

TOWN OF YARMOUTH

200 Main Street Yarmouth, Maine 04096

(207)846-2401

WWW.YARMOUTH.ME.US

Fax: (207)846-2438

SHORELAND ZONING PERMIT APPLICATION

PERMIT # SOP 19	9-39	ISSUE DATE	FEE AN	MOUNT_	1500	
Date: 8/15/2019	Zoning District_	RP/RR	Map 064 Lot 0	01_Ext_		
APPLICANT NAME: MAILING ADDRESS: 93 State H					11-1965 sky@maine.gov	
OWNER (other than app NAME: Cai MAILING ADDRESS:1 Bowdoin M	tlin Gerber, Main	e Coast Heritage Trus Topsham, ME 04086		_{IO:} 207-7 erber@m		
CONTRACTOR NAME: To I MAILING ADDRESS: N/ PROPERTY LOCATION: Lane's Is			PHONE ? e-mail N/	NO: <u>N/A</u>		
Applicant must also include a narrative of the project including a description of all proposed construction, (E.G. Land clearing, road building, septic systems and wells – Please note: A site plan sketch is required on a separate sheet of paper no less than 11" x 17" or greater than 24"x36" see attachment F for plans						
Please note: Plan se	t must be bour	nd (not rolled) with	a cover sheet a	and index	.	
Proposed use of proje	oct: see attach	ment A.				
Estimated cost of construction To be determined						
Lot area (sq. ft.) 1,219,680 (28 acres)						
Frontage on Road (FT) N/A						
SQ. FT. of lot to be covered by non-vegetated surfaces N/A						
Elevation above 100 YR Flood Plain part of structure is above and below the 100 yr BFE (12 ft NGVD, 11.3 ft NAVD) per effective FEMA FIRM (11-15-1984) Frontage on water body (FT.) 50 feet						
Height of proposed structure approximately 12 feet (8 ft NAVD88 to approximately 20 ft NAVD88)						
Revised 11/30/2017	Shoreland Zonin	g Permit Application	Applicant Initials	PAS	Page 1 of 4	

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Existing use of property Conservation property

Proposed	use of	f property	Conservation property

Note: NEXT Questions apply only to expansions of portions of existing structures

	that are less than the required setback.
A)	Total building footprint area of portion of structure that is less than required setback as of 1/1/89: N/A SQ.FT.
B)	Actual shore setback of existing structure proposed for expansion (measured as required in SOD, e.g.: Highest Annual Tide; Upland Edge of Coastal Wetland; Top of Bank (RP); Normal High Water Line of rivers and streams; as applicable):
C)	Building footprint area of expansions of portion of structure that is less that required setback from 1/1/89 to present:SQ.FT.
D)	Building footprint area of proposed expansion of portion of structure that is less than required setback:SQ.FT.
E)	% Increase of building footprint of previous and proposed expansions of portion of structure that is less than required setback since $1/1/89$: % increase = $((C+D)x100)/A = N/A$ %
F)	Floor Area and Market Value of Structure prior to improvements: (a) Area: N/A Value: N/A Floor Area and Market Value of portions of Structure removed, damaged or destroyed: (b) Area: N/A Value: N/A If the floor area or market value of (b) exceeds 50% of the area or value of (a), then the Relocation provisions of Article IV.R.5.a.(3) and (4) shall apply. Note: A value appraisal may be required or submitted in close cases where the applicant asserts that that 50% trigger and relocation assessment provision is not met. Any plan revisions after initial approvals to replace rather than renovate building components (foundations, framing, etc.) shall be required to recalculate the extent of removal, damage or destruction relative to retained structure.
	Please provide a site plan to include lot lines, area to be cleared of trees and other vegetation; the exact position of proposed structures, including decks, porches, and out buildings with accurate setback distances form the shoreline, side and rear property lines; the location of proposed wells, septic systems, and driveways; and areas and amounts to be filled or graded. If the proposal is for the expansion of an existing structure, please distinguish between the existing structure and the proposed expansion.
	Note: For all projects involving filling, grading, or other soil disturbance you must provide a soil erosion control plan describing the measures to be taken to stabilize disturbed areas before, during and after construction.
₩.	Draw a simple sketch showing both the existing and proposed structures with dimensions.

SHORELAND ZONING PERMIT CHECKLIST

Please note that this checklist is intended to help applicants identify major submittal components but it is the applicant's responsibility to review the SOD/RP provisions outlined in Chapter 701 of the Yarmouth Code and provide all required information as well as conform to all design components. Copies of Chapter 701 are available at the Yarmouth Town Hall or can be downloaded on the Town website which is www.yarmouth.me.us.

Ø	Complete Shoreland Zoning Permit application including signatures of property owners and
	agents.
	Appropriate fee.
	Square footage of lot area within the 250' SOD Entire island and project is within SOD; see Attachment A1.
	Square footage and % of lot covered by non-vegetated surfaces within the SOD N/A, no change from existing
	Square footage and % of cleared area within lot area within the SOD N/A, no change from existing
	Delineation of 75' setback from upland edge of the coastal wetland Entire project is within 75 ft setback.
ಠ	Delineation of 250' SOD line from upland edge of the coastal wetland. Entire island is within SOD.
	Delineation of Resource Protection District Entire project is within RPD.
Ø	Height of any proposed structures as measured between the mean original grade at the
	downhill side of the structure and the highest point of the structure N/A, project involves at-grade slope stabilization
Ø	Building elevations of any proposed structures as viewed from side and rear lot lines N/A
\square	% Increase of expansions of portion of structure which is less than the required setback (if
	applicable) N/A
	Floor Area and Market Value of Structure prior to improvements: (a) Area: N/A
	<u>Value:</u> . Floor Area and Market Value of portions of Structure removed, damaged or
	destroyed: (b) Area: Value:
	Elevation of lowest finished floor to 100 year flood elevation N/A
Ø	Evidence of submission of the application to the Maine Historic Preservation Commission
	(MHPC) at least twenty (20) days prior to the Planning Board meeting as required in Article
	IV.R.O see attachment B
	Copy of additional permit(s) if applicable:
	 Planning Board (e.g. Subdivision, Site Plan Review)
	Board of Appeals
	Flood Hazard
	 Exterior plumbing permit (Approved HHE 200 Application Form)
	Interior plumbing permit
	 DEP permit (Site Location, Natural Resources Protection Act) applied on 8/5/2019; copy submitted
	 Army Corps of Engineers Permit (e.g. Sec. 404 of Clean Waters Act)applied on 8/5/2019; copy submitted
	Please circle all habitat types, marine organisms and shoreline elements present:
	(Sand beach) (boulder/cobble beach) (sand flat) (mixed coarse & fines) (salt marsh)
	(ledge) (rocky shore (mudtlat) sediment depth if known) (Bluff/bank) (Mussels) clams
,	(marine worms) (rockweed) (eelgrass) (lobsters) (other)
Ø,	(11-)
	of adjacent circled habitats (except for
	Copy of deed see attachment C bluff/bank).
	Soil erosion control plan see attachment D
	Photographs see attachment E
Ø	Plan view see attachment F for plans

NOTE: Applicant is advised to consult with the CEO and appropriate state and federal agencies to determine whether additional permits, approvals, and reviews are required.

CONDITIONS OF APPROVAL

The property shown on this plan may be developed and used only as depicted on this approved plan. All elements and features of the plan and all representations made by the applicant concerning the development and use of the property which appear in the record of the Planning Board proceedings are conditions of approval. No change from the conditions of approval is permitted unless an amended plan is first submitted to and approved by the Planning Board.

I certify that all information given in this application is accurate. All proposed uses shall be in conformance with this application and the Town of Yarmouth Shoreland Regulations in the Zoning Ordinance. I agree to future inspections by the Code Enforcement Officer / Planning Director / Planning Board members (as applicable) at reasonable hours and with advance notice.

"I authorize appropriate staff within the Yarmouth Planning Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to collect facts pertaining to my application."

Applicant Signature Cold (Date 8/23/2019
Agent Signature(if applicable)	Date_8/15/2019
Code Enforcement Officer	
DATE OF APPROVAL / DENIAL OF APPLICATION (by either staff or planning board)	DN



STATE OF MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

BUREAU OF RESOURCE INFORMATION & LAND USE PLANNING

93 STATE HOUSE STATION AUGUSTA, MAINE 04333

AMANDA E. BEAL COMMISSIONER

GOVERNOR
August 28, 2019

Planning & Development/Code Enforcement Town of Yarmouth 200 Main Street Yarmouth, ME 04096

ATTN: Nicholas Ciarimboli, Code Enforcement Officer

RE: Shoreland Zoning application

Living Shoreline Demonstration Treatment

Lane's Island, Yarmouth, ME

Dear Nick:

On behalf of our project partner Maine Coast Heritage Trust (MCHT), the Maine Geological Survey (MGS) is pleased to submit this application for a demonstration living shoreline treatment located at Lane's Island, Yarmouth, Maine (Tax Map 064, Lot 001). Lane's Island is an undeveloped island owned by MCHT; it has a highly unstable bluff on its southwestern end, which is where a living shoreline project which beneficially reuses naturally occurring trees is proposed.

Project Narrative

Maine is currently participating in a regional effort funded by NOAA to further living shoreline applications throughout New England. This is the 2nd phase of a project which seeks to permit, install, and monitor living shorelines in each state with the goals of developing standardized New England-wide monitoring guidance and metrics, demonstrating living shoreline applications in New England, and increasing capacity and awareness of living shorelines with a variety of stakeholders, including coastal homeowners, the public, consultants and engineers, and municipal, state, and regional officials.

Maine's direct project partners include MGS, the Maine Coastal Program, Maine Department of Transportation, Casco Bay Estuary Partnership, The Nature Conservancy, MCHT, the Town of Brunswick, and the Brunswick-Topsham Land Trust. In addition, state and federal review and commenting agencies have been integral in helping to identify permitting requirements and monitoring protocols which would be implemented as part of this project. These agencies include MEDEP, MEIF&W, MEDMR, USACE, NOAA, USEPA, and USFWS.

As part of this project, Maine is pursuing demonstration living shoreline treatments at several different sites in Casco Bay, Maine. Demonstration treatments are designed to beneficially reuse naturally occurring materials in Casco Bay to the maximum extent practicable and be transferable to other locations in Casco Bay and Maine. Demonstration treatment sites are located in Brunswick (Wharton Point and Maquoit Bay Conservation Lands) and Yarmouth (Lane's Island). This application is being submitted only for work being proposed at Lane's Island, Yarmouth.

ROBERT MARVINNEY, STATE GEOLOGIST MAINE GEOLOGICAL SURVEY



PHONE: (207) 287-2801 FAX: (207) 287-2353 WWW.MAINE.GOV/DACF/MGS Lane's Island was selected as a living shoreline demonstration treatment site because of the following factors:

- It has an eroding coastal bluff on an island, which is representative of and transferable to shorelines in the Casco Bay region, and beyond;
- It has a relatively straight/consistent shore type of at least 150 feet in length;
- It is owned by a project partner (MCHT), who has right, title, and interest to the property;
- It is proximal to several different mapped habitat types;
- It represents a great educational opportunity given its location, visibility and ownership; and
- It had a high living shoreline suitability score based on a GIS-based analysis developed by MGS.

Proposed work at Lanes Island is described in the attached project narrative (Attachment A).

Please refer to the attached completed and signed Shoreland Permit Application (Note: Application Fee of \$150 is being paid by credit card charge from the Maine Geological Survey), with the following attachments:

- A. Project Narrative
- A1. Yarmouth Official Zoning Map with site located
- B. MHPC Notification for the project
- C. Lanes Island Declaration of Trust (MCHT)
- D. Erosion Control Narrative
- E. Site Photographs
- F. Project Plans in 11x17 format

Please note that copies of permit applications to the MEDEP for Permit by Rule and USACE were submitted to your office via email (under separate cover to Alex Jaegerman) on 8/7/2019.

The work proposed as part of this project was reviewed with applicable state and federal review and commenting agencies at a pre-application conference on May 31, 2019; subsequently, plans and proposed project efforts have been revised per input from the agencies.

Should you have any questions whatsoever, please contact me.

Best Regards,

Maine Geological Survey, Agent on behalf of Maine Coast Heritage Trust (MCHT)

Peter Slovinsky, Marine Geologist

Attachment A. Project Narrative

Maine is currently participating in a regional effort funded by NOAA to further living shoreline applications throughout New England. This is the 2nd phase of a project which seeks to permit, install, and monitor living shorelines in each state with the goals of developing standardized New England-wide monitoring guidance and metrics, demonstrating living shoreline applications in New England, and increasing capacity and awareness of living shorelines with a variety of stakeholders, including coastal homeowners, the public, consultants and engineers, and municipal, state, and regional officials.

Maine's direct project partners include MGS, the Maine Coastal Program, Maine Department of Transportation, Casco Bay Estuary Partnership, The Nature Conservancy, MCHT, the Town of Brunswick, and the Brunswick-Topsham Land Trust. In addition, state and federal review and commenting agencies have been integral in helping to identify permitting requirements and monitoring protocols which would be implemented as part of this project. These agencies include MEDEP, MEIF&W, MEDMR, USACE, NOAA, USEPA, and USFWS.

As part of this project, Maine is pursuing demonstration living shoreline treatments at several different sites in Casco Bay, Maine. Demonstration treatments are designed to beneficially reuse naturally occurring materials in Casco Bay to the maximum extent practicable and be transferable to other locations in Casco Bay and Maine. Demonstration treatment sites are located in Brunswick (Wharton Point and Maquoit Bay Conservation Lands) and Yarmouth (Lane's Island). This application is being submitted only for work being proposed at Lane's Island, Yarmouth.

Lane's Island was selected as a living shoreline demonstration treatment site because of the following factors:

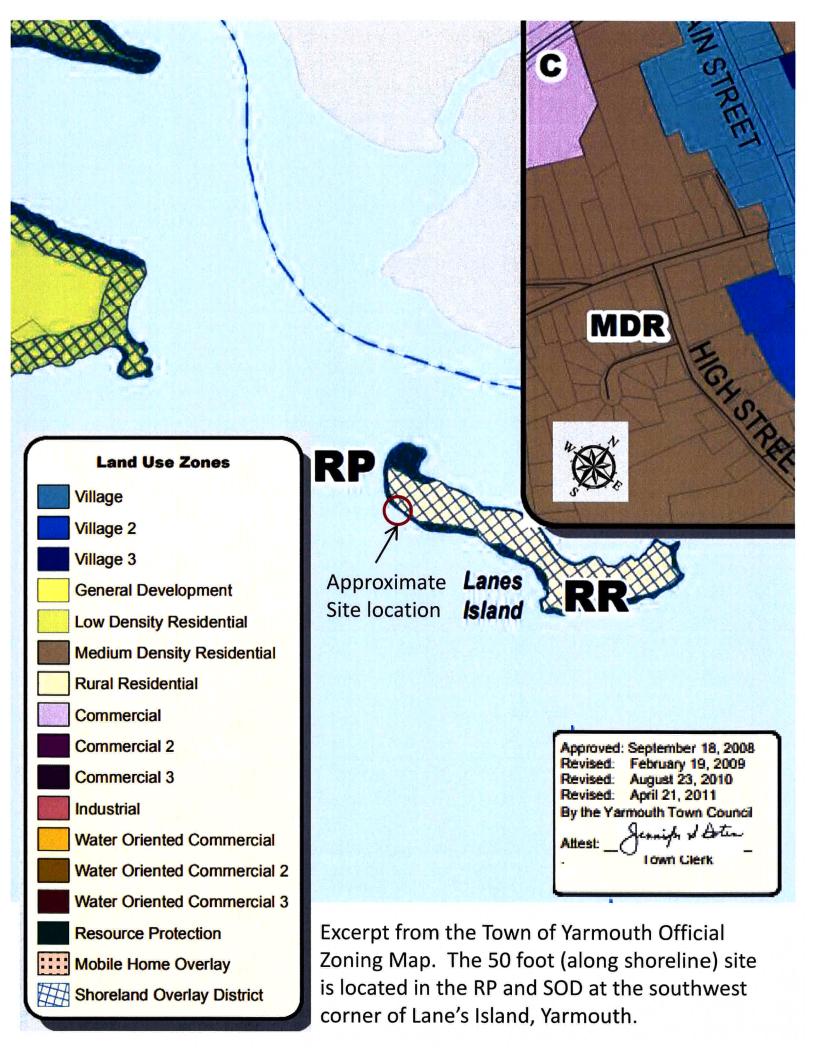
- It has an eroding coastal bluff on an island, which is representative of and transferable to shorelines in the Casco Bay region, and beyond;
- It has a relatively straight/consistent shore type of at least 150 feet in length;
- It is owned by a project partner (MCHT), who has right, title, and interest to the property;
- It is proximal to several different mapped habitat types;
- It represents a great educational opportunity given its location, visibility and ownership; and
- It had a high living shoreline suitability score based on a GIS-based analysis developed by MGS.

The proposed living shoreline demonstration treatment work includes the following main components:

- Regrading of approximately 50 feet of a 10-15 foot eroding coastal bluff. The current bluff is at an extremely unstable angle, with significant overhang. The bluff will be cut back (approximately 10 feet landward from the edge) to create a more stable slope. Regrading will be completed using mechanical equipment the upper edge of the eroded bluff will be cut and the existing soils redistributed down the bluff face to achieve the reduced slope while keeping cut-fill quantities nearly balanced along the treatment. Materials from regrading will be temporarily stockpiled for use in project construction. The engineering estimate earthmoving from regrading is approximately 60 cubic yards (with potential 20 cubic yard allowance for over-excavation, for a total of 80 cubic yards).
- Removal of 4 hazard trees (DBH > 3"). Three of these trees are currently either dying, have exposed roots, or
 are adding significantly to bluff edge instability. The fourth tree is within 10 feet of the top of the bluff. See
 photos in Attachment E. Note that the project was located along a portion of the existing bluff to minimize tree
 removal.
- Existing fallen trees (and any trees removed from the top of the bluff) will be beneficially reused to construct a stepped crib of approximately 50 feet in length, as shown on submitted plans in Attachment F. The stepped crib will include vertical tree trunks and horizontal sleeper trunks. The crib will include 4 step sections constructed within the regraded bank to create no seaward encroachment of the project. Trunks will be driven vertically into the bluff face and connected with long screws. Root balls from removed trees will be placed within the first step of the crib and used as flank protection to minimize scour. The sediment created from regrading the bluff will be placed within the crib steps. Jute mesh will be placed over the sediment in each crib step in order to help stability. Each step will be planted with appropriate salt tolerant and native bluff vegetation as shown and described in the Planting Schedule, which will change as the elevation increases.

- Approximately 5-6 cubic yards of excess bluff sediment will be spread along the toe of the project (but above the
 HAT) to create a feeder system for the adjoining marsh, beach, and mudflats. This material will be placed above
 the highest annual tide. The reason for placement of material is to demonstrate a potential precedent for future
 bank stabilization projects. Currently, material is typically removed from a project site; with this demonstration
 project, we would like to demonstrate that material from a bluff regrading project should always be beneficially
 reused by placing excess material slightly above (or into the intertidal) to serve as a feeder system for nearby
 habitats (beaches, mudflats, wetlands). This would help simulate the continued natural erosion of the coastal
 bluff.
- Work at the project site will be done via mechanical equipment transported by barge. The barge will be landed
 as close as possible to the site during construction. Equipment and materials will be staged on the barge. Work
 will be done from the dry beach as permitted by tides to minimize impacts to surrounding habitats. Appropriate
 erosion and sedimentation control measures in accordance with MEDEP BMP's will be implemented.
- Work is expected to occur in October 2019 to minimize any impacts on wildlife, fish and shellfish. It is expected
 that regrading and crib construction will take approximately 3 weeks allowing for appropriate weather windows.
- In conjunction with the CBEP, a comprehensive monitoring program will be implemented at the project site for a period of five years post-construction. This program was developed in cooperation with the other New England states, including state and federal permitting and review agencies. The purpose of this program is to document the efficacy of the living shoreline treatment. Monitoring will occur in the spring and fall of each year and will document shoreline erosion/accretion, topographic changes, vegetation changes, and species changes at the project site and at a nearby natural control.
- The living shoreline will be maintained to its design specifications for a period of 5 years.

The work proposed as part of this project was reviewed with applicable state and federal review and commenting agencies at a pre-application conference on May 31, 2019; subsequently, plans and proposed project efforts have been revised per input from the agencies.





STATE OF MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

BUREAU OF RESOURCE INFORMATION & LAND USE PLANNING

93 STATE HOUSE STATION AUGUSTA, MAINE 04333

AMANDA E. BEAL COMMISSIONER

JANET T. MILLS GOVERNOR

August 1, 2019

Maine Historic Preservation Commission 65 State House Station Augusta, ME 04333-0065

RE: Living Shoreline Demonstration Treatments

Wharton Point, Brunswick

Maquoit Bay Conservation Lands, Brunswick

Lanes Island, Yarmouth, ME

Dear Sir/Madam:

I have enclosed plans that show the locations and designs of several different proposed living shoreline demonstration treatments at eroding marshes and an eroding coastal bluff at Wharton Point and Maquoit Bay Conservation Lands (Brunswick) and Lane's Island (Yarmouth), respectively.

These demonstration treatments are part of an ongoing project which MGS has been involved in with multiple project partners (including the land owners) to permit, construct, and monitor such treatments to further the understanding of and use of living shorelines in Maine and the larger New England region. These small treatments are meant to be case studies that beneficially reuse naturally occurring materials (in this case, oyster shell, trees, and a combination thereof) for living shoreline applications.

In accordance with permit application requirements, the US Army Corps of Engineers require that you be informed of the proposed project and given an opportunity to provide comment on potential historic or archaeological impacts.

Please reply with any comments to my office, or directly to the Corps at:
Maine Project Office
US Army Corps of Engineers
675 Western Avenue #3
Manchester, ME 04351
(207) 623-8367

Should you have any questions whatsoever, please contact me.

Best Regards,

Peter Slovinsky, Marine Geologist, Maine Geological Survey

peter.a.slovinsky@maine.gov

(207) 287-7173 office; (207) 441-1965 mobile

ROBERT MARVINNEY, STATE GEOLOGIST MAINE GEOLOGICAL SURVEY



PHONE: (207) 287-2801 FAX: (207) 287-2353 WWW.MAINE.GOV/DACF/MGS

DECLARATION OF TRUST

LANES ISLAND Town of Yarmouth, Cumberland County, Maine

WHEREAS, Maine Coast Heritage Trust (MCHT), having a mailing address of One Bowdoin Mill Island, Suite 201, Topsham, Maine 04086, is a publicly supported non-profit corporation operating and existing under the laws of the State of Maine, and a tax-exempt organization under §501(c)(3) of the Internal Revenue Code, owns and operates a nature preserve on the entirety of Lancs Island in the Town of Yarmouth, Cumberland County, Maine, being all and the same real estate conveyed to MCHT by a warranty deed of gift from Leon A. Gorman dated December 19, 2013, and recorded at the Cumberland County, Maine, Registry of Deeds at Book 31240, Page 320, which preserve is hereinafter referred to as the "Lanes Island Preserve;" and

WHEREAS, MCHT wishes to hold Lanes Island in trust exclusively for its charitable and benevolent purposes, specifically so that it will remain forever preserved for the benefit and enjoyment of the general public as a scenic and natural area, permitting only those improvements designed to accommodate access and use by the general public for conservation education and low impact outdoor recreation, nature observation and study;

NOW, THEREFORE, Maine Coast Heritage Trust hereby grants to Maine Coast Heritage Trust, its successors and assigns forever, as Trustee under this express charitable trust, the Lanes Island Preserve, subject to the following covenants and restrictions that will run with the Lanes Island Preserve, in perpetuity, to which by acceptance of and in consideration for this deed Maine Coast Heritage Trust, agrees as Trustee thereof:

The Lanes Island Preserve shall be owned and operated exclusively for charitable and benevolent purposes for the benefit of the general public, permitting only those structures and improvements designed to accommodate access to and use and enjoyment of the Lanes Island Preserve, by the general public, and for natural resources management, conservation education and low impact outdoor recreation, nature observation and study; and all such recreational, educational, and conservation management related improvements shall be designed and sited in a manner to preserve the conservation values of the Lanes Island Preserve, including significant wildlife habitat and other important natural resources, and to preserve the scenic views of the substantially undeveloped portions of the Lanes Island Preserve from public vantage points on the surrounding waters of Casco Bay. The Trustee shall have the right to establish reasonable rules and regulations for public uses of the Lanes Island Preserve and to prohibit by posting or otherwise uses it deems inconsistent with or adverse to its conservation values.

The Lanes Island Preserve shall not be transferred except to another non-profit, tax exempt organization or governmental entity committed to the permanent conservation of real property, subject to the perpetual restrictions and requirements stated in this trust deed.

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- Page Two -

MAINE COAST HERITAGE TRUST

by William T. Glidden, Jr.

its President

STATE OF MAINE COUNTY OF SAGADAHOC, ss.

November 18th, 2014

Personally appeared William T. Glidden, Jr., the President and authorized representative of the MAINE COAST HERITAGE TRUST, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Notary Public/Attorney

KRIS CAMPBELL**
Notary Public, Maine

My Commission Expires January 30, 2020

Please type or print name of notary

My commission expires

Received
Recorded Resister of Deeds
Nov 18,2014 03:37:58P
Cumberland Counts
Famela E. Lovles

Certification of Clerk and General Counsel

Name of Entity:

Maine Coast Heritage Trust

One Bowdoin Mill Island, Suite 201

Topsham, Maine 04086

The undersigned, Karin Marchetti Ponte, hereby certifies as follows:

- I, Karin Marchetti Ponte, am an attorney licensed to practice law in the State of Maine, Bar Registration # 2044. I serve as General Counsel to and Clerk of Maine Coast Heritage Trust, a Maine non-profit corporation with an address of One Bowdoin Mill Island, Suite 201, Topsham, Maine 04086.
- 2. Maine Coast Heritage Trust ("MCHT") is a validly existing non-profit corporation under the laws of the State of Maine and is in good standing in the State of Maine as of the date hereof.
- 3. Maine Coast Heritage Trust, at its Meeting of the Board of Directors, duly called and held on November 14, 2014 in Portland, Maine, where a quorum was present and voting, voted to approve the filing of a Declaration of Trust on Lane's Island in Yarmouth to assure its permanent protection.
- 4. William T. Glidden, Jr., President, and Ciona Ulbrich, Senior Project Manager have been authorized to execute and deliver, on behalf of Maine Coast Heritage Trust, all deeds, contracts, and other instruments by which Maine Coast Heritage Trust will be bound, and to carry out any other actions that they deem to be in the best interests of Maine Coast Heritage Trust to accomplish this resolution.
- 5. The facts set forth herein are based on my personal knowledge, after due inquiry.

Signed at Mount Desert, Maine this 19th day of November, 2014.

Karin Marchetti Ponte, Esq

Clerk of Maine Coast Heritage Trust

Seal

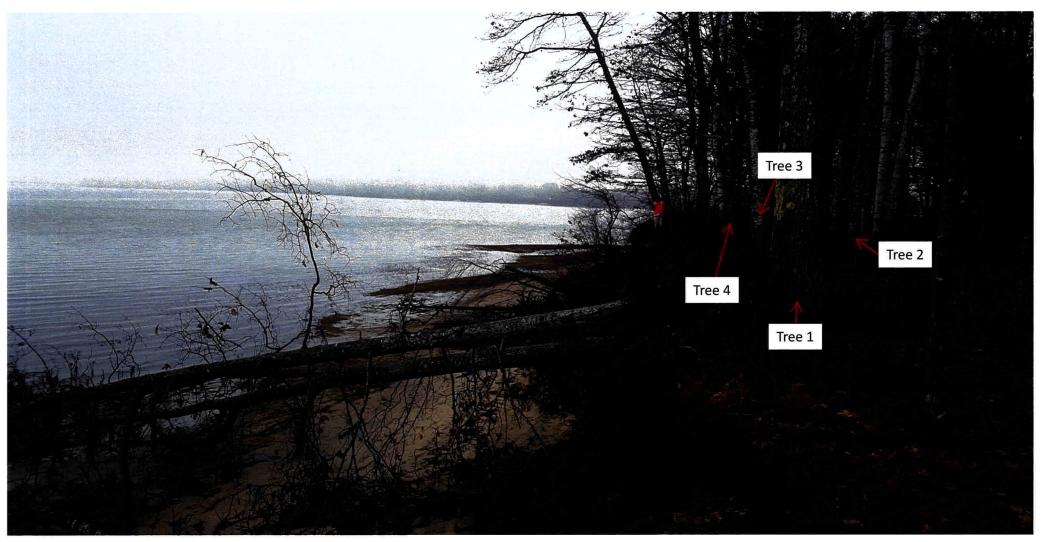
<u>Attachment D - Erosion and Sedimentation Control Narrative</u>

Living Shoreline Installation: Lane's Island, Yarmouth, ME

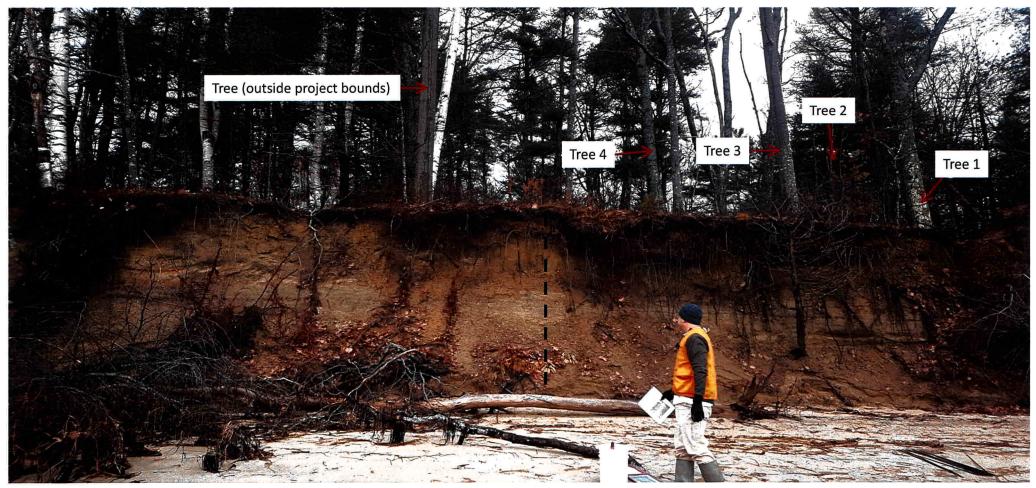
Town of Yarmouth Tax Map 64, Lot 1

General

- Erosion and sedimentation control measures are proposed to control accelerated erosion and sedimentation and reduce the adverse impacts from runoff and erosion at the work site.
- 2. Erosion and sedimentation due to runoff, tidal exposure, and wave action shall be controlled by staging construction activity to minimize area and time of disturbance and preserving natural vegetation whenever possible.
- 3. Application of temporary and permanent erosion control measures shall be in accordance with the latest edition of the Maine Erosion and Sediment Control BMP's published by Maine DEP and available at: https://www.maine.gov/dep/land/erosion/escbmps/
- 4. The work shall be performed by a contractor that is certified by Maine DEP in Erosion and Sediment Control measures. A certified individual shall be onsite during all construction activity.
- 5. The contractor's sequence of operations and schedule for work activities shall act to minimize exposure to erosion.
- 6. All work shall be performed in the dry during low water conditions.
- 7. All tracked or wheeled equipment operating on the beach adjacent the work area shall utilize timber mats to minimize disturbance. Mats shall remain in place for the duration of the work. Upon removal, areas disturbed by mats shall be restored to their original condition.
- 8. Stockpiling of excess materials on the beach shall not be permitted.
- Existing vegetation, shrubs, and trees shall be protected from disturbance and only that clearing that is absolutely necessary for the proposed excavation shall be performed.
- The contractor shall take care to limit the area of soil disturbance to the minimum necessary to complete the work.
- 11. Install erosion control blanket on all proposed slopes within treatment area and vegetate in accordance with the Planting Schedule.
- 12. Seeded or planted areas shall be maintained until acceptable ground cover is established.
- 13. Erosion control measures, seeding, and vegetation shall be inspected weekly and after rainstorms and runoff events until final acceptance. Repairs shall be made when no longer serviceable due to damage or accumulation of sediment.
- 14. At the completion of construction, all disturbed areas shall be restored to their original condition and contour, unless otherwise indicated on the plans.



View west of eroding bluff, scarp, and fallen trees along the Lane's Island, Yarmouth demonstration treatment site. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4"



View north of eroding bluff, scarp, and fallen trees along the Lane's Island, Yarmouth demonstration treatment site. Approximate western project boundary shown with black dashed line. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4" DBH); 4 (Oak, 7.4" DBH). Image by P.A. Slovinsky, 12/3/2018.



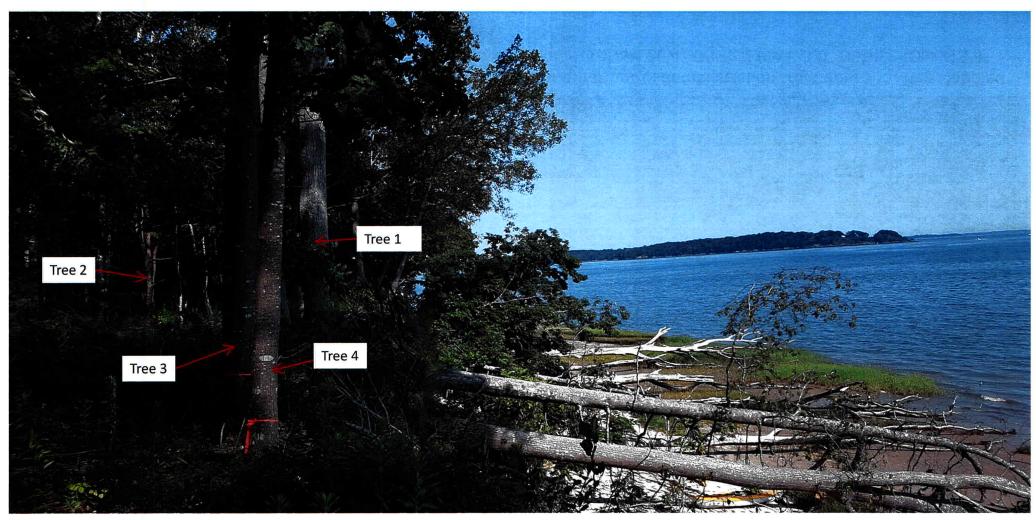
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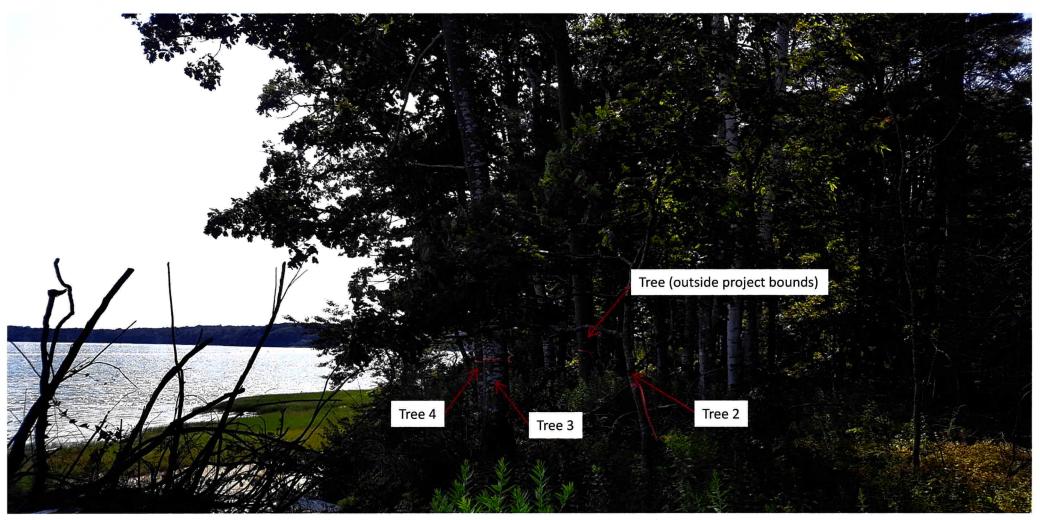
View northeast of eroding bluff, scarp, and fallen trees along the Lane's Island, Yarmouth demonstration treatment site. Approximate project boundaries shown with black dashed line. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4" DBH); 4 (Oak, 7.4" DBH). Tree 2 not visible in image. Image by P.A. Slovinsky, 12/3/2018.



View east of eroding bluff, scarp, and fallen trees along the Lane's Island, Yarmouth demonstration treatment site. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4" DBH); 4 (Oak, 7.4" DBH). Image by P.A. Slovinsky, 4/11/2019.



View east of eroding bluff, scarp, and fallen trees along the Lane's Island, Yarmouth demonstration treatment site. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4" DBH); 4 (Oak, 7.4" DBH). Image by P.A. Slovinsky, 7/26/2019.



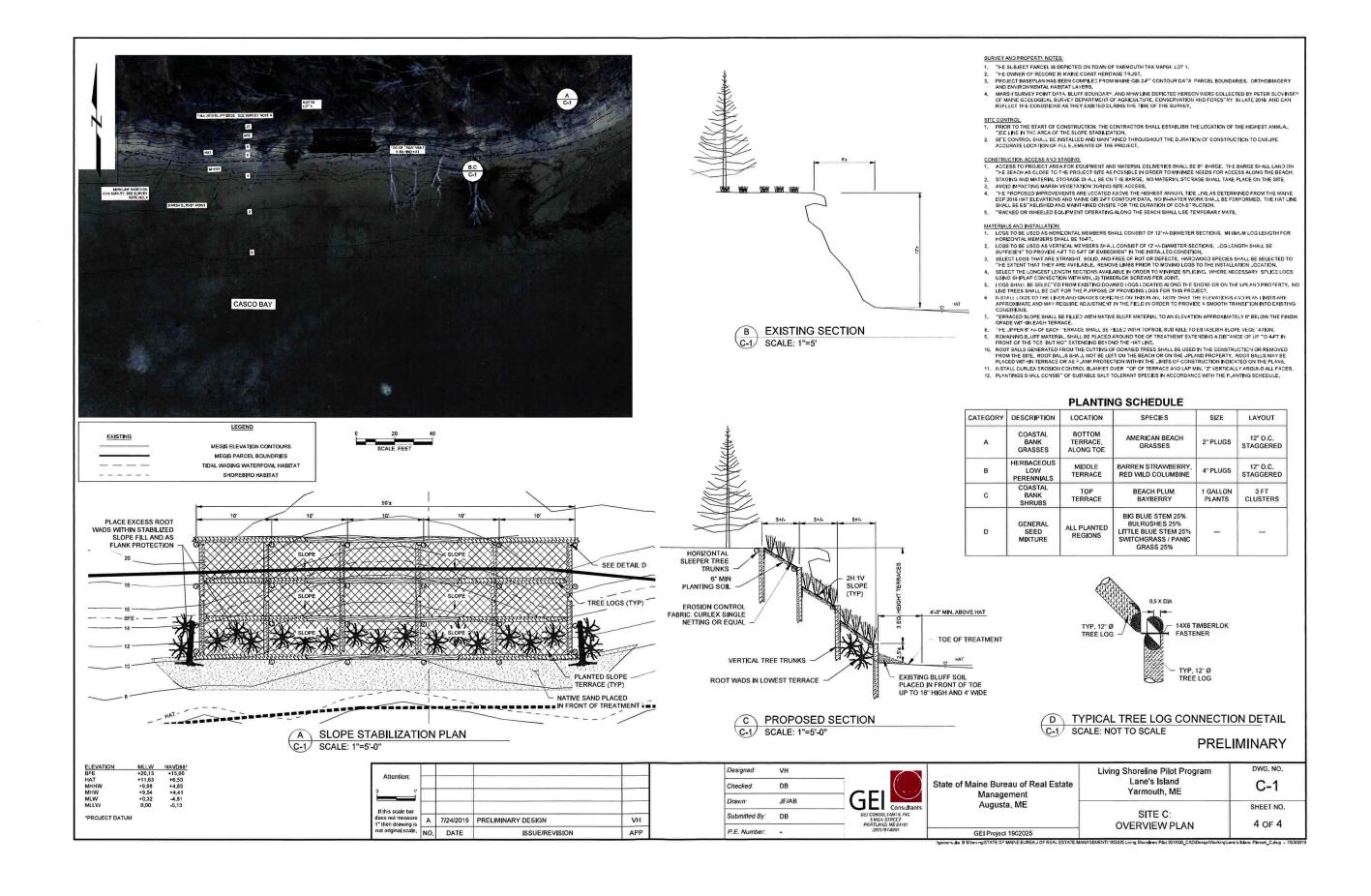
View west of eroding bluff, scarp, and fallen trees along the Lane's Island, Yarmouth demonstration treatment site. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4" DBH); 4 (Oak, 7.4" DBH). Tree 1 not in image. Image by P.A. Slovinsky, 7/26/2019.



Views of Trees 1 to 4 at the Lane's Island, Yarmouth demonstration treatment site. Trees labeled have been identified for potential removal during regrading and include: 1 (Oak, 26.4" DBH); 2 (Oak, 3.0" DBH); 3 (Oak, 13.4" DBH); 4 (Oak, 7.4" DBH). Note intense overhang and exposure of roots for Trees 1, 3 and 4. Images by P.A. Slovinsky, 7/26/2019.

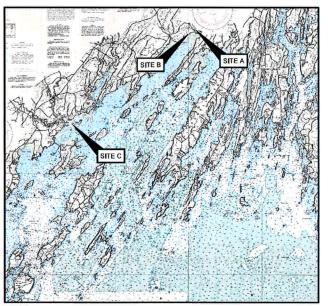


View southeast from top of eroding bluff showing approximate project boundaries shown with red line. On the right, the boundary is the line drawn in the sand; on the left, it is approximately the location of the yellow kayak. Images by P.A. Slovinsky, 7/26/2019.

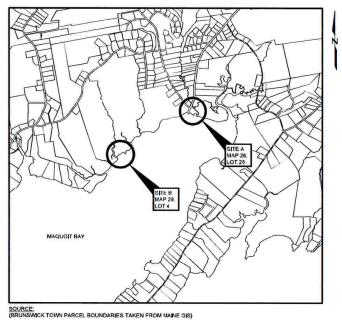


LIVING SHORELINE PILOT PROGRAM

A: WHARTON POINT, BRUNSWICK, ME B: MAQUOIT BAY CONSERVATION LAND, BRUNSWICK, ME C: LANES ISLAND, YARMOUTH, ME



MAINE COAST CHART



BRUNSWICK PARCEL MAP

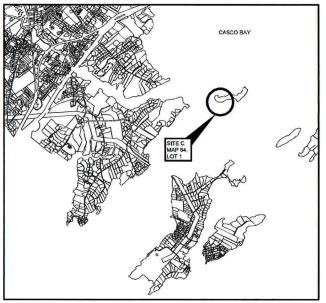
PREPARED FOR:

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PREPARED BY:

GEI CONSULTANTS, INC. 5 MILK STREET PORTLAND, ME 04101 (207)797-8901





SOURCE: {YARMOUTH TOWN PARCEL BOUNDARIES TAKEN FROM MAINE GIS}

YARMOUTH PARCEL MAP

SHEET NO.	DRAWING NO.	SHEET TITLE
01	G-1	COVER SHEET
02	A-1	SITE A OVERVIEW PLAN
03	B-1	SITE B OVERVIEW PLAN
04	C-1	SITE C OVERVIEW PLAN

PRFI IMINARY

				PRELIMINARY
				DWG, NO.
				G-1
				SHEET NO.
Α	7/23/2019	PRELIMINARY DESIGN	VH	1 OF 4
NO.	DATE	ISSUE/REVISION	APP	1014

GEI PROJECT NO. 1902025