development (See Appendix C)

The Town will review the existing CMP easement and evaluate the powerline corridor to use a portion of it as a “Carriage Trail”. The Town is required to submit the location and width of the “Carriage Trail” to RRCT for approval, the Town will also submit the location and design to CMP for review. To the extent that budget and existing conditions allow, the “Carriage Trail” will be built to a Universal Access (UA) standard. At the time of the creation of this management plan, it is anticipated that UA trail will be constructed through the open space lot and to a scenic lookout at the beaver bog. Additionally, primitive trails will be constructed as allowed by the conservation easements.

Public Access / Other Rights of Access

Hours of operation are governed by the Town’s Public Grounds Ordinance, see Chapter 501 for current restrictions on hours of operation if existing.

Parking is located at the end of Riverfront Drive. The main entrance to RWP is at the Kiosk at the back side of the parking lot. Access to the RWP is through the open space lot and trail, the boundaries of the open space lot are well marked with Town of Yarmouth property boundary signs and visitors should be encouraged to respect private landowner property adjacent to the trail (See Map 2).

The only permitted public crossing of the railroad is through a deeded right of way (shown on Map 2) at an at grade crossing to be used as a trail, as well as a maintenance and emergency access route. Signs will be installed to discourage any public or recreational use of the railroad, except at the designated crossing.

A map of the property is included with the signs at the main entrance to the preserve. The Town also installed signs at key boundary points to encourage respect of the private neighboring properties.

Central Maine Power Company retains an easement for rights to access their power lines through the property.

Town staff may close trails and portions of the property on a temporary basis and only for the purposes of public safety, wildlife management, resource protection, or other reasons that further the conservation purposes and objectives of the property. It is impossible to predict and enumerate all the potential occurrences necessitating public closures within the previously mentioned parameters.

Decisions on temporary closures will be made by the Director of Community Services or the Town Manager and email notification will be sent to the PLC. To ensure that reasonable discretion is used, the PLC may choose to override the closure with proof of documented discussion with Town of Yarmouth stewardship staff and proof of a majority vote. Temporary closures will be posted at the RWP kiosk and/or trailhead, as well as on the Facebook pages of Parks and Lands, Town of Yarmouth, and/or Yarmouth Community Services.

The Town will work toward developing and publicizing a schedule for trail construction and construction of other amenities (See Appendix D for an estimated timeframe and costs of development).

Recreation Management:

The LMF project agreement requires that the Town not allow any uses of the property that diminish its natural resource values. Conservation easements held by RRCT further reinforce this idea by stating, “the Protected Property may be used only for conservation, low-impact recreation by the general public, educational activities and natural resource management activities that do not materially adversely affect the Protected Property’s important natural, ecological and habitat values. . . .[L]ow-impact recreation includes, but is not limited to, nature observation and study, hiking, running, snowshoeing, cross-country skiing, ice skating, kayaking, canoeing.” Trails will be constructed on the property to accommodate these enumerated low impact uses; trails will be monitored for erosion issues and visitor use conflicts by Yarmouth Community Services, Town stewardship staff, and volunteers.

RWP is a desirable destination or stopover location for year-round users of the Royal River. To ensure protection of the riverbanks, the shoreline will be monitored for impacts due to high use. Preventative options will be considered if impacts begin to occur. Other maintenance issues and visitor use conflicts on the property will be addressed as they arise.

It is impossible to predict and enumerate all the potential visitor uses that may come up in the next ten years. Any uses not enumerated below as “Allowed” or “Prohibited” will require review by and permission from Yarmouth Community Services Department. Yarmouth Community Services Staff also reserves the right to further restrict the allowed uses should an allowed use conflict with the conservation values of the property or has the potential to interfere with or be harmful to other visitors (See section II.B.6 of the conservation easement).

Summary of Allowed Uses (See Appendix A)

At this time, the following uses are determined to be in keeping with the natural resource values of the property and with the conservation easements and project agreement and are allowed:

- Pedestrian uses: hiking, snowshoeing, XC skiing, walking, wildlife observation;
- Other outdoor recreational activities: skating, fishing, kayaking, canoeing;
- Use of electric mobility devices similar in size to powered wheelchairs, with a maximum width of 36 inches; (see Appendix F for trail assessment)

Summary of Prohibited Uses (See Appendix B for explanation of prohibited uses)

At this time, the following uses are determined to be in conflict with the Town's commitment, obligated by the conservation easements and project agreement, to prevent any use that would unreasonably conflict with the property's wildlife habitat values or its predominantly natural and scenic condition:

- domesticated animals (not including service-animals), bicycles, horseback riding, motorized recreational vehicles and recreational snowmobiles.
- Hunting and trapping are regulated through Yarmouth's local ordinances; federal and state laws; and deed restrictions, as applicable. Hunting is prohibited on the Barker parcel by deed, please refer to current local ordinances for information on hunting and trapping on the Dugas parcel and the Open Space Lot. At the time of the creation of this management plan, firearms are prohibited on RWP by the Chapter 314 Firearms Ordinance and the use of animal traps, water sets, or snares is prohibited by Chapter 501 Public Grounds Ordinance.

Forest Management:

Forest management activities on RWP are restricted by the conservation easements held by RRCT and the LMF project agreement. The conservation easements prohibit any commercial forestry on the property and the LMF project agreement requires any forestry activity beyond routine management be done under the supervision of a licensed forester.

As a result, any forest management will be limited to ecological management and no forestry activity beyond routine management will be done without a licensed forester.

Vegetation management on the property will be limited to actions necessary to facilitate trail construction and maintenance; to construct allowed structures; to remove hazard trees; and to control invasive species.

Hazard trees will be evaluated by Yarmouth Community Services, but will be judged on the criteria that they pose a threat to structures; are located at trail junctions, scenic views, or other areas where people may congregate; or are an imminent threat to fall on the trail during normal weather conditions.

Invasive species control will be undertaken by Yarmouth Community Services stewardship staff, contractors, and volunteers under supervision of Yarmouth Community Services staff. Any invasive species control will be completed to standards of the UMaine Cooperative Extension or another conservation organization. Any herbicide application to control invasives will be conducted by a licensed pesticide applicator with special care taken to avoid impacts to the property's significant vernal pools, wetlands, streams, and the Royal River. Any herbicides used on the property will be applied in the late summer or early fall after juvenile amphibians have migrated out of vernal pools.

Ecological Management:

Ecological management on the property will be considered during all routine management activities. More active ecological enhancement may be undertaken to control invasive vegetation. When replanting is necessary after invasive species control, high value native species will be used for revegetation. Due to the already high diversity of native plants on the property, natural recolonization by native plants will be possible through natural seed dispersion and the need to replant with natives will be unlikely.

Trails are being designed to accommodate future beaver recolonization, with the intent that beaver habitation will promote the property's ecological values and enhance water quality and flood control of the Royal River. Although beaver management is allowed by the conservation easements, purposeful trail designs should reduce the need for beaver management.

Mowing will be limited to maintenance of the "Carriage Trail" and the open space lot field. Mowing of the "Carriage Trail" will be undertaken when the grass is dry and amphibians are less likely to be present. Mowing of the "Carriage Trail" will be limited to the width approved by RRCT in supplemental requests. Mowing of the open space lot field will be undertaken annually in the fall. Primitive trails may be weed whacked in select areas to reduce herbaceous vegetation on the trail and minimize exposure of users to ticks.

Erosion will be monitored on trails and high traffic areas. When signs of erosion issues appear, steps will be taken to mitigate the problem. Monitoring of erosion will be particularly important near streams, wetlands, the Royal River, and within significant vernal pool critical terrestrial habitat. Erosion control mix will be spread on disturbed soils to prevent further erosion and facilitate natural revegetation. Visitors will be directed away from sensitive areas using methods that minimize impacts to the scenic values of the property.

Downed trees blocking the trail will be cleared 5 feet back from trails to minimize the visual impacts of cutting and will be limbed to promote contact of the trunk and branches with the ground. This practice facilitates rot, thereby reducing fire hazards and increasing the number of rotted logs utilized by salamanders.

Although vegetation management conducted by CMP within the powerline easement is not regulated by conservation easements, the project agreement, or this management plan, CMP should be reminded of the resource values of the property. CMP's vegetation management teams should be encouraged to use best management practices for herbicides especially within significant vernal pool critical terrestrial habitats. Alternatively, CMP offers a landowner maintenance agreement in which the Town could accept responsibility for, and the costs associated with, managing the vegetation on the powerline to standards acceptable to CMP.

Appendix A-Summary of Deed, Conservation, and Project Agreement Restrictions and Allowances

The management plan provides rules for three properties known as Riverfront Woods Preserve: Barker Preserve parcel, Dugas parcel, and the subdivision’s Open Space Lot.

Uses in RWP	Barker Deed	Conservation Easements (Applies to Dugas parcel and Barker Preserve parcel)	LMF Project Agreement (Applies to Dugas parcel)	Management plan rules (See Appendix B for explanation)
Walking		Expressly Allowed		Allowed
Running		Expressly Allowed		Allowed
Nordic Skiing		Expressly Allowed		Allowed
Snowshoeing		Expressly Allowed		Allowed
Fishing		Expressly Allowed		Allowed
Skating		Expressly Allowed		Allowed
Kayaking		Expressly Allowed		Allowed**
Canoeing		Expressly Allowed		Allowed**
Hunting and trapping*	Restricted	Allowed Subject to Federal, State, and Local Laws*	Allowed Subject to Federal, State, and Local Laws *	Restricted* See Town Ordinance Chapters 314 and 501
Recreational Motorized Vehicles	Restricted	Restricted		Prohibited
Other Power-driven Recreational Mobility Devices	Allowed per Maine Human Rights Act	Allowed as may be guided by a trail assessment or management plan		Restricted
Dogs				Prohibited
Bicycles				Prohibited
Horseback Riding				Prohibited

*Hunting and trapping are regulated by town ordinance; federal and state laws; and deed restrictions, as applicable. Hunting and trapping are restricted by town ordinance in the Riverfront Woods Preserve.

** Storage of boats on the property is prohibited.

Appendix B- Explanation of Prohibited Uses

USE	Reasons for Prohibition
Dogs	<ul style="list-style-type: none"> • Conservation easements have a clause addressing maintenance and erosion prevention and the Town is responsible for any unnatural disturbance to the banks of Royal River, streams, and vernal pools • The waste left behind by dogs poses a threat to water quality of the property’s significant vernal pools. Although many users in town are diligent about cleaning up after their pets, dog waste issues in other parks continue to be an issue. • Vernal pools are at times located near trails and wading by dogs could cause erosion, siltation, and disturbance to eggs masses in the Spring
Hunting and trapping*	<ul style="list-style-type: none"> • Hunting prohibited by deed on Barker • Hunting and trapping restricted by town ordinance in the Riverfront Woods Preserve (See Town Ordinance Chapters 314 and 501)
Recreational Motor Vehicles (not including other power-driven recreational mobility devices)	<ul style="list-style-type: none"> • Trails are not being built to accommodate recreational motor vehicles • Prohibited by deed on Barker • Necessity to protect the properties resource values and water quality • Conservation easements have a clause addressing maintenance and erosion prevention
Bicycles	<ul style="list-style-type: none"> • Primitive trail development is limited by the conservation easements and limits imposed on the hardening of these trails will prevent the accommodation of bikes • As the design and surfacing of the “Carriage Trail” allows, bicycles may be permitted on the “Carriage Trail”. This use would have to be approved by the Town Council after design and advice from Yarmouth Community Services and the Parks and Lands Committee.
Horseback Riding	<ul style="list-style-type: none"> • Trails bridges and boardwalks are not designed to accommodate horses • Trails are not being pruned or maintained to accommodate horses • Horse manure could pose a threat to water quality of the property’s significant vernal pools

*Hunting and trapping are regulated by town ordinance; federal and state laws; and deed restrictions, as applicable. Hunting and trapping are restricted by town ordinance in the Riverfront Woods Preserve.

Appendix C- Development Restrictions and Management Actions

Management/ Development Activity	Conservation Easement Reference Section	Conservation Easement Restrictions*	Management Actions*
Primitive Trail Construction (See Appendix D)	II.E.4	<ul style="list-style-type: none"> • Single file width with minor allowances for passing • Designed, located, constructed, and maintained to prevent erosion and protect conservation values • Built to primitive trail standards agreed to by Holder and Grantor defined by state, federal, or conservation organization • Limited gravel use is permitted in discrete areas to prevent erosion 	<ul style="list-style-type: none"> • Primitive trails will be built to standards as outlined in Appendix B of USFS Forest Service Trail Accessibility Guidelines (FSTAG), 2013, Federal Trail Data Standards -- Class Matrix, Class 2, Moderately Developed, or other standards approved by RRCT. (See Appendix E for typical) • Yarmouth Community Services will lay out trails and consult with RRCT during trail lay out process • On the ground consultation will be performed by a natural resource and wetland expert • Trail locations and design will be approved by Parks and Lands Committee

*Conservation Easements apply to Barker and Dugas Parcels only, management actions on the Open Space Lot do not require RRCT approval or consultation, but are subject to an Army Corps and Maine DEP permit filed with the Riverfront subdivision.

Management/ Development Activity	Conservation Easement Reference Section	Conservation Easement Restrictions*	Management Actions*
Development within 100 ft of Royal River ¹	II.B.7 II.D.1-3	<ul style="list-style-type: none"> • Any and all development within 100 ft of the Royal River is subject to formal approval by RRCT either by approval of management plan or supplemental requests • Minor structures (enumerated in CE), a canoe landing, bridge over the Royal River are all allowed provided RRCT approval 	<ul style="list-style-type: none"> • Any proposed development within 100 ft of the Royal River not already included in the management plan will be formally approved by RRCT <p><i>¹Also subject to all applicable Town of Yarmouth Shoreland Zoning and Flood Hazard Ordinance Requirements</i></p>
"Carriage Trail" Development	II.E.4.a	<ul style="list-style-type: none"> • Location and width subject to formal approval by RRCT • After formal approval can be constructed in a width and durability necessary to accommodate emergency and maintenance vehicles 	<ul style="list-style-type: none"> • Yarmouth Community Services will consult with a natural resource and wetland expert in the field • Trail designs will be produced by Yarmouth Community Services • Location and width will be formally approved by RRCT before construction • Trail design and location will also be approved by the Parks and Lands Committee

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Management/ Development Activity	Conservation Easement Reference Section	Conservation Easement Restrictions*	Management Actions*
Minor Improvements (signs, kiosks, benches, etc.)	II.D.1	<ul style="list-style-type: none"> • Kiosks, registration boxes, memorial benches, and fences to protect natural resources or for safety are all allowed • Any infrastructure within 100 ft of the Royal River is subject to formal approval by RRCT 	<ul style="list-style-type: none"> • Kiosks will be built to the standard used on the West Side Trail to promote continuity throughout Yarmouth • Benches will be built to the standard approved by the Parks and Lands Committee • Trail signs will be designed to the standards developed by the Parks and Lands Committee and in use at Pratt's Brook Park • Any improvements within 100ft of the Royal River will be formally approved with RRCT
Erosion control and repair	II.E.4.d -Erosion prevention is mentioned throughout, but this is the key provision requiring ongoing maintenance	<ul style="list-style-type: none"> • Ongoing theme throughout that all activities occurring on the property must be done in such a way as to limit erosion • Existing erosion has been documented in the baseline documentation provided by RRCT and the town will be responsible for preventing and remedying any further erosion • Erosion control measures will be done to standards defined by state, federal, or other conservation organizations or in close consultation with RRCT 	<ul style="list-style-type: none"> • Erosion control structures will be built to standards defined in the USFS Standard Trail Plans and Specifications • Erosion control measures will be implemented during trail and structure construction • Erosion repair within 100 ft of the Royal River will be site specific and done in close consultation with RRCT

*Conservation Easements apply to Barker and Dugas Parcels only, management actions on the Open Space Lot do not require RRCT approval or consultation, but are subject to an Army Corps and Maine DEP permit filed with the Riverfront subdivision.

Management/ Development Activity	Conservation Easement Reference Section	Conservation Easement Restrictions*	Management Actions*
Vegetation Management	II.B.3	<ul style="list-style-type: none"> • Vegetation may be managed to install and maintain allowed structures and trails • Invasive plants may be managed to improve habitat • Vegetation may be managed to reduce safety or human health hazards • No commercial forestry • No forestry beyond routine management without the supervision of a licensed forester (project agreement) 	<ul style="list-style-type: none"> • Vegetation will be managed minimally for trail construction (no more than necessary to achieve the width specified in conservation easements) and for installation of allowed structures • Vegetation will be managed in a way that limits erosion • Invasive plants may be managed and will be done to standards of the UMaine Cooperative Extension or another conservation organization • Any vegetation management within 100 ft of the Royal River will be done in close consultation with RRCT
Wildlife Management	II.B.4	<ul style="list-style-type: none"> • Must conform with best management practices or other standards established in Management plan • Removal of beaver dams, trapping of nuisance wildlife, and extermination of dangerous and invasive insects are allowed 	<ul style="list-style-type: none"> • Trails will be laid out and designed in a way that plans for future beaver cohabitation • Unforeseen nuisance wildlife will be managed to standards defined by the State of Maine

*Conservation Easements apply to Barker and Dugas Parcels only, management actions on the Open Space Lot do not require RRCT approval or consultation, but are subject to an Army Corps and Maine DEP permit filed with the Riverfront subdivision.

Management/ Development Activity	Conservation Easement Reference Section	Conservation Easement Restrictions*	Management Actions*
Maintenance Use of Motorized Vehicles	II.B.2	<ul style="list-style-type: none"> • Use of motorized vehicles for maintenance is allowed • The town may authorize CMP to use carriage road access trail to the CMP corridor provided such use reduces environmental impacts 	<ul style="list-style-type: none"> • Vehicles will be used for construction of the “Carriage Trail” and used in a way to minimize erosion and impact to sensitive natural communities • Vehicles may be used for during construction of other allowed structures as necessary, but will used in a way to minimize erosion and impacts to sensitive natural communities
Boundary Posting	III.E	<ul style="list-style-type: none"> • The town is responsible for maintaining boundary monuments 	<ul style="list-style-type: none"> • Property corners are currently adequately monumented • Boundaries lines will be posted with small signs using the Town of Yarmouth Logo

*Conservation Easements apply to Barker and Dugas Parcels only, management actions on the Open Space Lot do not require RRCT approval or consultation, but are subject to an Army Corps and Maine DEP permit filed with the Riverfront subdivision.

Management/ Development Activity	Conservation Easement Reference Section	Conservation Easement Restrictions*	Management Actions*
Structures	II.D	<ul style="list-style-type: none"> • Major Structures are not allowed, including buildings, barns, bleachers, permanent lighting, and tree stands • Allowances have been made for minor structures including signs, kiosks, fences for resource protection, and trail improvement structures • Allowance for a canoe or kayak landing as a measure to prevent erosion to the bank of the Royal River • Allowance for a future recreational bridge over the Royal River • All Structures within 100ft of the Royal River are subject to formal approval by RRCT 	<ul style="list-style-type: none"> • Structure development will be limited to the minor structures covered in Section II.D.1 of the conservation easement, any structure development beyond the scope of this section will be reviewed with RRCT for approval • A canoe or kayak landing may be explored if signs of high use and impacts occur, but will be done in close consultation with and have formal approval of RRCT • All structures within 100 ft of the Royal River will be formally approved by RRCT

*Conservation Easements apply to Barker and Dugas Parcels only, management actions on the Open Space Lot do not require RRCT approval or consultation, but are subject to an Army Corps and Maine DEP permit filed with the Riverfront subdivision.

Management/Development Activity	Open Space Lot (Army Corps Permit Restrictions)	Management Actions*
Open Space Lot	<ul style="list-style-type: none"> • Boardwalks limited to 4' width • Trail layout defined in permit • Vegetative clearing restricted 	<ul style="list-style-type: none"> • Boardwalks will be built to widths, lengths, designs, and in locations approved by the Army Corps permit • Upland trail will be laid out as approved by Army Corps Permit • There will be no vegetative clearing in the open space lot except as approved by the Army Corps

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*Conservation Easements apply to Barker and Dugas Parcels only, management actions on the Open Space Lot do not require RRCT approval or consultation, but are subject to an Army Corps and Maine DEP permit filed with the Riverfront subdivision.

Appendix D: Schedule of Development (Timeframe subject to approval, funding, permitting, and volunteer support)

Schedule of Development					
TASK	ACTION STEPS	ESTIMATED TIMEFRAME	WHO	ESTIMATED COST	EXPECTED CLOSURES
Kiosk at Trailhead	<ul style="list-style-type: none"> • Draw up plan using WST kiosk as a model and estimate materials • Purchase and deliver material • Build kiosk • Install maps, signs, and rules on kiosk 	Spring 2019 (completed)	<ul style="list-style-type: none"> • Town staff and volunteers 	\$700	None
Boundary Posting	<ul style="list-style-type: none"> • Purchase Signs • Locate Boundaries • Post Signs 	Spring 2019 (completed)	<ul style="list-style-type: none"> • Town staff 	<\$500	None
Natural Resource Inventories	<ul style="list-style-type: none"> • Create floodplain map and map of potential flooding by beavers • Identify and map invasive vegetation • Map wetland and significant vernal pools (SEE DEP permitting below) (completed) • Train volunteers to monitor significant vernal pools annually • Analyze impacts of dogs on wildlife, water quality, and other natural resources 	Spring 2019 and beyond	<ul style="list-style-type: none"> • Town staff • Interns • Volunteers • School groups • Wetland/natural resource consultant 	tbd	None

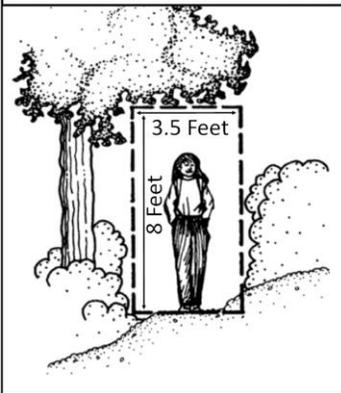
Schedule of Development					
TASK	ACTION STEPS	ESTIMATED TIMEFRAME	WHO	ESTIMATED COST	EXPECTED CLOSURES
DEP Permitting	<ul style="list-style-type: none"> • Survey for significant vernal pools on Barker parcel (Dugas Parcel already completed) (completed) • Delineate wetlands on Barker parcel (Dugas already completed) (completed) • Locate proposed trails wetland crossings and proximity to vernal pools and Royal River • Schedule initial meeting with DEP • Complete required DEP permitting 	Winter/Spring 2020	<ul style="list-style-type: none"> • Town staff and wetland consultant 	Wetland Consultant: \$1,690 Permitting Fees: ~\$450	None
Signs	<ul style="list-style-type: none"> • Design and order trail signs, RR crossing signs, kiosk signs, canoe/kayak landing signs, and boundary signs (RR and boundary signs complete) 	Summer 2019-Fall 2020	<ul style="list-style-type: none"> • Town staff 	\$750-1,250	None
Open Space Boardwalks	<ul style="list-style-type: none"> • DEP permitting (permitting for open space lot done as part of subdivision project) • Design boardwalks (based on permitting specs) • Purchase and deliver materials • Build boardwalks 	Summer 2019 (completed)	<ul style="list-style-type: none"> • Permitting done by Dugas • Design and build by town staff and volunteers 		None

Schedule of Development					
TASK	ACTION STEPS	ESTIMATED TIMEFRAME	WHO	ESTIMATED COST	EXPECTED CLOSURES
RR Crossing	<ul style="list-style-type: none"> • Install Signs at crossing (completed 2019) • Install signs along RR directing to crossing • Design/permitting for crossing (completed 2019) • Build crossing 	Summer 2019- Summer 2020	<ul style="list-style-type: none"> • Permitting already done by Town • Design already done by Wyman and Simpson • Site work to be done by contractor • Timber crossings must be done by MDOT • Signs installed by town staff 	\$10,000- 15,000	Yes
“Carriage Trail”	<ul style="list-style-type: none"> • Reach out to CMP for potential collaboration (completed 2019) • Layout route in the field (completed 2019) • Locate with GPS • Locate wetland crossings and Proximity to vernal Pools (completed 2019) • Create plan for design and width • Approve location and width with PLC and RRCT • Surface Uplands • Build wetland/stream Crossings 	Late 2019-Fall 2020 and beyond as funding allows	<ul style="list-style-type: none"> • Permitted and designed by town staff, wetland and natural resource consultants and volunteers • Construction done by contractor 	\$100,000- 135,000 UA trail complete to Royal River	Yes

Schedule of Development					
TASK	ACTION STEPS	ESTIMATED TIMEFRAME	WHO	ESTIMATED COST	EXPECTED CLOSURES
Primitive Trails	<ul style="list-style-type: none"> Layout route in field (complete 2019) Locate with GPS Approve locations with PLC and RRCT Locate wetland crossings Clear trail Build bog bridges Design stream crossings Build stream crossing Build "potential" boardwalk 	<p>Winter 2020 (laid out, located, designed, and approved)</p> <p>Summer/Fall 2020 (Stream crossing, boardwalks, and trails built)</p> <p>Fall 2020-Spring 2021 (potential wetland boardwalk built)</p>	<ul style="list-style-type: none"> Built and designed by town staff and volunteers Approved by PLC and RRCT GPS done by wetland consultant 	<p>Stream Crossing: \$5,000</p> <p>Potential Wetland Boardwalk: \$6,000</p> <p>Bog Bridges: \$1,500-2,000</p>	Limited Areas
Canoe/Kayak Landing (wait and monitor impacts)	<ul style="list-style-type: none"> Evaluate riverbanks for lowest impact landing area Approve location and any necessary signs with RRCT Purchase and add signs directing river traffic to landing Long-term: Consider permanent and more formal landing 	Wait and monitor impacts	<ul style="list-style-type: none"> Evaluation (town staff, volunteers, PLC, RRCT) Minor Improvements (Town Staff) Signs (town staff) Future Improvements (contractor) 	\$200 with the potential for additional need	None
Full Build Out		<ul style="list-style-type: none"> 2-3 Years 		~\$167,000	

Appendix E: Primitive Trail Graphic "Typical"

ILLUSTRATIVE TRAIL CLEARANCES



PHOTOGRAPHIC REPRESENTATION OF STREAM CROSSING



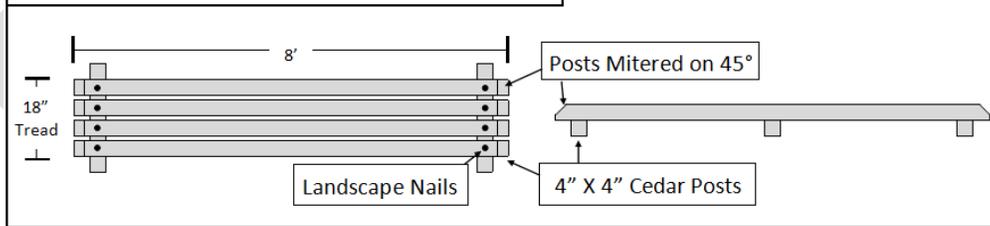
PHOTOGRAPHIC REPRESENTATION OF RAISED WETLAND BRIDGE



PHOTOGRAPHIC REPRESENTATION OF BOG BRIDGE



PLAN OF 4" X 4" CEDAR POST BOG BRIDGE



PHOTOGRAPHIC REPRESENTATION OF STREAM CROSSING



Appendix F: Trail Assessment for “other power-driven mobility devices” (OPDMD)

Maximum width (36’): Boardwalks are being constructed with a clear tread width of 41”, this width is functionally reduced by the winding nature of the boardwalks and the necessity for minor turning. As a result, the maximum width of OPDMD’s that can be safely accommodated is 36.”

Engine type (electric only): The sensitive nature of the vernal pools and necessity to protect the properties water quality, prevents the accommodation of gas and other fuel powered engines. The noise produced by combustion engines is further in conflict with the intent of low-impact, contemplative, and scenic enjoyment of the property.

Appendix G: Conservation Easement for Dugas Parcel (to be included in final draft)

Appendix H: Conservation Easement for Barker Parcel (to be included in final draft)

Appendix I: Barker Deed (to be included in final document)

Appendix J: Riverboat LLC parcel (Dugas Parcel) deed of transfer (to be included in final document)

Appendix K: Open Space lot deed (to be included in final document)

Appendix L (i,ii,iii,iv): Dugas Parcel Survey and Riverfront Subdivision Plat (showing boundaries, RR crossing, and emergency/maintenance access between Lots 5 and 6) (to be included in final document)

Appendix M: LMF Project Agreement (to be included in final draft)

Appendix O: Historical and Cultural Context

JACOB R. PRATT HOMESTEAD FARM: The Pratt family owned land in the North Road and Ledge Road area since before 1805. The family had been residents of Yarmouth (and the previous North Yarmouth) since at least the early 1770s when the first Pratt births were recorded. By 1871 there were at least 4 Pratt family farms on North Road, all near the junction with East Elm Street. In 1848 David Pratt and Jacob Pratt owned the now-Dugas parcel and sold a corridor to the railroad to allow railroad construction. The Dugas riverfront parcel was part of the homestead farm of Jacob R. Pratt until 1895, then of Eugene Pratt until 1927. Eugene Pratt owned the parcel in 1924 when a cattle underpass with “1924” carved in the keystone was built under the railroad.

TURNER FAMILY OWNERSHIP (Dugas riverfront parcel): Max and Ruth Turner purchased this parcel in 1948. It then passed into the ownership of Anne Turner before being sold to Steven and Greg Dugas (DBA Riverboat, LLC) in 2016.

HILDA BARKER PRESERVE: Hilda Barker sold this parcel to the town in 2001. Her son Jim was one of the founders of the Friends of the Royal River (now Royal River Conservation Trust), founded in 1992. He was once the chairman of the Yarmouth Conservation Commission. The Barker family acquired the land from Helen Greenlaw in 1957, the same years as the Pole Yard fire (below).

RIVERBOAT: The Dugas family's use of Riverboat, LLC, comes from a grandfather's family business Riverboat Electric.

STEAMBOAT HOYT: Linc Merrill of the North Yarmouth Historical Society writes that Yarmouth businessmen Charles Russell and A. O. Sands built a small steamboat 35' long that could carry about 30 passengers, perhaps called the Hoyt, which in the early 1890s navigated this section of the Royal River between Yarmouth's East Elm Street and the Wescustogo House resort and springs in North Yarmouth.

POLEYARD FIRE: A fire in 1957 originating at the CMP Pole Yard on the western bank of the Royal River burned some of the forest on the Barker parcel, according to Yarmouth's Open Space Guide. It may have also affected the forest on the Dugas parcel.

CMP POWERLINE CORRIDOR: The CMP powerline easement across the Dugas parcel was granted in 1956 and cleared shortly thereafter.

SAINT LAWRENCE & ATLANTIC (GRAND TRUNK) RAILROAD. The railroad was proposed and built beginning in the 1844, and began operating in 1853. The Pratts sold rights to cross the now-Dugas parcel in 1848. The railroad was the vision of John Alfred Poor of Portland and Andover, Maine, brother of the founder of Standard & Poor's. Grand Trunk's president Charles Melville Hays died on the Titanic in 1912. The former headquarters of Grand Trunk, in Portland's Old Port, is now a flagship office building of Gorham Savings Bank. The railroad line between Portland and Auburn (through Yarmouth) was acquired by the State of Maine around 2000. Freight service to the last customer (B&M Baked Beans) was discontinued in 2015. The line has been recently studied as a possible route for passenger rail or commuter light rail service to Lewiston-Auburn, or Montreal.

WABANAKI NAMES: One Wabanaki name for the Royal River is "Pungustuck", which means "falls river." The Wabanaki name "Wescustogo" includes the tidal section of the river, meaning "muddy."

IMPOUNDMENT & DAMS: The first dam and mill was built at East Elm Street's "Fourth Falls" in 1759 to power an iron refinery. The dam's impoundment reaches the Riverfront Woods Preserve, and continues upriver beyond Route 9 in North Yarmouth.

This plan was reviewed and approved by the Parks and Lands Committee on: 3/4/2020

This plan was reviewed and approved by the Royal River Conservation trust on: _____

This plan was reviewed by the Yarmouth Town Council on: _____

This plan was approved by the Yarmouth Town Council on: _____

DRAFT