

Taylor Point Restoration Plan

March 2017



Potter Farmhouse, Taylor Point, 1882
Courtesy of the Jamestown Historical Society

Taylor Point Restoration Plan

Prepared by the
Taylor Point Restoration Association
P. O. Box 21
Jamestown, RI 02835

March 2017

Cover: This 9" x 13" pencil sketch, labeled "Potter's Point Conanicut Island Aug 20, 82" was drawn in 1882 by J. Ludivici and is in the Jamestown Historical Society collection (catalogue number 1994.003.001). It depicts the back of the old Freebody/ Potter house at Taylor Point. In the left foreground is a fallen-down barn. In the center is the back side of a center-chimney, gambrel-roof, 2-story house with additions on the back, and to it's right, farther back, are a barn and small shed. There is a stone wall in the foreground, and another in the background beyond the house. The grass is long, shrubs are growing up, and there is a leaning fence post; the general appearance is of an abandoned farm, or at least one no longer actively farmed or maintained. In the far background is a gaff-rigged sloop sailing north in the East Passage, with Acquidneck Island beyond. The direction of view appears to be toward the east or northeast.

The Potter Farmhouse stood about 200 feet north of the present-day Newport Bridge, approximately where the Highway Department's gravel storage bins are today. The date of construction is unknown. During the Revolutionary War a cannon ball is said to have passed through the kitchen and lodged in the back of the fire place. The last occupants, Andrew Potter and his wife, Phoebe (Congdon) Potter, died 6 months apart in 1874, and the abandoned house burned down in 1884.

Use of this cover drawing is by the kind permission of the Jamestown Historical Society.

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**Submitted to the Jamestown Town Council by the
Taylor Point Restoration Association**

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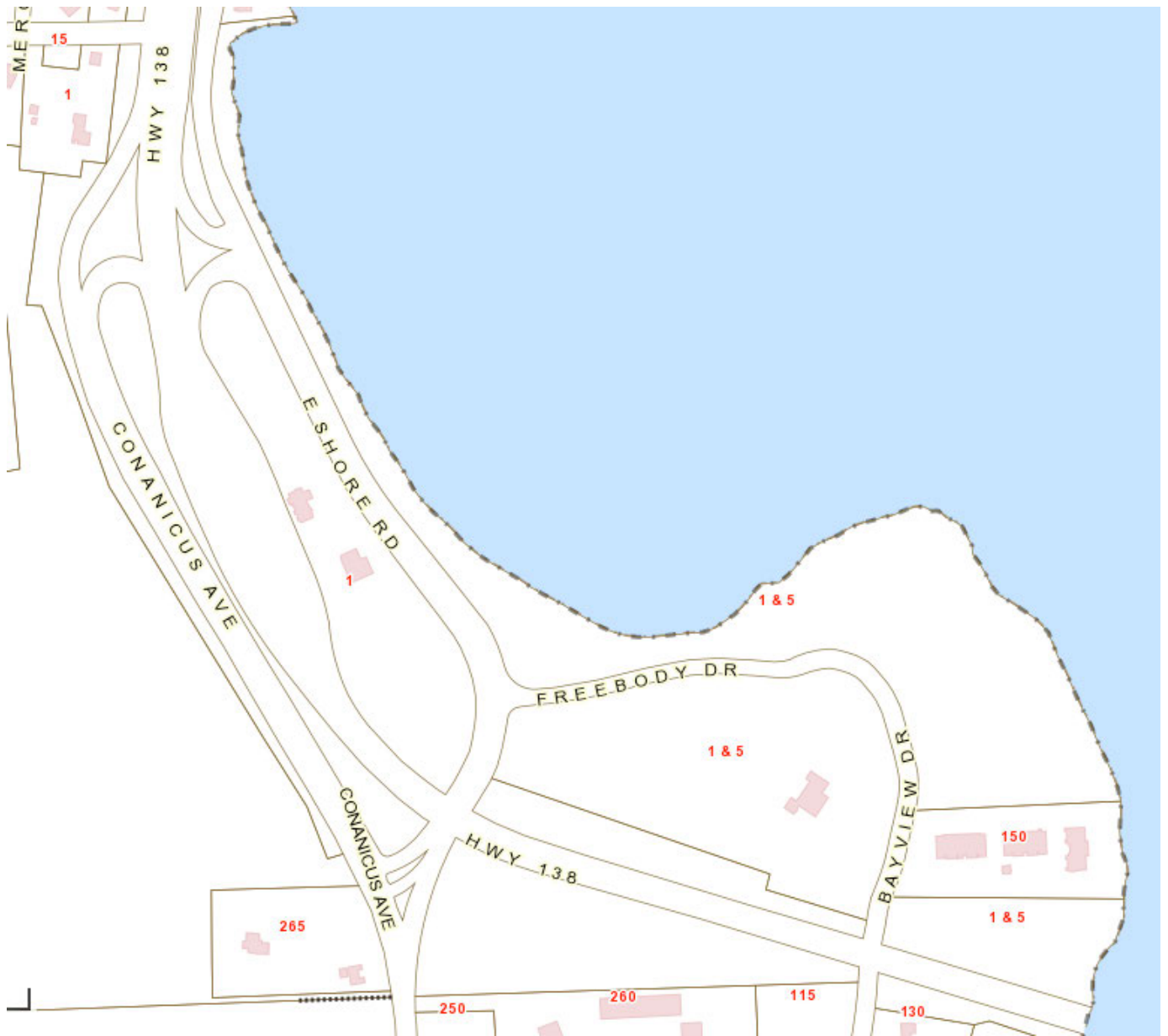
Taylor Point Section Map

This map shows the four Taylor Point Sections. The fifth section, the Roadside Meadow Section, is a narrow section bordering all the roads and is not labeled on this map.



Taylor Point Plat Map

Plat 7, Lot 1, owned by the Town of Jamestown, is labeled “1&5” on this map (for the street addresses, 1 and 5 Freebody Drive). Plat 7, Lot 1 contains a total of 25.76 acres. Approximately 5 of these acres are within the fenced Sewer Plant /Highway Barn complex and are not a part of this plan.



Taylor Point Restoration Plan

Executive Summary

In March 2015 the Town Council approved a 6-point concept for the restoration of Taylor Point. Those 6 points, without change, have become the goals of this Restoration Plan (Annex A). The goals have been further expanded into 50 measurable objectives by which progress will be measured (Annex B).

The plan carefully incorporates the letter and spirit of the Coastal Resources Management Program and other CRMC guidance documents throughout.

The proposed name, requiring Town Council action is the **Taylor Point Nature Preserve**.

The TPRA will manage the project, closely coordinating with the Town Administrator. TPRA will draft CRMC permit applications for Town Administrator approval. With the planning phase complete, the project is ready to move to the Design, Permitting, and Implementation phases. Completion of restoration is expected in 10 years, with maintenance of the project to continue indefinitely.

The greatest challenge at Taylor Point is eliminating all the nonnative plant species, and replacing them with native plants. The goal is to establish a healthy ecosystem of native plants and animals that don't have to fight a losing battle with alien plants.

Other goals are to rehabilitate the footpaths to provide better and safer public access to the shoreline, and to maintain what views are left - from East Shore Rd, Freebody Drive, and the narrow view from the upper parking lot. We want to do whatever we can to limit erosion as sea level rises, although that is ultimately a losing battle. And as our restoration efforts progress, we intend to establish a strong maintenance program to keep the invasive plants from growing back and the footpaths from eroding again

Litter is a major problem that will probably require a mix of approaches to solve. We are searching for the best ways to engage the beachgoers and fishermen who visit there, to gain their cooperation and hopefully inspire them to help us take care of Taylor Point.

Involving the community through a strong program of Education and Community Engagement is essential to the success of the project. We want Jamestown residents to be interested in the project, and we need some to volunteer to help. We want to involve the schools. We are developing a partnership with the URI Master Gardeners that should gain us some experienced volunteers and give them an exciting project to work on. We've developed a useful relationship with the Friends of Canonchet Farms, who are engaged in a similar project in Narragansett.

We're look forward to getting permits for this project and making some real progress this spring and summer.

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Taylor Point Restoration Plan

1. Purpose

The purpose of this plan is to describe the proposed restoration of the 20 acres of town-owned undeveloped land at Taylor Point, to guide the Taylor Point Restoration Association through the design, permitting, and implementation phases to successful project completion and follow-on maintenance, and to clearly demonstrate to the Jamestown Town Council, the Coastal Resources Management Council, and potential grantors and donors how the restoration effort will be carried out.

2. Scope

a. This plan addresses the 20 acres of undeveloped town-owned land at Taylor Point - that portion of Plat 7, Lot 1 that is not within the fenced Sewer Plant / Highway Barn complex. Approximately 15 acres of that land is zoned Open Space - 1, Conservation Preserve. 5-plus acres (the Black Cherry Woodland) is zoned for public use, and is included in this plan until such time as the Town needs it for another use.

b. The fenced Sewer Plant / Highway Barn complex is not included in this plan.

c. The location of the property line between the Town's Plat 7 Lot 1 and East Shore Road, a State Highway maintained by the RI Turnpike and Bridge Authority (RITBA), is uncertain. No restoration work will be done along the East Shore Road embankment without coordination with RITBA.

d. The location of property lines between the Town's Plat 7 Lot 1 and the Newport Overlook Association (Plat 7 Lot 66) are uncertain. Restoration work planned near these property lines will be coordinated with the Newport Overlook Association.

e. This plan is general in nature. Specific features of the restoration project will be addressed during the design phase.

f. This plan describes a restoration project anticipated to take ten years to complete, with follow-on management and maintenance to continue indefinitely. The plan recognizes that, over the longer term, sea level rise is likely to flood Potter Cove Beach and erode the embankments of East Shore Road and Freebody Drive, requiring

relocation or extensive shoreline protection. A detailed examination of these future events is beyond the scope of the plan.

3. Goals

On March 2, 2015 the Town Council approved the “Concept for the Taylor Point Natural Area Restoration Project”. The six elements of this concept have been incorporated without change as the Goals of this plan, and are found in Annex A to this plan.

4. Objectives

The goals of this plan have been expanded into fifty distinct objectives by which the progress of the project will be measured. These objectives are listed in Annex B to this plan. The first 25 objectives are keyed to the Subsection Map in Annex D.

5. Name

The proposed name of the area to be restored is the **Taylor Point Nature Preserve**.

6. Conformance with Coastal Resources Management Program

This plan has been developed to conform to the Coastal Resources Management Program (CRMP), promulgated by the Rhode Island Coastal Resources Management Council. The CRMP can be found at <http://www.crmc.ri.gov/regulations/RICRMP.pdf>

The Goals of the Taylor Point Restoration Project, found in full in Annex A, are supported by the CRMP. For example:

TPRA’s Goal #1, to “Restore the Taylor Point habitat with native species...” is supported by CRMP Section 150 D. 4. *“Coastal Buffer Zones shall remain covered with native flora and in an undisturbed state in order to promote the Council’s goal of preserving, protecting, and restoring ecological systems. ...”*

TPRA’s Goal #2, to “Improve the existing degraded footpaths...” is supported by CRMP Section 210.1 C. 1. *“The Council’s goals are (a) to preserve the qualities of, and public access to those beaches which are an important recreational resource (adjacent to Type 1 and 2 waters); ...”*

TPRA's Goal #3, to "Incorporate shoreline erosion control into the design, using vegetation to avoid or delay the need for structural erosion-control features such as riprap. ..." is supported by CRMP Section 210.1 C. 2. *"Alterations to beaches adjacent to Type 1 and Type 2 waters are prohibited except where the primary purpose of the project is to preserve or enhance the area as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature."*

TPRA's Goal #4, to "Maintain, and in places improve, existing views of the Bay." is supported by CRMP Section 330. A. 1. *"The primary goal of all Council efforts to preserve, protect, and, where possible, restore the scenic value of the coastal region is to retain the visual diversity and often unique visual character of the Rhode Island coast as it is seen by hundreds of thousands of residents and tourists each year from boats, bridges, and such public vantage points as roadways, public parks, and public beaches."* 2. *"Every effort should be made to safeguard from obstruction significant views to and across the water from highways, scenic overlooks, public parks, and other vantage points enjoyed by the public."*

The Taylor Point Restoration Plan carefully incorporates the spirit of the Coastal Resources Management Program and other CRMC guidance documents throughout.

7. Project Management

The restoration project will be managed by the Taylor Point Restoration Association (TPRA), a Rhode Island non-profit corporation formed for the purpose in 2015. The Association's dues-paying membership will continue to be primarily Jamestown residents who support the project, volunteer to help organize and accomplish the work, and who elect the Board of Directors. TPRA will maintain close coordination with the Town Administrator of Jamestown. The Town Council will be kept informed of progress and consulted on any potentially controversial issues.

CRMC has jurisdiction over all restoration work done at Taylor Point as part of this project. All work will require a CRMC Buffer Zone Management Permit. The TPRA will prepare the permit application, which will need to be signed by the Town of Jamestown as the land owner. Preparation of these permit applications by the TPRA with submission through the Town Administrator to CRMC will insure coordination between the TPRA and the Town of Jamestown. To the extent possible, work will be funded by grants and contributions to be obtained by the TPRA.

All work along property lines will be coordinated with the adjacent landowners. Specifically, work near East Shore Road will be coordinated with the Rhode Island Bridge and Turnpike Authority (RITBA). Work near the fence lines on the south sides of

the Black Cherry Woodland and the Bridge Section will also be coordinated with RITBA. Work near the Newport Overlook timeshare property lines will be coordinated with the Newport Overlook Association.

The TPRA will continue to maintain the areas after completion of the initial restoration work. The maintenance and management phase of this restoration project is expected to continue indefinitely.

8. Project Phases

The restoration project naturally divides itself into five phases - planning, design, permitting, implementation, and maintenance. Rather than being strictly sequential, these phases will overlap. We intend to design and permit a few project objectives initially, then, while implementing those objectives, we will design and permit additional parts of the project. We intend to complete detailed designs and apply for permits two to four years ahead of implementation. We expect to learn a great deal in our first few years that will improve execution in later years. A timeline showing the projected accomplishment of these five phases is in Annex C.

a. Planning: This plan was developed between September 2014 and March 2017 by the Taylor Point Restoration Association. It describes our intended approach to the restoration. As we move into design, permitting, and implementation, experience and nature will teach us many lessons, and we will inevitably find that some changes will need to be made. We will try to adhere to the project goals laid down in Annex A to the plan. Any need to compromise on the goals or any major changes to this plan will be cleared through the Town Administrator.

b. Design: Design will meet the requirements of the Coastal Resources Management Council. We expect to design from two to four years ahead of expected implementation. Design will be done in-house where feasible, but some may have to be done by contracted professionals. Before beginning each design effort, we will coordinate the scope with the Town Administrator, and the final design will be a part of the permit application that must be signed by the Town Administrator or his designee before it is submitted to CRMC.

c. Permitting: A permit from CRMC will be required from all proposed work at Taylor Point, including work that is over 200 feet from the coastal feature. Additional CRMC wetland permits will be needed for work in any wetlands. We expect to apply for a series of permits, as design work is accomplished, rather than one overall permit for the entire project. Permit applications will be prepared by the TPRA and approved and signed by the Town Administrator. Permit requests will ordinarily include follow-on maintenance work, and most permits will be requested for a 10 year period.

d. Implementation: The designs will be implemented by volunteers and by contractors, depending on the nature of the work, funds raised, and the availability of volunteers. An important part of this project is the development of a corps of enthusiastic volunteers. We intend to keep the Town Administrator, the Council, and the community informed of our implementation plans to avoid surprising anyone.

e. Maintenance: Maintenance begins as soon as each day's work ends. The work plan for each year will include maintaining the work done in previous years. After the restoration project is complete, in ten years or more, the TPRA expects to concentrate on maintaining the restored Taylor Point so it does not revert to its present state. Most of the maintenance is expected to involve finding and removing any newly sprouting non-native plants. Some work may be beyond the ability of volunteers to maintain and require DPW involvement.

9. Description of Taylor Point Sections

The area referred to here as "Taylor Point" consists of approximately 20 acres of undeveloped land on Plat 7, Lot 1. It does not include the Sewer Plant/ Highway Barn complex. Taylor Point has approximately 4150 feet of shoreline and is designated a Priority 1 Right of Way to the shoreline in the Jamestown Comprehensive Plan. It is divided by manmade features into into five sections, each with distinct vegetation and other characteristics (see Section Map at front of plan). Each section is further divided into subsections based on restoration objectives, as detailed in Annex B (Objectives) and Annex D (Vegetation Management).

a. Potter Cove Beach Section

(1.) Located north of Freebody Drive and east of East Shore Road, from the east end of the Potter Cove (lower) parking lot running west and then north along East Shore Road. It is zoned OS-I Conservation Preserve, described in the Zoning Ordinance as "Intended to preserve, protect, and enhance where appropriate environmentally sensitive and natural resource areas such as conservation areas, watersheds, reservoirs, wildlife refuges, and wetlands."

(2.) Existing Conditions: Gravel parking area with trash can and stairs to beach. Rip-rap installed about 2003 to protect the parking area from erosion by waves is badly deteriorated, and the embankment is eroding toward the parking area at the rate of approximately 1 foot per year. At that rate, the parking area itself should begin eroding about 2030. The beach is home to a community of native (and some non-native) plants, and is used for swimming, shell fishing, kayak launching, and scuba diving instruction. The shallow, muddy bottom makes this a low-quality swimming area. Intensity of use is usually low, although on one unusually busy Sunday in July 2014 35 cars were counted, and 99 people were on the beach. This beach is the finish line for the annual Save-the-

Bay Swim and Freebody Drive is the starting line for the Jamestown Half-Marathon and Newport Bridge Run. Beach users seem to appreciate the lack of regulation and no serious abuse of the area or conflicts among users have been observed.

The vegetated area behind the southwest corner of the beach, northeast of the corner of Freebody Drive and East Shore Road, is partly a phragmites marsh and partly an occasionally-inundated back-beach area of shrubs and small trees, dominated by invasives, primarily rugosa rose, morrow honeysuckle, and black swallowwort. There is also a narrow band of shrubs, some invasive, running north between East Shore Road and the beach. This entire beach will undergo extensive change from sea level rise in coming decades.

b. Taylor Point Cliffs Section

(1.) Located east and north of Bay View Drive, from the northern boundary of the Newport Overlook timeshares north, then west to the east end of the Potter Cove (lower) parking area. Zoned OS-I Conservation Preserve,

(2.) Existing Conditions: Currently includes an asphalt parking area with a badly deteriorated fence, overgrown ornamental vegetation from the 1980's, a badly-eroded path to the cliffs, less-eroded side paths, and considerable litter. There is a narrow view along the pathway from the parking area north to the water. In recent years a port-a-potty has been provided part of the year. Trash cans are located in the parking lot. Vegetation in the wooded areas is a mix of native and invasive trees, shrubs, and vines. Closer to the water the vegetation becomes shrubby and grassy, some native, some invasive, with considerable poison ivy in places. The cliffs and the beach south as far as the bridge are heavily used for fishing, spring through fall. The views are spectacular, and the area may get more visitors once it is restored and made more presentable.

c. Black Cherry Woodland Section

(1.) Bounded on the east by the Sewer Plant - Highway Barn complex fence, on the north by Freebody Drive, on the west by East Shore Road, and on the south by the Newport Bridge. This section also includes a narrow piece of land between Bay View Drive and the Sewer Plant-Highway Barn complex fence. This section, formerly zoned Open Space (OS), is now zoned Public (P), described as "a zone accommodating a range of public and semi-public uses." The Black Cherry trees in this section are currently screening the Sewer Plant and Newport Bridge approach ramp from view from the north. The Town Council can convert this section to another public use at their discretion.

(2.) Existing Conditions: Wooded, mostly with Black Cherry. Many invasive Oriental Bittersweet vines grow into the tops of the cherries, and invasive Morrow

Honeysuckle shrubs dominate the understory. Some native herbaceous plants survive under the honeysuckle. Three or four portions of this area are dominated by grape vines that have smothered much other vegetation; there are no large trees in these areas. There is a small upland wetland along the north side, abutting Freebody Drive. There is already a trail network in this section, which needs some rehabilitation.

d. Bridge Section

(1.) Located east of Bay View Drive, between the southern boundary of the Newport Overlook timeshares and the northern boundary of the Newport Bridge. The outfall pipe from the sewer plant to the East Passage runs under this section and, if it ever needs maintenance, excavation could be necessary. It is partially fenced along Bayview Drive. It is zoned OS-1.

(2.) Existing Conditions: Densely wooded along Bay View Drive, this section is difficult to access, and the slope is moderately steep. A rough, narrow path to the rocky beach, used by fishermen, runs along the southern boundary of this section, next to the fence erected about 2015 by the Bridge Authority. Because of the steepness of the slope and sparse vegetative cover, this path is eroding rapidly.

e. Roadside Meadow Section

(1.) Between the road shoulders mowed by the Highway Department and the woodlands and shrublands of the four sections described above, the TPRA proposes to establish narrow roadside meadows, areas planted with native grasses and forbs (wildflowers), which will be allowed to grow throughout the summer and be mowed once a year. These roadside meadows will help prevent erosion, will filter storm water runoff, provide valuable habitat (especially for pollinators) and provide an attractive transition zone between road shoulder and adjacent woodlands. Width will vary depending on location. Similar meadows of grass and flowers may be established along East Shore Road in cooperation with the RI Turnpike and Bridge Authority, along some footpaths, and along the shoulders of the two parking areas.

(2.) Existing Conditions: Along Town roads, the mowed shoulder grows up to mostly-invasive shrubs which are cut back every few years by the Highway Department; this band of invasive shrubs would be replaced by a roadside meadow. Along East Shore Road, the embankment is regularly mowed; a roadside meadow here would provide greater erosion protection from storm waves. The main path from the upper parking area to the Taylor Point Cliffs provides a view to the water for the public, but invasive shrubs and trees are growing in; a meadow along both sides of this footpath will preserve this view and prevent shrubs and trees from growing into the trail.

10. Vegetation Management

The vegetation at Taylor Point has been undergoing natural succession since farming there was abandoned by the Potter family in the 1870's. Ever since, the vegetation has been slowly changing. First wild herbaceous plants, such as goldenrods, appeared in the abandoned hayfields and pastures. As years went by, woody shrubs appeared, then pioneer species of trees. Today trees and shrubs dominate much of Taylor Point, and the landscape is much less open than it was sixty years ago. Even so, the vegetation is still in the process of natural succession, and the mix of plants growing there will continue to change for many decades until a somewhat stable climax plant community is reached.

But 140 years of "natural succession" has not led to an entirely natural landscape. Over the last few hundred years humans have brought many plants from other continents to Conanicut Island, and today approximately half the vegetation at Taylor Point consists of species not native to Rhode Island. Some of these alien species - the ones we call "invasive" - are extremely aggressive and are out-competing and displacing the native vegetation, leading to an impoverished ecosystem that provides poor habitat for native birds and other animals. (A brief discussion of some of the ecological principles underlying his plan can be found in Section 21 and in Annex K).

The intent of this restoration project is to intervene at the current stage of the natural succession process and remove all the alien (non-native) plant species growing at Taylor Point, allowing the native species already present to flourish. Where plant removal leaves gaps in the vegetative cover, species native to Rhode Island and appropriate to the habitat will be planted. After this intervention, natural succession will be allowed to continue without the influence of alien plants. Annual management to remove new occurrences of alien plants is essential to the long-term success of this plan.

Climate change is likely to alter the mix of native species that can successfully grow at Taylor Point, perhaps necessitating a change in the definition of the phrase "native to Rhode Island." Future management practices will have to accommodate these effects of climate change. For the present, however, plants listed in *Vascular Flora of Rhode Island* as native to Rhode Island are the ones that will be retained at Taylor Point and used for revegetation.

Details on the design process to develop projects eradicating non-native vegetation and replacing with native species are in Annex D. Lists of the plant species found growing at Taylor Point are in Annex T.

11. Shoreline Erosion Control

Taylor Point has over 4000 feet of shoreline, much of which has seen considerable erosion in the past and is susceptible to more during future storms. Sea level rise is a looming threat, with much uncertainty as to how fast it will occur. As of late 2016, the forecast was for between a low of 2 feet and a high of 11.5 feet of sea level rise by 2100. The intent of this plan is to protect the shoreline for as long as possible using erosion-resistant vegetation and perhaps some soft protection, such as coir logs. Eventually sea level rise is likely to require hardened protection along parts of the shoreline, but that is beyond the scope of this plan. The embankment of East Shore Road and the parking area along Freebody Drive appear to be the most vulnerable to erosion by storm waves and sea level rise. Along the east side of the Taylor Point Cliffs Section and the Bridge Section, the low earth bluffs are eroding in storms and no practical solution is apparent.

12. Public Access - Footpath Rehabilitation and Maintenance

Existing footpaths, many unmaintained, overgrown, and eroded, provide access to the shore and into the Black Cherry Woodland. Most footpaths require rehabilitation and installation of erosion control measures. All trails will need continuing maintenance on an annual basis. CRMC requires a design stamped by a professional engineer before issuing a permit for footpath rehabilitation. TPRA intends to undertake this work within the first few years of the project.

Consideration will be given to upgrading some of the footpaths to meet accepted accessibility guidelines, provided the terrain allows.

Most existing footpaths will be repaired and maintained. The exceptions are: In the Potter Cove Beach Section, a short path from the east end of the parking area to the rip-rap will be abandoned or re-located. In the Taylor Point Cliffs Section, the westernmost footpath will be abandoned and eroded soil repaired and re-vegetated. In the Bridge Section, the existing footpath from Bay Shore Drive to the shore is too steep to be maintained; a replacement footpath will be constructed. Finally, a new footpath, requiring signs but little construction, is planned from the Black Cherry Woodland to the Conanicut Island Sanctuary.

In keeping with Taylor Point's designation and function as a nature preserve, only those currently established footpaths that people use to get to points of interest - primarily the shoreline - will be maintained. Construction of any paths other than those listed in Annex E will be avoided unless there is a clear need (usually demonstrated by "herd paths" created by human use). Footpaths invite human (and animal) traffic, which disturbs nesting birds and other wildlife. Footpaths can also disturb the soil and reduce

natural shade, thus encouraging the growth of sun-loving, often invasive, vegetation that thrives in disturbed sites. With only the minimum necessary footpaths, Taylor Point can both accommodate the desires of human visitors and function as a healthy preserve for native plants and animals

Annex E includes two maps showing existing footpaths, data on each footpath, design guidance for footpath rehabilitation, and Federal Accessibility Guidelines.

13. Public Views

Old time Jamestowners remember the broad Taylor Point vistas from the 1940's and 50's, when the land was covered with grasses and low shrubs. From most vantage points one could see far up the Bay and across to Acquidneck Island, with the Navy's destroyer fleet prominent at their nearby moorings. In the intervening decades trees, both native and alien, have grown up and obscured these broad vistas. Today, Taylor Point is still a spectacular site, but except from the shoreline, there are only three remaining good public vantage points of the Bay.

In accordance with Section 330 of the Coastal Resources Management Program, it is the intent of this plan to preserve the view from these three vantage points from any further degradation, and, through removal of invasive vegetation, to restore those parts of the views that have started to become obstructed within the last twenty-five years.

The first of these vantage points is from East Shore Road and RI Route 138 at the Newport Bridge toll plaza. East of these roads is a wide vista of Potters Cove and the East Passage, enjoyed by thousands of motorists daily. Several mature Autumn Olive shrubs and about twenty young Black Locust trees (both invasive species) are beginning to obstruct this vista. These will be removed and replaced with low native vegetation. Native Staghorn Sumac at the north end and Red Cedar at the south end will remain, but their spread will be controlled so they do not obstruct the view more than they do now.

The second broad vista is from the Potter Cove Beach parking area along Freebody Drive, looking up the East Passage to the north. The narrow fringe of mostly-low vegetation between the parking area and the shoreline embankment is eroding at about one foot per year, and will be gone within ten or fifteen years. However, in the short term, tall species of invasive vegetation (including Autumn Olive, Gray Willow, and Multiflora Rose) and native vegetation (Black Oak) that block the view will be trimmed or removed and replaced with low-growing species.

The third vantage point is from the (upper) Taylor Point Cliffs parking area along Bay View Drive. It consists of a thirty to forty foot wide field of view looking straight north up the Bay, with a glimpse of Gould Island to the right. This view, with the footpath to the

cliffs running through it's center, is enough to entice the curious from their cars, and as they walk along the footpath toward the cliffs, the view slowly broadens, until they near the cliff edge and a magnificent 180 degree view of the Bay opens before them. It can be a dramatic experience for those who do not often get to enjoy such water views. In conjunction with the rehabilitation of this footpath, young invasive vegetation will be removed from either side of the path for a distance of ten or fifteen feet and replaced with a pollinator meadow of native grasses and wildflowers. A few overhanging limbs of Black Cherry trees may have to be trimmed as well.

14. Signage

At the present time there are no signs identifying Taylor Point or establishing any rules for it's use. Visitors see it as simply a free, unregulated area that they can use any way they like. In spite of this, there is little serious abuse; excessive litter is the major problem. Unnecessary regulation will be avoided, but some signage is proposed as part of this plan. A common color and graphic pattern for the signs will be developed. Some of the signage needed is listed below, other requirements will become apparent as the restoration project progresses.

- a. An information kiosk is proposed near each parking area, which identifies the "Taylor Point Nature Preserve" as being the property of the Town of Jamestown. It will include maps of the preserve, including trails; a description of the Restoration Project; some text and graphics interpreting the natural and cultural history of Taylor Point; any necessary rules, phrased to encourage cooperation; and other educational information.
- b. Footpath signs: Trail markers, directions signs, "You are Here" maps, directional signs to and from Conanicut Island Sanctuary.
- c. Litter-related signs.
- d. Restoration project-related signs, such as "Re-vegetation area, Please keep out" and signs required by CRMC showing permit numbers authorizing the restoration work.

15. Outhouses

In recent years the Town Recreation Department has placed a portable toilet at the (upper) Taylor Point Cliffs parking area in the spring and removed it in the fall. In the future, this portable toilet should be in place from May 1 to October 15 to cover the full fishing season, when this area is the busiest. Judging from toilet paper, many Taylor Point users seem to prefer using the nearby bushes rather than walk back to the

portable toilet at the parking area. Means to encourage better sanitary practices (perhaps a better location for the toilet) will be evaluated.

A portable toilet should also be placed at the (lower) Potter Cove Beach parking area to accommodate the increasing number of beach users from May 15 through September 15. With no toilet facilities available, they too use the woods and bushes.

The TPRA, in conjunction with the Town Recreation Department, will, as part of design work for vegetation in the vicinity of these parking areas, develop vegetative screening plans for the portable toilet locations. Longer term, TPRA, along with the Recreation Department, will evaluate the advantages of installing permanent outhouses.

16. Trash Management

Litter is significant problem, particularly at Taylor Point Cliffs and the Bridge Section. After a busy weekend, quantities of bottles, cans, food containers, and tangled fishing line can be found in the brush immediately inland from the cliffs and beaches. The TPRA will work with the Town Recreation Department to develop solutions, which may include signs, education, a “carry-in, carry-out” policy, more frequent litter patrols, and perhaps better locations for trash receptacles.

17. Parking

Parking is adequate for the number of people who visit Taylor Point. When parking areas are near or at capacity, there are approximately one hundred people on Potter Cove Beach, which at high tide is a very narrow beach indeed. Fishermen, many with families, fill Taylor Point Cliffs and the beaches along the East Passage to a comfortable capacity.

There appears to be a good balance between parking availability and the capacity of Taylor Point to accommodate visitors without damage to the resource. A careful analysis of the capacity of Taylor Point should be conducted before consideration is given to additional parking.

Visitors park in three locations to access Taylor Point:

Along East Shore Road, on the right side of the northbound lane. The pavement is wide enough that this does not cause a safety risk. There is room for twenty or thirty cars to park along the road, but that many cars are seldom if ever parked there.

Along Freebody Drive is the lower or Potter Cove Beach Parking Area. It accommodates about twenty-two cars and has a gravel surface that is periodically maintained by the Highway Department. In recent years the parking area fills on busy weekends and a few cars park on the shoulder of Freebody Drive - usually not more than five or six cars. There is usually unused space along East Shore Road at these times. This parking area could begin eroding within fifteen years if the rip-rap along the north embankment is not repaired.

The upper or Taylor Point Cliffs Parking Area is at the north end of Bay View Drive. It is paved and has a capacity of about twenty-two cars. It is frequently full when the fishing is good, but parking seldom overflows onto Bay View Drive. This parking area is used for the cliffs, the rocky beach along the East Passage, and the small beach at the east end of the Bridge Section.

18. Wetlands

There are two wetlands at Taylor Point. One is a small inland wetland at the north side of the Black Cherry Woodland-West Subsection, along the south side of Freebody Drive. It is north and west of the culvert running under Freebody Drive, and was apparently created by the construction of Freebody Drive about 1979. On the north side of Freebody Drive the Phragmites Marsh Subsection of Potter Cove Beach is a coastal wetland.

Restoration work in either of these wetlands will require a wetlands permit from CRMC in addition to the Buffer Zone Management Permit(s) required for restoration work anywhere at Taylor Point.

Applied Bio-Systems Inc assessed the wetlands during 2016. Their interim report, dated November 28, 2016, with associated maps and photographs, is in Annex F. Applied Bio-Systems will finalize the report in conjunction with our application to CRMC for a wetlands permit.

19. Long-term Management and Maintenance

As restoration work is accomplished it is essential that it be maintained to prevent Taylor Point from reverting to its present degraded condition. Maintenance will generally begin the year after the work is accomplished, and continue indefinitely. As the project progresses, more and more time will have to be devoted to maintaining work

done in previous years, and less and less time will be available for initial restoration work.

Keeping invasive (and other alien vegetation) from returning to restored areas will require vigilance, especially in the first few years until the native plants become well established. Footpaths will need maintenance, new native plantings will need watering, signs will need replacement, and trash will need continuing attention.

Maintenance and management will begin with keeping careful records of the restoration work that is initially accomplished, and developing a schedule to periodically evaluate restored areas for maintenance needs, then to promptly commit the resources to perform the needed maintenance. As experience is gained in the first few years a maintenance manual will be developed documenting the initial restoration effort and the standards to which each part of the project (each of the fifty one measurable objectives) should be maintained.

It is important to remember that “maintenance” does not necessarily mean keeping things the same as they were when first restored. For vegetation, the initial restoration will remove all the invasive vegetation and fill the empty spaces with native plants. Follow-on maintenance will involve removing any alien species that more back in, but natural succession of native species will be allowed to progress as nature sees fit. As some native species die out and are replaced with other native species, maintenance efforts will not interfere (with some limited exceptions).

Contingency plans to deal rapidly with storm damage, and the flexibility needed to deal with the uncertainties of sea-level rise will be incorporated into the maintenance manual.

It is intended that the maintenance work will be accomplished indefinitely by a corps of volunteers from the TPRA, with some help from contractors or Town departments when the work is beyond the capability of volunteers. Some functions, such as trash pick-up and portable toilet rental, will be primarily a Town responsibility.

Post-restoration maintenance work will be included in all permit applications to CRMC.

Some approaches to development of the maintenance plan are in Annex G, but the structure and content of the plan will be developed as the restoration project progresses and experience is gained.

20. Long-range Project Schedule

For initial planning purposes, we are projecting the restoration project will take ten years to complete. The actual time required to complete the restoration will depend on availability of volunteers, the success raising funds, and the management capability of

the volunteer Taylor Point Restoration Association. A projected work plan for the project is in Annex J. Only complete through 2018 at this time, it will be updated as the project progresses, with the intent to schedule projects three to four years ahead.

21. Native Plants and Biodiversity

One goal of this project is to eliminate all the non-native plants growing at Taylor Point so that by 2027 only plants that are native to Rhode Island grow there. Why? Because native plants provide the foundation for a healthy ecosystem. Our native plants, animals, and soil microbes evolved together over hundreds of thousands of years, developing a complex interdependence, adapting to, competing with, and supporting each other, developing a food chain, and creating an ever-shifting state of rough equilibrium. In the last five hundred years - a brief moment on the evolutionary time scale - humans have introduced many new plants (and animals) into what was a fairly stable ecosystem, and we have changed that ecosystem drastically so that it is functioning less and less well.

These plants introduced from elsewhere are termed **alien**. Some of them have become particularly aggressive, moving into natural, undisturbed areas and displacing native Rhode Island species; these are called **invasive**. These invasive species can displace native species in a relatively short time, resulting in an area that may look green and healthy, but is actually close to sterile biologically, unable to support the native animal and plant life that once lived there.

Biodiversity can be thought of as the totality of a diverse community of interdependent native plants, animals and microbes. Aliens may appear to add to the total count of species, but in fact they reduce biodiversity. Native insects usually cannot feed on alien plants and disappear; the aliens often secrete chemicals that inhibit native plants; and all too soon, they reduce, then displace native species entirely, until the once-native ecosystem of plants and animals that relied on each other no longer exists.

Annex K contains a more detailed discussion of this topic.

22. Legal Foundation

The project goals, including “restoring with native vegetation,” “improving shoreline access,” and “maintaining and improving views” are well supported by various constitutional, legal, program, policy, and regulatory documents. Pertinent extracts from some of these supporting documents are found in Annex L.

23. History of Taylor Point

The original colonial owner of Taylor Point, in 1658, was Benedict Arnold. His descendants passed the land (perhaps with an intermediate owner) to Andrew Freebody, who leased the farm to Peleg Potter then gave it to the son Andrew Potter. After the last Potters died in 1874 the farm apparently lay abandoned for twenty-six years, then in 1900 was subdivided into house lots that did not sell. In 1954 the Town took 54 acres for unpaid taxes. The subsequent court case granted title to the Town in 1965, just in time for the State of Rhode Island to take some thirty acres for construction of the Newport Bridge. Since then the Town has built the sewer plant and highway barn, Freebody Drive, and two parking areas for visitors.

In Annex H is a brief history of Taylor Point and some historical maps and air photos. Research on the history of Taylor Point continues, and will be published in the indefinite future. Historical aspects of Taylor Point will be incorporated into future interpretive signage.

24. Education and Community Engagement

The long-term success of this project relies on the support of the community, and to gain and keep that support the community must be informed of and involved in the project. The project must be one that town's residents, the Town Council, and the Town staff can support, and they all must be kept informed of what to expect, before it happens; nobody likes surprises. Press releases, social media, periodic reports, guided walks, informational signs, and collaboration with the schools are all approaches that will be taken. Inviting people to become actively involved as volunteers is essential to developing a base of support. The diverse community of users of Taylor Point, largely fishermen and women and beachgoers, many not island residents, will be encouraged to support the restoration project, and invited to get involved.

Taylor Point Restoration Association will expand the collaboration with off-island groups that we have already started to develop. The Friends of Canonchet Farm, implementing a similar project in Narragansett, has been extremely helpful. In the fall of 2015 URI Professor Laura Meyerson used the restoration of Taylor Point as the semester project for her Restoration Ecology class. We are pursuing an affiliation with the URI Master Gardener program which will gain us experienced volunteers and leaders from both on and off the Island, along with a great deal of added expertise. The Rhode Island Natural History Survey continues to be a valuable resource for the project, and their Rhody Native plants are expected to be a primary source for our revegetation efforts.

These programs and partnerships, still largely immature, will be developed over the first few years of the project and will be documented and incorporated as Annex J, Education and Community Engagement, to this plan.

25. Getting the Work Done and Supporting Volunteers

The work will be accomplished by a combination of volunteers, contracted professionals, and, for work requiring specialized equipment or expertise, a limited amount of help from the Departments of Public Works and Recreation. Funds will be raised by the TPRA through grants and occasional requests for local donations.

The intent is to accomplish the project with minimal use of Town funds. The Town will continue to fund the rental of portable toilets and trash pick-up. Occasional assistance from Public Works will be needed with cutting large trees, limb chipping, and some limited earthmoving. The Town will be asked to donate some materials, such as gravel, and some services, such as copying and GPS assistance. Some large projects, such as rip-rap replacement along Freebody Drive, will be a Town responsibility. Town assistance may be needed to prepare CRMC permit applications.

Grants will be sought to fund work by contractors.

The Rhode Island Bridge and Turnpike Authority has indicated a willingness to help with this project. Once this plan is approved we will coordinate with them to determine the tasks they are best equipped to work with us on. We hope to collaborate with them on work along the property lines, especially on the East Shore Road Embankment.

Most of the work will be done by volunteers organized by the TPRA. If this restoration project is to have the support of the Town's residents, they need to have hands-on involvement. To be successful, the TPRA must provide meaningful and satisfying work, attainable objectives, good organization and leadership, camaraderie on the job, the right tools and supplies, and recognition for volunteers' contributions. Annex N, Volunteer Support, identifies the need for a dedicated volunteer support team and outlines its duties. TPRA wants to get the most out of our volunteers, and we want the volunteers to get the maximum satisfaction out of the project.

26. References and Resources

The Taylor Point Restoration Association has consulted various reference materials during the preparation of this plan, and found many useful resources. They are summarized in Annex R.

27. Safety

Safety consciousness is essential with a volunteer work force. Annex S, Safety, describes measures that will be taken to provide a safe work environment, and proper response in case of accident. All project and team leaders, as well as the Volunteer Support Team, will be aware of, and implement, the contents of Annex S.

28. Amendments

All amendments and changes to this plan will be recorded in Annex U, Log of Restoration Plan Amendments. Significant changes will be presented to the Town Administrator or the Town Council for approval before being implemented. Minor changes will be recorded and presented to the Town Administrator or Town Council during periodic progress reports.

Annexes

Annex A: Goals

Restoration Goals: On March 2, 2015 the Jamestown Town Council approved the following 6-point Concept, which now expresses the goals of the project and serves as the foundation document for the Taylor Point Restoration Plan:

Concept for the Taylor Point Natural Area Restoration Project For approval by the Jamestown Town Council on March 2, 2015

Concept: Create and maintain a Taylor Point Natural Area that prioritizes habitat protection and improvement while accommodating public access to the shore at this Town-designated Priority 1 Right-of-Way.

1. Restore the Taylor Point habitat with native species that will maximize the ecological value of the 20± acres of undeveloped land at Taylor Point. Remove all non-native vegetation, nurture existing native species, and plant new natives where needed.
2. Improve the existing degraded footpaths to provide:
 - (a) Safe, convenient, and erosion-resistant access to the shoreline, the most popular destination,
 - (b) A network of footpaths within the Taylor Point Natural Area,
 - (c) A connecting pedestrian route to the nearby Conanicut Island Sanctuary, and
 - (d) Handicap access where feasible.
3. Incorporate shoreline erosion control into the design, using vegetation to avoid or delay the need for structural erosion-control features such as riprap. Plant vegetation in depth to provide long-term stabilization of the shoreline as sea level rises.
4. Maintain, and in places improve, existing views of the Bay.
5. Provide the minimum essential necessities to mitigate the impact of humans on the natural environment - trash receptacles, outhouses, parking, and signage.
6. Plan for reliable long-term management and maintenance.

Annex B: Objectives

Restoration Plan Objectives: The fifty distinct objectives by which progress will be measured are listed below. Subsections referred to are shown on the attached map. Details of each objective are found in the referenced Annex or Plan section.

1. Vegetation Management, Potter Cove Beach Section (see Annex D, Tab D-1)
 - 1a. Potter Cove Beach, North Beach Subsection
 - 1b. Potter Cove Beach, Lower Beach Subsection
 - 1c. Potter Cove Beach, Upper Beach Subsection
 - 1d. Potter Cove Beach, Phragmites Marsh Subsection
 - 1e. Potter Cove Beach, Wooded Swamp Subsection
 - 1f. Potter Cove Beach, Back Beach Subsection
 - 1g. Potter Cove Beach, Parking Area Subsection
2. Vegetation Management, Taylor Point Cliffs Section (see Annex D, Tab D-2)
 - 2a. Taylor Point Cliffs, West Woods Subsection
 - 2b. Taylor Point Cliffs, Cliffside Subsection
 - 2c. Taylor Point Cliffs, Northwest Shrubland
 - 2d. Taylor Point Cliffs, Successional Field Subsection
 - 2e. Taylor Point Cliffs, Public Access Subsection
 - 2f. Taylor Point Cliffs, Upper Parking Area Subsection
 - 2g. Taylor Point Cliffs, East Woods Subsection
 - 2h. Taylor Point Cliffs, Southeast Shrubland Subsection
3. Vegetation Management, Black Cherry Woodland Section (see Annex D, Tab D-3)
 - 3a. Black Cherry Woodland, West Subsection
 - 3b. Black Cherry Woodland, East Subsection
 - 3c. Black Cherry Woodland, Thickets Subsection
 - 3d. Black Cherry Woodland, Bay View Dr. Subsection
4. Vegetation Management, Bridge Section (see Annex D, Tab D-4)
 - 4a. Bridge Section, Upland Subsection
 - 4b. Bridge Section, Beach Subsection
5. Vegetation Management, Roadside Section (see Annex D, Tab D-5)
 - 5a. Roadside Section, East Shore Road Subsection
 - 5b. Roadside Section, Freebody Drive Subsection
 - 5c. Roadside Section, Bay View Drive Subsection
 - 5d. Roadside Section, Black Cherry Woodland Trailside Subsection
6. Shoreline erosion control (see Plan Section 11)

7. Public Access - Footpath Rehabilitation (see Annex E)
 - 7a. Footpaths to Potter Cove Beach from East Shore Road
 - 7b. Stairway from Lower Parking Area to Potter Cove Beach
 - 7c. Main Footpath to Taylor Point Cliffs
 - 7d. West Footpaths to Taylor Point Cliffs
 - 7e. East Footpaths to Taylor Point Cliffs
 - 7f. New Footpath, Lower Parking to Taylor Point Cliffs
 - 7g. Old Cart Path, Black Cherry Woodland
 - 7h. Blake Footpath, Black Cherry Woodland
 - 7i. Bridge Section Footpath(s)
 - 7j. Connecting Footpath, Black Cherry Woodland to Conanicut Island Sanctuary

8. Public Views (see Plan Section 13)
 - 8a. East Shore Road Public View
 - 8b. Freebody Drive Public View
 - 8c. Taylor Point Cliffs Public View

9. Signage (see Plan Section 14)
 - 9a. Kiosk, Potter Cove Beach
 - 9b. Kiosk, Taylor Point Cliffs
 - 9c. Trail Signs
 - 9d. Regulatory Signs
 - 9e. Interpretive Signs
 - 9f. Caution Signs

10. Outhouses (see Plan Section 15)
 - 10a. Potter Cove Beach
 - 10b. Taylor Point Cliffs

11. Trash Management (See Plan Section 16)

12. Develop and implement a Long-term Management and Maintenance Plan (see Plan Section 19 and Annex G)

13. Develop and implement an Education and Community Engagement Program (See Section 24 and Annex M)

Annex C: Timeline

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
PLANNING	■															
DESIGN			■													
PERMITTING			■													
IMPLEMENTATION			■													
MAINTENANCE			MAINTENANCE CONTINUES INDEFINITELY													

Taylor Point Restoration Project Timeline

The Taylor Point Restoration Project is expected to take approximately ten years to complete. Maintenance will continue indefinitely. This timeline shows the expected timeframe for the accomplishment of the five project phases.

Annex D: Vegetation Management

Taylor Point is divided by manmade features into five sections, each with distinct vegetation and other characteristics (see Section Map at front of plan). Each section is further divided into numbered subsections based on common vegetation, soil, and drainage features as shown in the Subsection Map immediately behind this page. There are a total of 25 subsections. The subsection numbers on the map are the same as the restoration objective numbers listed in Annex B. Vegetation Management (that is, eradication of alien plants and replacement with native species) in each numbered subsection coincides with a separate numbered objective

The 25 Subsection Plans contained in Tabs B-1 through B-5, below, are intended to serve as templates for the detailed vegetation design of each subsection during the design phase. They are intentionally incomplete and will be completed as detailed design is accomplished.

The Taylor Point Subsection Map is a part of this Annex and is found immediately behind this page.

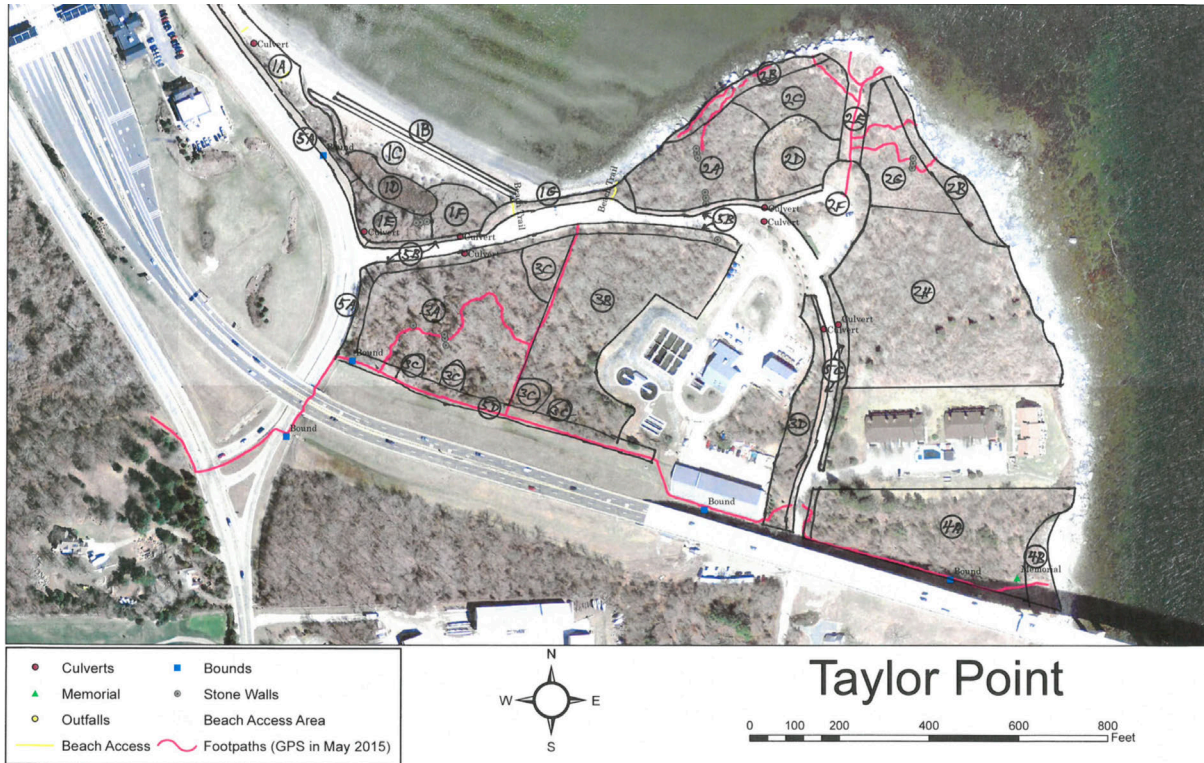
This Annex contains the following numbered Tabs. Tabs D-1 through D-5 contain the Subsection Plans for their Section.

- Tab D-1: Potter Cove Beach Section - Vegetation Management
- Tab D-2: Taylor Point Cliffs Section - Vegetation Management
- Tab D-3: Black Cherry Woodland Section - Vegetation Management
- Tab D-4: Bridge Section - Vegetation Management
- Tab D-5: Roadside Section - Vegetation Management
- Tab D-6: Re-vegetation

Taylor Point volunteers, with the help of consultants, will research and document methods and techniques to (1) eradicate invasive plants and (2) re-vegetate with native plants at Taylor Point. The resulting documentation will guide the TPRA in accomplishing the vegetation management goals of this plan.

Nearly all the oak trees at and near Taylor Point are invasive English Oaks. They are growing throughout Taylor Point, except on the beach. Most are small, less than 6" diameter, and thus quite young; the largest is about 18 inches in diameter, perhaps 60 years old. This suggests that they are fairly recent invaders at Taylor Point. In most of Rhode Island, native oaks (Black, Red, Scarlet, and White) displace Black Cherry trees over time, but near the shore Black Cherry can persist much longer than usual. With no native acorns being produced at Taylor Point, it is not known if native oaks would displace the Black Cherries in this location as the invasive English Oaks seem to be

doing. TPRA intends to eradicate the English Oaks, plant native oaks as street trees along Bay View and Freebody Drives to produce acorns, and let nature decide if the Taylor Point woodlands and shrublands will succeed to native oak forest eventually, as happens elsewhere in Rhode Island, or if Black Cherry will persist as the dominant tree at Taylor Point



Tab D-1: Potter Cove Beach Section

The Potter Cove Beach Section has seven (7) subsections, most of which are distinctly differentiated by their vegetation and soils. See subsection map.

Sea level rise will have an increasing effect on this entire section, and will eventually inundate it completely, first at the highest tides, then for longer and longer periods of time. As forecasts of the rate of sea level rise becomes more accurate, we may have to change our proposed restoration and management approach. Anything we do here will be in some sense temporary, but at this time temporary could be anywhere from 30 years to 200 years. Restoration of this area will profit from innovative and flexible thinking.

1a. North Beach : The narrow northern panhandle of the beach, where the distinctive features of the six subsections described below are mixed and compressed into an increasingly narrow band of vegetation. The subsection is immediately east of East Shore Road embankment. Adjacent to the 400-foot long rip-rap, there is practically no vegetation. There are several culverts draining the toll plaza and East Shore Road onto this subsection.

1b. Lower Beach : A narrow band of vegetation, about 10 feet wide, just above the high tide line, with a limited number of species. Sea Rocket, Common Saltwort, and Beach Clotbur define this sub-section, and grow mixed with non-native Lambs Quarters and Wild Radish.

1c. Upper Beach : Separated from the Lower Beach by about six feet of sparsely vegetated (mostly Wild Radish) sand, the upper beach vegetation grows on wave-deposited sand and broken shale, on a shelf 6 to 12 inches higher than the lower beach. This subsection varies in depth from 25 to 70(?) feet, and supports a wider variety of vegetation than the lower beach. Dominant species are Rugosa Rose, Beach Grass, Morrow Honeysuckle Phragmites and Black Swallowwort are moving into the inland side of this sub-section from the Phragmites Marsh.

1d. Phragmites Marsh: The area inland of the Upper Beach dominated by Phragmites, immediately west of the Back Beach subsection. This area is a lower than the upper beach and does not have an obvious layer of wave-deposited sand. It In the 1980s this was reportedly a cattail marsh. Dominant species are now Phragmites, Black Swallowwort, Poison Ivy, and Wild Radish.

1e. Wooded Swamp: Inland of the Phragmites Marsh, bounded on the south and west by road embankments. A culvert emptying into the southwest corner conveys large quantities of rainwater into the swamp from East Shore Road, along with deposits of road sand and trash. This subsection is dominated by Red Maple,

Quaking Aspen, and invasive Gray Willow. It also contains an interesting variety of wetland shrubs and herbaceous vegetation not found elsewhere at Taylor Point, including Swamp (Silky) Dogwood. Phragmites and Poison Ivy are intruding from the Phragmites Marsh subsection to the north, and Morrow Honeysuckle from the Back Beach to the east.

1f. Back Beach: The area inland of the Upper Beach that is not dominated by Phragmites. This area is a lower than the upper beach and does not have an obvious layer of wave-deposited sand. The vegetation is distinctly different. The dominant species are Morrow Honeysuckle and Poison Ivy.

1g. Parking Area: The subsection encompasses the vegetation immediately north of the lower parking area on the north side of Freebody Drive. All is land filled for road construction about 1980. This vegetation will likely be destroyed when the rip-rap is repaired in the indefinite future, and total re-vegetation will be required there.

Sequence of Work:

The entire Potter Cove Beach Section (except the parking area) is subject to inundation during storms. The beaches, especially the northeast-facing beach, are subject to strong wave action in northeast storms. Areas of sand overwash immediately north of the Phragmites Marsh and Back Beach subsections are obvious. Future storms will inevitably extend the overwash farther into these subsections. To help control this, it will be important to plan removal of invasives and re-vegetation on the beach so that large areas of sand are not left without erosion-inhibiting vegetation at any time.

The Black Swallowwort growing in and near the Phragmites Marsh subsection produces copious seed each fall. Since it seems to germinate only in sunny areas, it might be wise to not remove vegetation from other sub-sections until the black swallowwort is controlled enough to not produce seed.

Following are design outlines for each of these subsections, to be used as templates to guide design and permit application.

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1a, North Beach

Description: The narrow northern panhandle of the beach, where the distinctive features of the six subsections described below are mixed and compressed into an increasingly narrow band of vegetation. The subsection is immediately east of East Shore Road embankment. Adjacent to the 400-foot long rip-rap, there is practically no vegetation. There are several culverts draining the toll plaza and East Shore Road onto this subsection. This subsection merges into the adjacent Road Embankment Subsection throughout. The two subsections should be managed together.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Seaside Goldenrod (C)(p)

Evening Primrose

Poison Ivy (P)

Beach Grass (C)(p)

Wild (Virginia) Rose (P)

Staghorn Sumac (P)

Hedge Bindweed(P)(p) (listed as both Native and Alien)

Sweet Everlasting (P)(p)

Existing Non-native Species:

Rugosa Rose (C) - Invasive

Black Swallowwort (P)(p)-Invasive

Wild Radish (VC)(a)

Lambs Quarters (C)(p)

(more thorough inventory needed)

Management: Where vegetation zones are distinct, manage as for Lower Beach, Upper Beach, and Back Beach Subsections, below. Pull or cut non-natives, treating stumps with herbicide if required, concentrating on invasives (and selected Poison Ivy) first. Revegetate. Do work in stages so beach is not left open to erosion.

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

RIBTA?:

Estimated Expense:

Replacement Vegetation Needed:

Virginia Rose

Beach Grass

Density of Revegetation Species:

Long-term Maintenance:

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1b, Lower Beach

Description: A narrow band of vegetation, about 10 feet wide, just above the high tide line, with a limited number of species, some that grow only within this habitat. Appears to grow on a layer of sand deposited each winter over a layer of washed-up eelgrass.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Sea Rocket (VC)(a)

Common Saltwort (C)(a)

Beach Clotbur (P)(a)

Orache(P) (species to be identified)

Existing Non-native Species:

Wild Radish (VC)(a)

Lambs Quarters (C)(p)

Spearscale Orache(P) (species to be identified)

Management: Pull non-native species, allow native species to grow. This is low-priority, to be done toward the end of the project.

Trees over 6" Diameter to be removed: None

Estimated Work Effort:

Volunteer: 6 person-hours twice per year

Contractor: 0

Town DPW: 0

Estimated Expense: None

Replacement Vegetation needed: None

Density of Revegetation Species:

Long-term Maintenance: Repeat pulling of non-natives once or twice annually as required.

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1c, Upper Beach

Description: Separated from the Lower Beach by about six feet of sparsely vegetated (mostly with Wild Radish) sand, the upper beach vegetation grows on wave-deposited sand and broken shale, on a shelf 6 to 12 inches higher than the lower beach. This subsection varies in depth from 25 to 70(approx) feet, and supports a wider variety of vegetation than the lower beach. Dominant species are Rugosa Rose, Beach Grass, Salt-hay Grass, and Morrow Honeysuckle. Phragmites and Black Swallowwort are moving into the inland side of this sub-section from the Phragmites Marsh.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Seaside Goldenrod (C)(p)

Evening Primrose

Poison Ivy (P)

Beach Grass (C)(p)

Salt-hay Grass (P)(p)

Wild (Virginia) Rose (P)

Staghorn Sumac (P)

Hedge Bindweed(P)(p) (listed as both Native and Alien)

Sweet Everlasting (P)(p)

Existing Non-native Species:

Rugosa Rose (C)-Invasive

Morrow Honeysuckle (P)-Invasive

Cypress Spurge (P)(p)

Black Swallowwort (P)(p)-Invasive

Phragmites (P)(p)-Invasive

Horn Poppy (P)(b)

White Sweet Clover (U)(a+b)

Wild Radish (U)(a)

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Do work in stages so beach is not left open to erosion.

Trees over 6" Diameter to be removed: None

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

Estimated Expense:

Replacement Vegetation needed:

Wild (Virginia) Rose

Beach Grass

Density of Revegetation Species:

Long-term Maintenance:

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1d, Phragmites Marsh

Description: The area inland of the Upper Beach dominated by Phragmites, immediately west of the Back Beach subsection. Receives fresh water from an 18" culvert draining East Shore Road and a 12" culvert from the Black Cherry Woodland. Often has standing water in winter; in summer, standing water only after heavy rain. Heavy rain cuts a drainage channel through the beach to Potter Cove, which fills in with a few tides. Salt water inundation only in heavy storm, but with approx 12" of sea level rise will be inundated at highest tides (twice a month) and with 24" of sea level rise will be inundated at every high tide. Approximately 0.5 acres.

Size (square feet or acres):

Wetlands:

Existing Native Species:

Poison Ivy (Very Common)

??Maritime Orache (Common)

Swamp Rose Mallow (Uncommon)(perennial)

Swamp Milkweed (Uncommon)(perennial)

Existing Non-native Species:

Phragmites (Very Common)(perennial)-Invasive

Black Swallowwort (Very Common)(perennial)-Invasive

Wild Radish (Common)(annual)

??Spearscale Orache (Uncommon)

Management: Management and revegetation to be determined during design stage. It may be advisable to eradicate the Black Swallowwort first, so the seeds do not spread to newly-cleared areas. NOTE: The phragmites extends into the adjacent Upper Beach Subsection (1c) and Wooded Swamp Subsection (1e), and should be eliminated in these subsections at the same time.

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

Estimated Expense:

Replacement Vegetation needed:

Since this area is only inundated after a heavy rain during the growing season, once cleared of Phragmites it might support a shrub community. Determine what is appropriate for the soil and moisture; perhaps the same species as grow in the Back Beach subsection? Otherwise, native wetland grasses may be more appropriate for re-vegetation.

Shadbush

Beach Plum

Elderberry

Swamp Dogwood

Calmy Azalea (Swamp Honeysuckle)

Sumac

Spicebush

Bayberry

Long-term Maintenance: Weed out emerging Phragmites and other invasives annually until new plant community is well established.

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1e, Wooded Swamp

Description: A small sub-section inland (south) of the Phragmites Marsh, bounded on the south and west by road embankments. It is dominated by Red Maple and Quaking Aspen, but also contains an interesting variety of wetland shrubs and herbaceous vegetation not found elsewhere at Taylor Point. Phragmites and Poison Ivy are intruding from the Marsh subsection to the north, and Morrow Honeysuckle from the Back Beach to the east.

Size (square feet or acres):

Wetlands:

Existing Native Species:

Red Maple (VC)
Quaking Aspen(C)
Sumac(P)
Swamp Dogwood (P)
Arrowwood (P)
Smooth Gooseberry (U-4)
Fox Grape (VC)
Virginia Rose
Poison Ivy (moving in from Phragmites Marsh on north)
Jack-in-the-Pulpit (P)(p)
Marsh Skullcap (P)(p)
Water Horehound (P)(p)
Clayton's Bedstraw (P)(p)
False Nettle (P)(p)
White Avens (P)(p)
Jewelweed(P)(a)
Swamp Rose Mallow (P)(p)
Swamp Milkweed (P)(p)
Common Dodder (P)(a+p)

Existing Non-native Species:

Gray Willow (C)-Invasive
Phragmites (P)(p)-Invasive, moving in from Phragmites Marsh on north
Bull Thistle (U-1)
Morrow and Pretty Honeysuckle (P)

Management: Eliminate Gray Willow , Phragmites, and Poison Ivy. Revegetate with native trees or shrubs where Gray Willow removed to maintain shade-tolerant species growing here. Cut back Fox Grape smothering native shrubs. Remove honeysuckle.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

Estimated Expense:

Replacement Vegetation needed:

Buttonbush?

Swamp Dogwood?

Density of Revegetation Species:

Long-term Maintenance:

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1f, Back Beach

Description: The area inland of the Upper Beach that is not dominated by Phragmites, immediately east of the Phragmites Marsh Subsection and a few inches higher. This area is lower than the upper beach and does not have an obvious layer of wave-deposited sand. The vegetation is distinctly different. The dominant species are Morrow Honeysuckle and poison Ivy.

****Size** (square feet or acres):

****Wetlands:** There are no wetlands in this subsection.

Existing Native Species:

Poison Ivy (VC)
One-flowered Cancerroot (U)(a)
Blunt-leaved Sandwort (U)(p)
(probably more - need a better inventory)

Existing Non-native Species:

Morrow Honeysuckle (VC)
Pretty Honeysuckle (P)
(probably more- need a better inventory)

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Do work in stages so subsection is not left open to erosion.

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:
Contractor:
Town DPW:

Estimated Expense:

Replacement Vegetation needed:

Possible replacement vegetation:
Shadbush
Elderberry
Swamp Dogwood
Calmy Azalea (Swamp Honeysuckle)

Sumac
Beach Plum
Spicebush
Bayberry

Density of Revegetation Species:

Long-term Maintenance:

Tab D-1: Vegetation Management - Potter Cove Beach Section

Subsection 1g, Parking Area

Description: The subsection encompasses the vegetation immediately surrounding the lower parking area on the north side of Freebody Drive. All is land filled for road construction within the last half-century. The vegetation immediately north of the parking area will likely be destroyed when the rip-rap is repaired in the indefinite future, and total re-vegetation will be required there.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Existing Non-native Species:

Management: Immediately after rip-rap repair, re-vegetate narrow strip between parking area and rip-rap with low native vegetation to maintain views, dense enough to deter short-cutting from parking to rip-rap. At the un-disturbed ends of the parking area, remove invasives, re-vegetate with native vegetation used in adjacent sub-sections.

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Estimated Expense:

Replacement Vegetation Needed:

Switchgrass
Little Bluestem
Meadowsweet
Steeplebush
Wild (Virginia) Rose
Perennial herbs, to be determined
Swamp Milkweed

Density of Revegetation Species:

Long-term Maintenance: Mow Switchgrass/ perennial areas in early spring. Weed all areas twice a year to remove invasives and any tall-growing shrubs or trees that will grow to impede views. Install low temporary fencing as required to deter trampling.

Annex D: Vegetation Management

Tab D-2: Taylor Point Cliffs Section

The Taylor Point Cliffs Section, with about 9 acres, is almost half the land area of the open space at Taylor Point. It contains a greater proportion of native species than do the other three sections, although there is considerable competition from invasive species as in the rest of Taylor Point. In the hostile environment close to the shoreline low, shrubby vegetation and grasses predominate. Trees start appearing from 10 to 50 feet from the shoreline, and get larger as distance from the shore increases. Parts of this section have extensive shrub lands, with Arrowwood and High-bush Blueberry being the dominant species.

This section includes a paved parking area for about 22 cars that affords physical access to the shore and a view of the bay for the public. Annex E of this plan contains details of renovating footpaths in this section to improve public access; management of the vegetation in parts of this section is closely associated with the rehabilitation of these footpaths.

Adjacent to the parking are some areas with overgrown ornamental landscaping from the 1980's, and some mowed grass areas. These areas will be revegetated with native vegetation to the extent possible.

For planning and management purposes, the Taylor Point Cliffs section is divided into 8 subsections, numbered 2a through 2h on the Subsection map.

- 2a. Taylor Point Cliffs, West Woods Subsection
- 2b. Taylor Point Cliffs, Cliffside Subsection
- 2c. Taylor Point Cliffs, Northwest Shrubland
- 2d. Taylor Point Cliffs, Successional Field Subsection
- 2e. Taylor Point Cliffs, Public Access Subsection
- 2f. Taylor Point Cliffs, Upper Parking Area Subsection
- 2g. Taylor Point Cliffs, East Woods Subsection
- 2h. Taylor Point Cliffs, Southeast Shrubland Subsection

Following are design outlines for each of these subsections, to be used as templates to guide design and permit application.

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2a, West Woods

Description: A wooded area with a dense understory of shrubs and vines. Parts of the road shoulder and ditch along Bay View and Freebody Drives, to a distance of about 10 feet from the edge of pavement, was cleared by the DPW in February 2016 and is proposed for conversion to a Roadside Meadow (see Subsections 5b and 5c).

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Red Maple - common
White Ash - present
Black Cherry - common
Winterberry - present
Arrowwood - common
High-bush Blueberry -present
Greenbrier - common
Early Sedge

Existing Non-native Species:

English Oak - present
Norway Maple - present
Morrow Honeysuckle - common
Oriental Bittersweet -common

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species.

Trees over 6" Diameter to be removed:

Estimated Work Effort Required:

Volunteer:
Contractor:
Town DPW:

Estimated Expenses:

Replacement vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2b, Cliffside

Description: Near the shore, on the east and north sides of the Taylor Point Cliffs Section, this subsection has fairly low, thick growth, mixed native and non-native. If this thick vegetation is removed the area will likely experience moderate to heavy human use, inhibiting revegetation and promoting erosion.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Arrowwood
Wild Rose
Virginia Creeper (+)
Winged Sumac
Raspberry
Poison Ivy(+)
Bayberry
White Pine (1)
Red Cedar
Seaside Goldenrod?
Greenbrier

Existing Non-native species:

Glossy buckthorn (1)
Morrow Honeysuckle
Multiflora Rose

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Remove poison ivy within 4 ft of trails and cliffs.

Trees over 6" Diameter to be removed:

Estimated Work Effort Required:

Volunteer:
Contractor:
Town DPW:

Estimated Expenses:

Replacement Vegetation Needed:

Density of Revegetation Species:

Long-Term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2c, Northwest Shrubland

Description: A subsection of dense shrubs, mostly Arrowwood and High-bush Blueberry, with some Morrow Honeysuckle along the edges. These shrubs are being smothered by vines on the south and west sides.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Gray Birch (one only)
Arrowwood
High-bush Blueberry
Shadbush
Staghorn Sumac
Winged Sumac
Bayberry
Sweet Pepperbush
Greenbrier
Fox Grape
Virginia Creeper

Existing Non-native Species:

Autumn Olive
Japanese Honeysuckle
Morrow Honeysuckle

Management: Cut vines to improve shrub health. Vines may need re-cutting for several years. Eradicate the other scattered invasive vegetation and revegetate with native vegetation as required; In most cases existing native vegetation will grow to quickly fill in any gaps.

Trees over 6" Diameter to be removed:

Estimated Work Effort Required:

Volunteer:
Contractor:
Town DPW:

Estimated Expenses:

Replacement vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2d, Successional Field

Description: This appears to be an abandoned field in the early to mid stages of natural succession. It is dominated by blackberry and greenbrier, with grape in the Cherry Trees along the west side. Various native shrubs are growing, but are being smothered by the greenbrier and grape. Along the north side, greenbrier from this subsection is moving into the adjacent shrubland and smothering the native shrubs there (mostly arrowwood and blueberry).

The road and parking area shoulder and ditch, to a distance of about 10 feet from the edge of pavement, was cleared by the DPW in February 2016 and is proposed to be converted to a Roadside Meadow (see Subsection 5c).

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

- Black Cherry
- Red Maple
- Arrowwood
- High-bush Blueberry
- Shadbush
- Staghorn Sumac
- Winged Sumac
- Greenbrier
- Fox Grape
- Virginia Creeper
- Blackberry
- Goldenrod

Existing Non-native species:

- English Oak
- Oriental Bittersweet
- Japanese Honeysuckle
- Morrow Honeysuckle

Management: The objective is to restore the health of the native shrub and tree species in this field and allow them to flourish as part of the process of natural succession. This will be accomplished by cutting by hand the vines smothering the shrubs and trees. This cutting may have to be repeated annually for several years.

Eradicate the other scattered invasive vegetation and revegetate with native vegetation as required. In most cases existing native vegetation will grow to quickly fill in any gaps. Remove English Oak to allow existing native shrubs to flourish and natural succession to continue with native species.

Trees over 6” Diameter to be removed:

Estimated Work Effort Required:

Volunteer: 16 for 6 hours, cutting vines to allow shrub and tree species to recover.

Contractor: xx hours to cut and remove English Oaks.

Town DPW:

Estimated Expenses:

Replacement Vegetation Needed:

Density of Revegetation Species:

Long-Term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2e, Public Access

Description: This subsection includes the northern portion of the eroded main and northwest footpaths from the parking area to the shoreline cliffs. Bordering the footpath along its south end is an area of low vegetation, mostly grasses and perennials, extending up to 15 feet on either side of the footpath. Some invasive shrubs are growing into this grassy fringe. At the north end the subsection widens, with Rugosa Rose, Virginia Rose, Poison Ivy, and Oriental Bittersweet predominating. There are a few taller shrubs, both native and invasive, along the west side.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Virginia Rose
Poison Ivy
Arrowwood
High-bush Blueberry
Red Cedar

Existing Non-native Species:

Oriental Bittersweet
Rugosa Rose
Autumn Olive
Butter and Egg
Glossy Buckthorn (1)

Management: Create a “roadside meadow” community along both sides of the south end of the footpath to maintain the existing public view of the bay. At the north end, remove invasives, protect natives, revegetate as required. The cliffs see heavy human use, so use thick vegetation near cliffs to discourage trampling.

Trees over 6” Diameter to be removed:

Estimated Work Effort Required:

Volunteer:
Contractor:
Town DPW:

Estimated Expenses:

Replacement vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2f, Upper Parking Area

Description: An asphalt parking area with surrounding areas landscaped in 1980's, with mowed grass areas in the circle and north of the parking. A mix of invasive and native (mostly sumac) vegetation is growing on the steep edges of the fill that was dumped here in 1979. Mixed vegetation is encroaching on the back-side of the wooden guardrail.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Black Cherry - present

Staghorn Sumac - present

Greenbrier - common

Existing Non-native Species:

Box Elder

English Oak- present - INVASIVE

Morrow Honeysuckle - present - INVASIVE

Japanese Honeysuckle - present - INVASIVE

Various ornamental plantings

Management: Design restoration of this highly visible area in close coordination with Town departments. In the circle: Remove vines and invasive vegetation in north half to allow existing native shrubs and trees to regain health. On west side, remove overgrown ornamental shrubs. Revegetate south and west parts of circle with native shrubs, primarily Shadbush. Once Shadbush becomes established and begins to grow, plant shorter shrubs underneath, and especially along the south and west sides to prevent sun from penetrating into the interior.

In mowed area north of parking area, plant native shrub screen around outhouse location. Remove ornamental vegetation and replace with native shrubs.

Clear vegetation to edges of area where fill was dumped in 1979, regrade to establish a more gentle, natural slope, revegetate with native shrubs, and establish a 10 to 15 foot wide fringe of native grasses and forbs (similar to a roadside meadow) immediately east of wood guard rail. Plant a Memorial Tree for Bob Kinder.

Trees over 6" Diameter to be removed:

Estimated Work Effort Required:

Volunteer:

Contractor:

Town DPW:

Estimated Expenses:

Replacement vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2g, East Woods

Description:

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Existing Non-native Species:

Management:

Trees over 6" Diameter to be removed:

Estimated Work Effort Required:

Volunteer:

Contractor:

Town DPW:

Estimated Expenses:

Replacement vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-2: Vegetation Management - Taylor Point Cliffs Section

Subsection 2h, Southeast Shrubland

Description: This subsection is primarily native shrubs, with scattered trees. 85% is native vegetation. Two large English Oaks near water, many more smaller English Oaks. Shady, with few herbaceous species. At the south end, where the Town land abuts Newport Overlook, are more early-succession species, including invasive Morrow Honeysuckle to the east, and small native Gray Birch to the west.

The road shoulder and ditch, to a distance of about 15 feet from the edge of pavement, was cleared by the DPW in February 2016 and is proposed to be converted to a Roadside Meadow (see Subsection 5C).

The property boundary between Town-owned land and Newport Overlook land needs to be determined along the north side of this section.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native species:

Arrowwood
High-bush Blueberry
Winterberry
Black Cherry
Gray Birch
Red Cedar
Poison Ivy (mostly small vines, close to ground)
Sumac, winged (-)
Shadbush (-)

Existing Non-Native species:

English Oak (two large near beach, plus other smaller ones)
Morrow Honeysuckle (many small, apparently grazed by deer in winter)
Japanese Honeysuckle (+)
Asiatic Bittersweet(-)
Privet(-)

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species.

Trees over 6" Diameter to be removed:

Estimated Work Effort Required:

Volunteer:

Contractor:

Town DPW:

Estimated Expenses:

Replacement vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Annex D: Vegetation Management

Tab D-3: Black Cherry Woodland Section

The Black Cherry Woodland section, a little over six acres in size, serves to screen the sewer plant and the Newport Bridge approach ramp from view. Small parts of this section include other native trees, Red Maple and Quaking Aspen, and the understory includes a variety of native shrubs. The entire woodland is threatened by invasive Oriental Bittersweet vines smothering and strangling the trees, and by Morrow Honeysuckle shrubs displacing native vegetation from large areas of the understory. The vines have already pulled down many trees, and if nothing is done, the woodland will be gone in another decade or two.

Along the south edge of the woodland, where bridge construction in the 1960's cut through the woodland and exposed the edge to full sun, vines have thrived and killed many of the trees in some small areas, resulting in thickets consisting of shrubs overgrown by vines, especially the native Fox Grape. There is one thicket area along the north edge. These thicket areas are growing, and a large part of the western subsection of the Woodland appears to be converting to thicket. Restoration should be undertaken within the next few years, before significantly more of the woodland becomes thicket, making restoration much more difficult.

The northern edge of the Black Cherry Woodland-West Subsection contains a small wetland. A Wetland Permit from CRMC is required before any work is done in the wetlands.

For planning and management purposes, the Black Cherry Woodland section is divided into four subsections, numbered 3a through 3d of the Subsection map.

- 3a. Black Cherry Woodland, West Subsection
- 3b. Black Cherry Woodland, East Subsection
- 3c. Black Cherry Woodland, Thickets Subsection
- 3d. Black Cherry Woodland, Bay View Dr. Subsection

Following are design outlines for each of these four subsections, to be used as templates to guide design and permit application.

Tab D-3: Vegetation Management - Black Cherry Woodland Section

Subsection 3a, Black Cherry Woodland West

Description:

Size (square feet or acres):

Wetlands: There is a small wetland at the north edge of this subsection, just south of Freebody Drive, around and west of the culvert. See Annex F, (Wetlands).

Existing Native Species:

Black Cherry -very common

Red Maple - common

Red Cedar - uncommon

Staghorn Sumac - present

Arrowwood -present

Winterberry - present

High-bush Blueberry - common

Common Shadbush - present

Common Elder - present

Common Blackberry - present

Raspberry - present

Greenbrier - present

Fox Grape - present

?Virginia Creeper - common

Poison Ivy - common

Jack-in-the-pulpit - very common

Hollow Joe-pye Weed (*Eupatorium fistulosum*)- uncommon (wetlands only)

Jewelweed (*Impatiens capensis*) - present, (wetlands only)

Existing Non-native Species:

?English Oak - present - INVASIVE

?Norway Maple - uncommon - INVASIVE

Sycamore Maple (*Acer pseudoplatanus*) - uncommon - INVASIVE

Apple - Present

Morrow Honeysuckle - very common - INVASIVE

Pretty Honeysuckle - present INVASIVE

?Glossy Buckthorn - uncommon - INVASIVE

Gray Willow - present - INVASIVE

Multiflora Rose - present - INVASIVE

?Privet - present - INVASIVE

?Wineberry - present -INVASIVE

Japanese Honeysuckle -common - INVASIVE

Oriental Bittersweet - very common - INVASIVE
Black Swallowwort- present - INVASIVE
Figwort (*Scrophularia nodosa*) - present

Management: Two invasive species are seriously threatening this 2 to 3-acre subsection of the Black Cherry Woodland. Dense Morrow Honeysuckle shrubs inhibit growth of native understory vegetation, and Oriental Bittersweet is both smothering and strangling the native Black Cherry trees. Some Black Cherries have already been killed and pulled down by the Oriental Bittersweet vines. Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Morrow Honeysuckle and Oriental Bittersweet grow throughout the woodland, the other invasive plant species are present in much smaller numbers, and are primarily at the subsection perimeter where they get more sunlight.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer: Volunteers will remove invasive vegetation. Removed vegetation will be cut into small pieces, consolidated into brush piles and allowed to decompose on the site. If too much dead vegetation accumulates, some may have to be removed from the site. In 2015 pilot projects in the Black Cherry Woodland East, volunteers cleared 4000 square feet with 64 volunteer hours. Based on this, we estimate 700 volunteer hours per acre, or 1400 volunteer hours for this 2-acre sub-section. As invasives are eradicated, volunteers will plant replacement vegetation.

Contractor: A contractor may be use to supplement volunteer efforts.

Town DPW: Cutting down trees, and chipping brush and limbs if required.

Estimated Expense:

Tools for volunteers (will continue to be used in future years):	\$
Volunteer support (mostly food and water for volunteers@\$10/volunteer/3-hr day: \$2080	
Contract work - invasive Tree, shrub, and vine extermination	\$

Replacement Vegetation Needed: (this list of species is incomplete, quantities are not yet estimated)

Black Cherry
Arrowwood
Winterberry
Shadbush

Common Elder
Sumac
High-bush Blueberry
Spicebush (wetland areas)
Buttonbush (wetland areas)
Swamp Dogwood (wetland areas)
Native willow species (wetland areas)

Density of Revegetation Species:

Long-term Maintenance: Long-term maintenance and management is an essential part of the Taylor Point Restoration Project. Seeds of invasive species will sprout throughout the woodland, especially in the first few years after vine removal when lots of sunlight hits the woodland floor. As the tree canopy heals, these problems will decrease. Invasive vegetation will continue to be a problem at the woodland edges. A volunteer crew will walk through the woodland early each spring and pull young Honeysuckle and Bittersweet, which are conspicuous because they leaf out before the native vegetation. Experienced volunteers will walk the restored woodland twice a year to identify and flag invasives that need more attention from a volunteer work crew.

Tab D-3: Vegetation Management - Black Cherry Woodland Section

Subsection 3b, Black Cherry Woodland East

Description:

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Black Cherry -very common
Red Maple - uncommon
Quaking Aspen -present, NE corner
Red Cedar - uncommon
Staghorn Sumac - present
Arrowwood - common
Winterberry - present
High-bush Blueberry - common
Common Shadbush - present
Common Elder - present
Common Blackberry - present
Raspberry - present
Greenbrier - present
Fox Grape - present
Virginia Creeper - common
Poison Ivy - common
Jack-in-the-pulpit - very common

Existing Non-native Species:

English Oak - present - INVASIVE
Norway Maple - uncommon - INVASIVE
Norway Spruce - uncommon
Apple - uncommon
Morrow Honeysuckle - very common - INVASIVE
Pretty Honeysuckle - present INVASIVE
Glossy Buckthorn - uncommon - INVASIVE
Gray Willow - present - INVASIVE
Multiflora Rose - present - INVASIVE
Privet - present - INVASIVE
Wineberry - present -INVASIVE
Japanese Honeysuckle -common - INVASIVE
Oriental Bittersweet - very common - INVASIVE
Black Swallowwort- present - INVASIVE

Figwort (*Scrophularia nodosa*) - present

Management: Two invasive species are seriously threatening this 2 to 3-acre subsection of the Black Cherry Woodland. Dense Morrow Honeysuckle shrubs inhibit growth of native understory vegetation, and Oriental Bittersweet is both smothering and strangling the native Black Cherry trees. Some Black Cherries have already been killed and pulled down by the Oriental Bittersweet vines. Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Morrow Honeysuckle and Oriental Bittersweet grow throughout the woodland, the other invasive plant species are present in much smaller numbers, and are primarily at the subsection perimeter where they get more sunlight.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer: In 2015 pilot projects we cleared 4000 square feet with 64 volunteer hours. Based on this, we estimate 700 volunteer hours per acre, or 1400 volunteer hours for this 2-acre sub-section. We are planning 13 3-hour volunteer work sessions in 2016, hopefully with 16 volunteers at each one, which equals 624 volunteer hours. That’s approximately enough to clear one acre in 2016 and the second acre in 2017.

Contractor: If funds permit, we may use a contractor to do some of the Honeysuckle and Bittersweet removal. A contractor may be needed to remove selected dead trees and limbs that present a hazard.

Town DPW: Cutting down trees, and chipping brush and limbs if required.

RIBTA?: None

Estimated Expense:

Tools for volunteers (will continue to be used in future years):	\$
Volunteer support (mostly food and water for volunteers @\$10/volunteer/3-hr day):	\$2080
Contract herbicide applicator - 2 or 3 3-hour sessions:	\$
Other contract work (tree removal, equipment work, etc)	\$

Replacement Vegetation Needed: (list of species is incomplete, quantities are not yet estimated)

Black Cherry
Arrowwood
Winterberry
Shadbush
Common Elder
Sumac

Density of Revegetation Species:

Long-term Maintenance: Long-term maintenance and management is an essential part of the Taylor Point Restoration Project. Seeds of invasive species will sprout throughout the woodland, especially in the first few years after vine removal when lots of sunlight hits the woodland floor. As the tree canopy heals, these problems will decrease. Invasive vegetation will continue to be a problem at the woodland edges. A volunteer crew will walk through the woodland early each spring and pull young Honeysuckle and Bittersweet, which are conspicuous because they leaf out before the native vegetation. Experienced volunteers will walk the restored woodland twice a year to identify and flag invasives that need more attention from a volunteer work crew.

Tab D-3: Vegetation Management - Black Cherry Woodland Section

Subsection 3c, Black Cherry Woodland Thickets

Description: The Thickets subsection consists of five areas on the edges of the Black Cherry Woodland where the trees have already been pulled down by vines and the vegetation now consists of shrub species, mostly invasive but with some natives, with vines growing over them. The vegetation is between 4 and 12 feet high. The other Black Cherry Woodland sections appear to be transitioning to thickets as vines destroy the existing trees, and the line between the Thicket subsection and other subsections is not always distinct. One area in this Thicket subsection may be within the wetland overlay area.

Size (square feet or acres):

Wetlands:

Existing Native Species:

Black Cherry - uncommon, mostly vine infested
Staghorn Sumac - uncommon
Arrowwood - present
High-bush Blueberry - present
Common Shadbush - present
?Common Elder - present
Common Blackberry - present
?Raspberry - present
Greenbrier - common
Fox Grape - very common
Virginia Creeper - present
Poison Ivy - common
Virginia Rose - uncommon

Existing Non-native Species:

Morrow Honeysuckle - common - INVASIVE
Pretty Honeysuckle - present INVASIVE
?Glossy Buckthorn - uncommon - INVASIVE
?Gray Willow - present - INVASIVE
Multiflora Rose - present - INVASIVE
Privet - present - INVASIVE
Wineberry - present - INVASIVE
Japanese Honeysuckle - very common - INVASIVE
Oriental Bittersweet - very common - INVASIVE
Black Swallowwort - present - INVASIVE

Management: A management strategy for this subsection awaits the advice of consultants. Management will include the removal of some native vine species which, because the forest canopy is so badly damaged, are smothering native shrubs and trees. Some areas may be managed with hand tools used to selectively remove specific species. Other areas may have so few native species worth saving that they may be mowed down and new vegetation planted. In most of this subsection native species presently growing in the adjacent subsections, including Black Cherry, will probably be re-established. Along the south side, parallel to Bridge Authority property, a strip of herbaceous vegetation may be established (Roadside Meadow subsection 5D) as a transition between Black Cherry Woodland and mown grass.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW: None

RIBTA?: None

Estimated Expense:

Replacement Vegetation Needed: (list of species is incomplete, quantities are not yet estimated)

Black Cherry
Arrowwood
Winterberry
Shadbush
Common Elder
Sumac

Density of Revegetation Species:

Long-term Maintenance: To be determined, will probably be more intensive than in some other subsections.

Tab D-3: Vegetation Management - Black Cherry Woodland Section

Subsection 3d, Bay View Dr

Description: A narrow area between Bay View Drive and the Sewer Plant / Highway Barn fence line. This subsection contains a mix of native and invasive plants, mostly natives at the north end, primarily invasives (Honeysuckles and Bittersweet) at the south end. The road shoulder and ditch, to a distance of about 15 feet from the edge of pavement, was cleared by the DPW in February 2016 and is proposed to be converted to a Roadside Meadow (see Subsection 5C).

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Black Cherry - present
Red Cedar - present
Staghorn Sumac - uncommon
Arrowwood - very common
?Winterberry - present
High-bush Blueberry - present
Common Shadbush - present
?Common Elder - present
Common Blackberry - present
?Raspberry - present
Greenbrier - common
Fox Grape - present
Virginia Creeper - present
Poison Ivy - present

Existing Non-native Species:

English Oak - present - INVASIVE
Morrow Honeysuckle - common - INVASIVE
Pretty Honeysuckle - present - INVASIVE
?Glossy Buckthorn - uncommon - INVASIVE
?Multiflora Rose - present - INVASIVE
Privet - present - INVASIVE
?Wineberry - present - INVASIVE
Japanese Honeysuckle - very common - INVASIVE
Oriental Bittersweet - very common - INVASIVE
?Black Swallowwort - present - INVASIVE

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. At the north end of the subsection the extensive existing native vegetation should fill in most cleared areas, with limited planting of replacement native shrubs required. At the south end, considerable re-vegetation will be required. A licensed arborist, or the DPW, will be needed to remove some invasive English Oaks.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor: Remove English Oak trees

Town DPW: Remove English Oak trees

RIBTA?: None

Estimated Expense:

Replacement Vegetation Needed: (list of species is incomplete, quantities are not yet estimated)

Black Cherry
Arrowwood
Winterberry
Shadbush
Common Elder
Sumac

Native oaks are proposed for planting at the east edge of this area, or in the adjacent roadside meadow, as street trees.

Density of Revegetation Species:

Long-term Maintenance:

Annex D: Vegetation Management

Tab D-4: Bridge Section

This narrow section, a little under 2 acres in size, runs from Bay View Drive to the East Passage of Narragansett Bay, sloping moderately steeply in places. In 1979 the section was heavily disturbed by excavation for the sewer outfall pipe running from west to east from the sewer plant to the Bay. As a consequence, in many places this section contains a greater percentage of invasive vegetation than the rest of Taylor Point.

The property boundary between Town-owned land and Newport Overlook land needs to be determined along the north side of this section. The boundary between Town-owned land and RITBA land is marked by a fence.

The sewer outfall pipe running under this section, and the possibility that it may have to be dug up for maintenance some day, should be considered in selecting native species for re-vegetation.

An eroding footpath from Bay View Drive to the shoreline adjacent to the south fence line. This steep, difficult to maintain path will be abandoned and replaced by a path switchbacking through the section. Vegetation management design should consider this future footpath.

This section is divided into two subsections for the purposes of planning and permitting:

- 4a. Bridge Section, Upland Subsection
- 4b. Bridge Section, Beach Subsection

Following are design outlines for these two subsections, to be used as templates to guide design and permit application.

Tab D-4: Vegetation Management - Bridge Section

Subsection 4a, Bridge Section - Upland

Description: A wedge-shaped area between Bay View Drive and the top of the beach along the East Passage. Heavily disturbed in 1979, this subsection contains a mix of native and non-native plants. Consider removing the chain link fence along Bay View Drive and establishing a Roadside Meadow (see subsection 5C) along the road and the west end of the subsection. Especially along the south side, sun penetrates into the woodline causing vines and invasive shrubs to dominate and damage native vegetation.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Black Cherry - common
Red Maple - present
Eastern White Pine - present
Red Cedar - common
Staghorn Sumac -common
Arrowwood - common
High-bush Blueberry -present
Common Shadbush - present
Greenbrier - common
Fox Grape - common
?Virginia Creeper -present
Poison Ivy - present

Existing Non-native Species:

English Oak - present -INVASIVE
Norway Spruce - uncommon
Morrow Honeysuckle - very common - INVASIVE
Multiflora Rose - present - INVASIVE
Privit- uncommon -INVASIVE
Autumn Olive- present - INVASIVE
Japanese Honeysuckle - very common - INVASIVE
Oriental Bittersweet - very common - INVASIVE
Black Swallowwort- present - INVASIVE
Garlic Mustard -common - INVASIVE
Burning Bush (*Euonymus atropurpureus*) - (native to mid-Atlantic)-uncommon (only 1)
Mullin - present
Stinging Nettle -present
Bull Thistle - uncommon

Wild Madder - uncommon

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Establish some native tree populations that will survive disturbance if the sewer outfall pipe ever needs excavation. Perhaps Sassafras, Black Tupelo, and Black Birch, all of which can spread quickly and are native species uncommon or not present at Taylor Point.

Select erosion-resistant and salt-tolerant species on the steep slope forming the east end of this subsection to resist coastal erosion which will occur as sea-level rises.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW: None

RIBTA?: None

Estimated Expense:

Replacement Vegetation Needed: (list of species is incomplete, quantities are not yet estimated)

Sassafras (*Sassafras albidum*)

Black Tupelo (*Nyssa sylvatica*)

Black Birch (*Betula lenta*)

Black Cherry

Staghorn Sumac

Winged Sumac

Arrowwood

Winterberry

Shadbush

Common Elder

Native oaks are proposed for planting at the west edge of this area, or in the adjacent roadside meadow, as street trees.

Density of Revegetation Species:

Long-term Maintenance:

Tab D-4: Vegetation Management - Bridge Section

Subsection 4b, Beach

Description: A small subsection, approximately 100 feet north to south and 40 feet or less east to west, between the high tide line and the foot of the slope forming the east end of the Upland Subsection. This small area supports a variety of invasive species, some found nowhere else at Taylor Point. These should be replaced with erosion-resistant native vegetation.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

?Red Cedar - present

Existing Non-native Species:

Morrow Honeysuckle - common - INVASIVE

Sycamore Maple - uncommon - INVASIVE

Beach Rose - present - INVASIVE

False Indigo - present - INVASIVE

Japanese Honeysuckle - present- INVASIVE

Oriental Bittersweet - common - INVASIVE

?Black Swallowwort- present - INVASIVE

Japanese Knotweed - present -INVASIVE

Garlic Mustard -present - INVASIVE

Management: Eradicate non-native species using adopted control protocols. Protect existing native species, and revegetate as required with native species. Do work in stages so beach is not left open to erosion. A licensed arborist, or the DPW, will be needed to remove the Sycamore Maple.

Trees over 6” Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

RIBTA?: None

Estimated Expense:

Replacement Vegetation Needed:

Trees over 6" Diameter to be removed:

Long-term Maintenance:

Tab D-5: Roadside Section

A narrow section between 5 and 20 feet wide alongside all roads, and along some footpaths, that will be planted with warm season (native) grasses and forbs (wildflowers). *Effective Establishment of Native Grasses on Roadsides in New England* by Kuzovkina, Campanelli, Schulthess, Ricard, and Dryer, prepared for the New England Transportation Consortium and dated June 1, 2016, will be used to guide design of these roadside meadows.

Roadside meadows will only be established along Freebody Drive and Bay View Drive with the concurrence and approval of the Jamestown Department of Public Works, and along East Shore Road with the concurrence and approval of RITBA. The location of the property line along East Shore Road has not yet been located with certainty.

In general, RITBA or the Jamestown Highway Department would continue to maintain a strip of mowed grass along the road shoulder between 4 and 8 feet wide (or as wide as they want.) Beyond the mowed strip, the TPRA will establish a Roadside Meadow of native species which, once properly established, would require mowing only once a year. Full establishment could take up to 3 years.

These “roadside meadows” may also be established long the south side of the BlackCherry Woodland, at the upper parking area west of the wood guardrail, along both sides of the main path from the upper parking area to the Taylor Point Cliffs, and possibly between the lower parking area and the rip-rap to it’s north.

- Roadside meadows have the following advantages compared to the mowed (cool-season) grasses or invasive shrubs that currently grow along these roadsides:
- Erosion Resistance: The deep, dense root systems of native grasses resistant erosion from both runoff and storm waves much more effectively than the shallow roots of cool season grasses. The thicker, taller vegetation slows runoff.
- Filtering: Contaminants are filtered out of runoff as it flows through the meadow grasses.
- Less mowing is needed, since the meadows are only mowed once a year.
- Pollinator species of insects, an important part of the ecosystem, need the nectar and pollen the wildflowers produce for food. Pollinator gardens are becoming popular as more is published about the rapid decline of these insect species.

- Roadside meadows are attractive. They may look weedy to some, but, with some signs and publicity, most passing motorists will appreciate them.
- These roadside meadows are encouraged by the 2014 Presidential Memorandum “Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators”

Following are design outlines for each of these four subsections, to be used as templates to guide design and permit application.

- 5a. Roadside Section, East Shore Road Embankment Subsection
- 5b. Roadside Section, Freebody Drive Embankment Subsection
- 5c. Roadside Section, Bay View Drive Embankment Subsection
- 5d. Roadside Section, Black Cherry Woodland Trailside Subsection

Tab D-5: Vegetation Management - Roadside Section

Subsection 5a, East Shore Road Embankment

Description: The man-made road embankment along East Shore Road and Freebody Drive, mostly mown grass, with some shrubs and trees intruding from the beach. The property line between Town-owned land on Potter Cove Beach and RITBA or RIDOT land along East Shore Road has not been determined. If the Town owns any part of the road embankment, the lower parts will be re-vegetated with native plants to resist erosion. The parts nearest the roadways will continue as mowed grass for traffic safety purposes. Anything done here will be closely coordinated with the RI Bridge and Turnpike Authority, who maintain the road embankment.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Red Cedar
Staghorn sumac
Poison ivy
Switch grass
(thorough inventory needed)

Existing Non-native Species:

Black Locust
Autumn Olive
Cool-season grasses, mown
(thorough inventory needed)

Management: Remove any invasive vegetation intruding from Potter Cove Beach. Introduce erosion-resistant plantings (species to be determined) on embankment, paying special attention to the embankment where it meets the beach. Maintain existing native vegetation. Introduced vegetation to be low to maintain views. Make mown-grass access points to beach more erosion-resistant.

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:
Contractor:
Town DPW:
RIBTA?:

Estimated Expense:

Replacement Vegetation needed:

Switchgrass

Little Bluestem

Meadowsweet

Steeplebush

Wild (Virginia) Rose

Perennial herbs, to be determined

Density of Revegetation Species:

Long-term Maintenance: Mow 4- to 8-foot wide shoulders for traffic safety. Areas beyond that to be (1)mowed in early spring, if grass and forbs, or (2) In shrub areas, weed annually of non-native species and tall native species to maintain healthy native shrubs and to maintain views.

Tab D-5: Vegetation Management - Roadside Section

Subsection 5b, Freebody Drive Embankment

Description:

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection. However, there are wetlands immediately adjacent to the road embankment on the south side near and south of the culvert, and close to this subsection on the north side.

Existing Native Species:

Existing Non-native Species:

Management:

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

RIBTA?:

Estimated Expense:

Replacement Vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-5: Vegetation Management - Roadside Section

Subsection 5c, Bay View Drive Embankment

Description:

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Existing Non-native Species:

Management:

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

RIBTA?:

Estimated Expense:

Replacement Vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-5: Vegetation Management - Roadside Section

Subsection 5d, Black Cherry Woodland Trailside

Description: Although this is not adjacent to a road, it is proposed to establish and manage this narrow strip along the south edge of the Black Cherry Woodland as a Roadside Meadow, with a strip of mowed grass between this meadow and the fence to serve as a footpath.

Size (square feet or acres):

Wetlands: There are no wetlands in this subsection.

Existing Native Species:

Existing Non-native Species:

Management:

Trees over 6" Diameter to be removed:

Estimated Work Effort:

Volunteer:

Contractor:

Town DPW:

RIBTA?:

Estimated Expense:

Replacement Vegetation needed:

Density of Revegetation Species:

Long-term Maintenance:

Tab D-6: Re-vegetation Guidelines

Standards for selection of native plants to be planted at the Taylor Point Nature Preserve.

1. Restore and maintain the Taylor Point Nature Preserve so that only native plants grow there. “Native” is used here to mean only plants that grew in Rhode Island prior to the arrival of European settlers in the 16th century - that is, those plants designated with a “1” in the “RI Status” column in *The Vascular Flora of Rhode Island*.
2. Retain native plants currently growing at Taylor Point, and revegetate only with native plants.
3. Some plants listed as Native in *Vascular Flora* are more northern species that grow naturally only in the more northern parts of RI (that is, the southern limit of their natural range is northern RI). Examples are such trees as sugar maple, striped maple, and white pine. Plants such as these which probably did not grow on Conanicut Island before European colonization should not be planted at Taylor Point. With the warming climate, these species probably would not thrive here in future decades anyway.
4. Identify RI ecological communities at Taylor Point and select appropriate species to use for revegetation in each community.
5. All new plantings should be from native RI genotypes; that is, from seed or cuttings taken from native RI plants. When seed or plants from native RI origin are not available (which is the case for some native grasses) seed from southern New England will be used.
7. Native vines are an important part of a healthy woodland ecosystem, but much of Taylor Point is not healthy; the woodland is fragmented, with many gaps in the canopy. An over abundance of vines that are strangling and smothering the trees and shrubs is part of the problem. Invasive vines must be eliminated, and native vines (mostly grape and greenbrier) must be controlled until the health of native trees and shrubs is improved.
8. Plan for a future stable habitat. That is, recognize natural succession. All of Taylor Point is in some stage of natural succession, and many of the plants growing there today will be replaced by other native plants as natural succession occurs over the years, decades, and centuries. We do not want to accelerate or retard this natural succession, but allow it to proceed without interference from any non-native plants. The exception would be along roadsides and footpaths, where grasses and forbs may be maintained.

9. In selecting native plants for re-vegetation, we want to select those that would grow naturally in the Taylor Point habitat. A good indicator of these is the native plants that now grow at Taylor Point, or in similar habitats in Jamestown.

10. Exceptions: We may keep a few non-native species, eg, Apple trees, at least until we can map their locations and determine if they may have once been part of an orchard; cool season (European) grasses growing on road shoulders and perhaps on paths or other pedestrian areas will also be kept.

References: The following references provide useful information on growing native plants from cuttings and seeds.

1. www.riwps.org (Rhode Island Wild Plant Society website). Click on “Growing Natives”, then “Cultivation Notes” to find instructions for propagating many native species, and growing them from seed.

2. Cullina, William, *Native Trees, Shrubs, and Vines: A Guide to Using, Growing, and Propagating North American Woody Plants*, New England Wild Flower Society, 2002

3. Cullina, William, *The New England Wildflower Society Guide to Growing and Propagating Wildflowers of the United States and Canada*, New England Wild Flower Society, 2000

4. Cullina, William, *Native Ferns, Moss, and Grasses: From Emerald Carpet to Amber Wave, Serene and Sensuous Plants for the Garden*, New England Wild Flower Society, 2008

Some RI Native Plants suitable for planting at Taylor Point Nature Preserve

<u>Species</u>	<u>Currently Found</u>
TREES	
Black Cherry <i>Prunus serotina</i>	TP
Red Maple <i>Acer rubrum</i>	TP
Gray Birch <i>Betula populifolia</i>	TP
Staghorn Sumac <i>Rhus typhina</i>	TP
Smooth Sumac <i>Rhus glabra</i>	TP
Dwarf (Shining) Sumac	TP

<i>Rhus copallina</i>	
Black (Sweet) Birch	J
<i>Betula lenta</i>	
Tupolo (Black Gum)	TP
<i>Nyssa sylvatica</i>	
Sassafras	J
<i>Sassafras albidum</i>	
?American Holly	J?
<i>Ilex americana</i>	
White Oak	J
<i>Quercus alba</i>	
Black Oak	J
<i>Quercus velutina</i>	
Scarlet Oak	J
<i>Quercus coccinea</i>	
Northern Red Oak	RI
<i>Quercus rubra</i>	
Alternate-leaved Dogwood	RI
<i>Cornus (Swida) alterniflora</i>	
Red Cedar	TP
<i>Juniperus virginiana</i>	
?Pitch Pine	TP?
<i>Pinus</i>	
SHRUBS	
Arrowwood	TP
<i>Viburnum dentatum</i>	
Winterberry	TP
<i>Ilex verticillata</i>	
Highbush Blueberry	TP
<i>Vaccinium corymbosum</i>	
Northern Bayberry	TP
<i>Myrica pensylvanica</i>	
Common Elder (Elderberry)	TP
<i>Sambucus canadensis</i>	
Sweet Pepperbush	TP
<i>Clethra alniflora</i>	
Wild (Virginia) Rose	TP
<i>Rosa virginiana</i>	
Silky (Swamp) Dogwood	TP
<i>Swida (Cornus) amomum</i>	
Red-osier Dogwood	J
<i>Swida (Cornus) sericea</i>	

Round-leaved Dogwood <i>Swida (Cornus) rugosa</i>	J
Meadowsweet <i>Spiraea alba</i>	J
Steeplebush <i>Spiraea tomentosa</i>	TP
Shadbush <i>Amelanchier (arborea??)</i>	TP
Dwarf Shadbush <i>Amelanchir spicata</i>	J
Spicebush <i>Lindera benzoin</i>	J
Beach-plum <i>Prunus maritima</i>	RI
Buttonbush <i>Cephalanthus occidentalis</i>	J
?Witch Hazel <i>Hamamelis virginiana</i>	RI
Sweet Fern <i>Comptonia peregrina</i>	J
Willow <i>Salix sp</i>	

VINES

HERBACEOUS (this section is incomplete, needs work)

Jack in the Pulpit <i>Arisaema triphyllum</i>	TP
Joe Pye-weed Woods <i>Eupatorium sp</i>	TP - inland wetland, Black Cherry

GRASSES

Little Bluestem <i>Schizachyrim scoparium</i>	TP
Broomsedge <i>Andropogon virginicus</i>	TP
Big Bluestem <i>Andropogon gerardii</i>	J?
Switch Grass	TP

<i>Panicum virgatum</i>	
American Beach Grass	TP
<i>Ammophila breviligulata</i>	
Saltmarsh Hay	TP
<i>Spartina patens</i>	
Early (Pennsylvania) Sedge	TP?
<i>Carex pensylvanica</i>	
Path Rush	J? - on trails instead of European
grasses?	
<i>Juncus tenuis</i>	

FERNS and CLUB MOSSES

NOTES: The “Currently Found” column indicates where this species is currently known to grow.

“TP” means it is currently found growing at Taylor Point.

“J” means it grows elsewhere in Jamestown.

“RI” means it grows in RI, but has not been found growing in Jamestown.

Annex E: Public Access (Footpath Rehabilitation)

There are currently about 19 footpaths at Taylor Point, many is poor condition. Most provide access to the shoreline from roads or parking areas. Most were never constructed as footpaths, but were simply created by people walking in the same place until the vegetation was gone, after which they started to erode.

Six of the paths provide access from East Shore Road to Potter Cove Beach. These are very short, less than 20 feet long. Several of these are grass kept mowed by RITBA; these are in good condition, with little erosion. A few others, all just a few feet long, are just where people walk.

A new path, about 550 feet long, is proposed along East Shore Road to connect the Black Cherry Woodland Section of Taylor Point with the Conanicut Island Sanctuary.

Four paths are proposed for closure. One of these, in the Bridge Section, will be replace by a new, more erosion-resistant footpath. Two others, one at the east end of the Potter Cove Beach Parking Area and another along the westernmost of the Taylor Point Cliff Section, are eroding and difficult to maintain. After closure, the need for a new path connecting these two areas will be evaluated. Finally, the westernmost of the three paths fanning out to the Taylor point Cliffs will be closed and revegetated.

Public Access (Footpath Rehabilitation) encompasses the following ten plan objectives:

- 7a. Footpaths to Potter Cove Beach from East Shore Road
- 7b. Stairway from Lower Parking Area to Potter Cove Beach
- 7c. Main Footpath to Taylor Point Cliffs
- 7d. West Footpaths to Taylor Point Cliffs
- 7e. East Footpaths to Taylor Point Cliffs
- 7f. New Footpath, Lower Parking to Taylor Point Cliffs
- 7g. Old Cart Path, Black Cherry Woodland
- 7h. Blake Footpath, Black Cherry Woodland
- 7i. Bridge Section Footpath(s)
- 7j. Connecting Footpath, Black Cherry Woodland to Conanicut Island Sanctuary

This Annex contains four Tabs:

Tab E-1: A table of “Footpath Data”, and two maps showing existing trails. These maps were produced by GPS in the summer of 2015.

Tab E-2: “Footpath Design Guidance”, 5 pages, prepared to provide general guidance for design of footpath rehabilitation projects at Taylor Point.

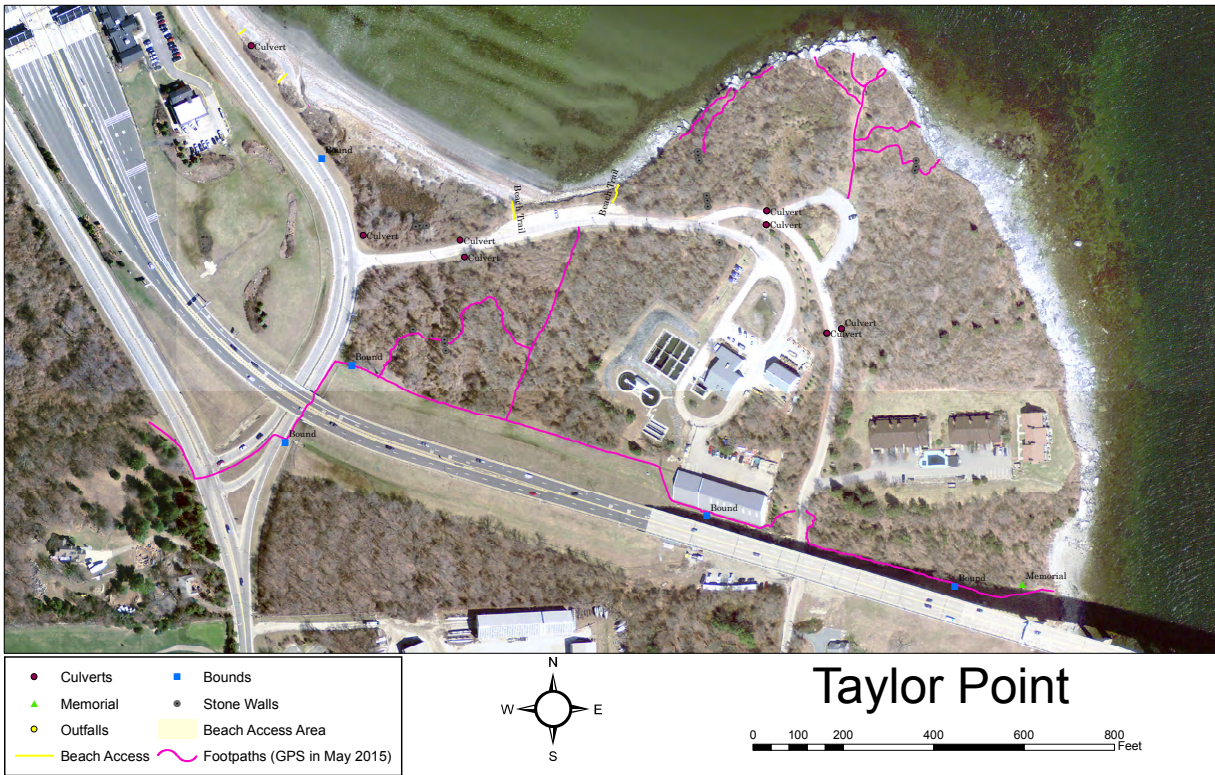
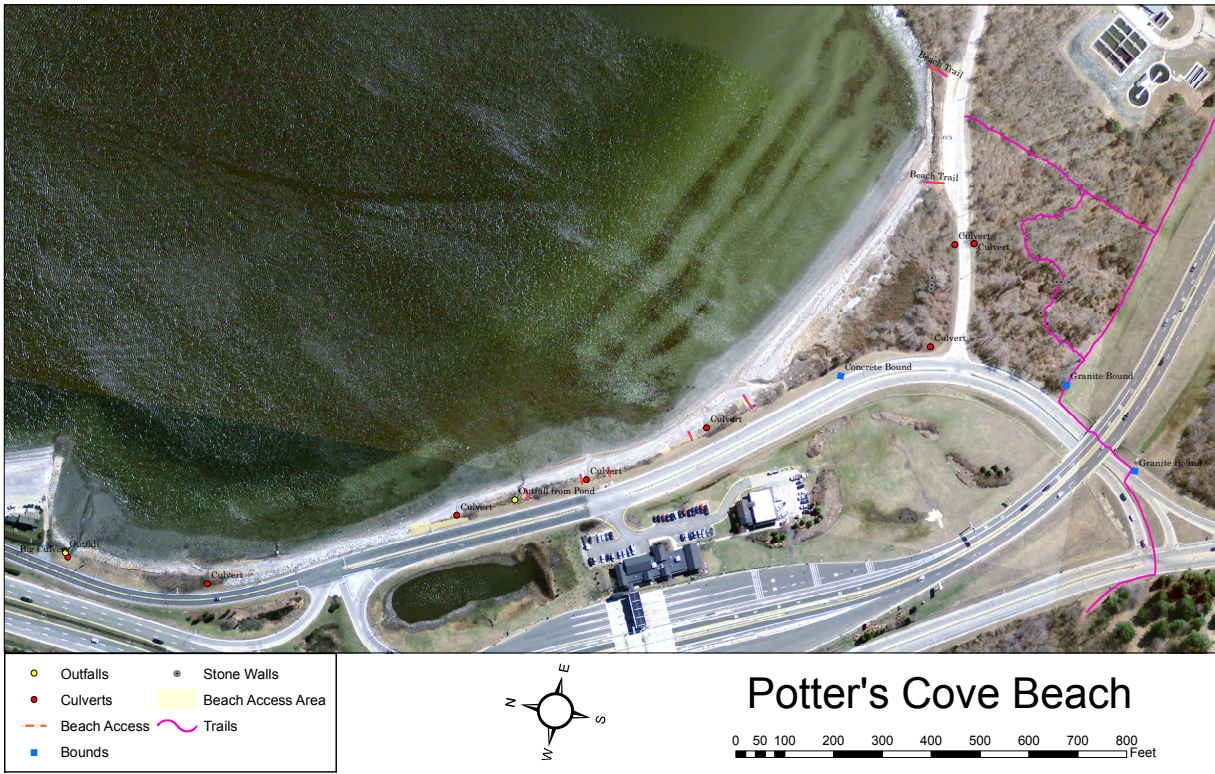
Tab E-3: “Federal Accessibility Guidelines”, an extract from the federal guidelines for trails constructed in compliance with the Americans With Disabilities Act (ADA). While Taylor Point footpaths do not have meet ADA requirements, this provides useful guidance if we decide to build one or more accessible trails.

Annex E: Public Access (Footpath Rehabilitation)

Tab E-1: Footpath Data and Maps

Footpath Data

Footpath Name	Length (ft)	Proposed Width	Notes
<u>Potter Cove Beach Section:</u>			
6 Paths from E. Shore Rd	< 20 ft	various	Rehab
Stairway from lower pkg to beach	20 ft	8 ft	Rehab complete
Path from lower pkg to rip-rap	20 ft		Close and revegetate
<u>Taylor Point Cliffs Section:</u>			
Main path from upper pkg to cliffs	200 ft	8 ft?	Rehab, re-align, evaluate for ADA path
West path to cliffs			Close and revegetate
Northwest path to cliffs		3 ft?	Rehab
Northeast path		3 ft?	Rehab
Southeast path		3 ft?	Rehab
Paths along cliffs, west side			Close and Revegetate
Path from west cliffs to lower pkg		3 ft	evaluate need after closing path to rip-rap in PCB Sec.
<u>Black Cherry Woodland Section:</u>			
Old Cart Path		8 ft?	Rehab
Blake Path		3 ft?	Rehab
Fenceline Path		varies	limited work required
<u>Bridge Section:</u>			
Fenceline Path to Beach			Close, revegetate
New Path to Beach		3 - 4 ft	Construct
<u>Taylor Point to Conanicut Island Sanctuary:</u>			
Proposed Path along E. Shore Rd	550 ft	various	Signs, minor const



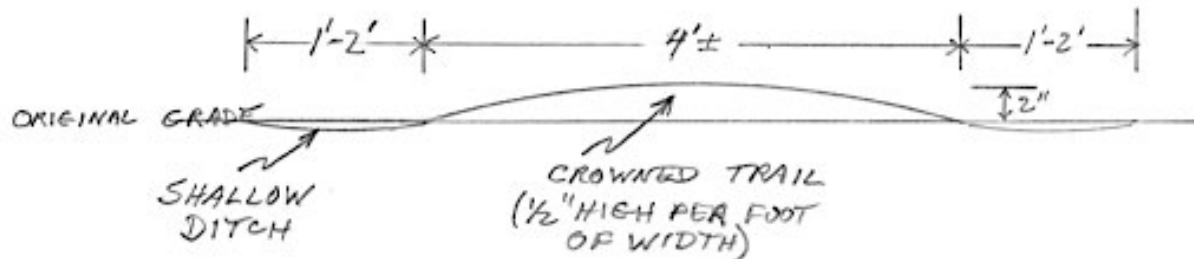
Tab E-2: Footpath Design Guidance

Following this page is guidance for the design of footpaths at Taylor Point. Tab E-2 (Footpath Design Guidance) to Annex E (Public Access)

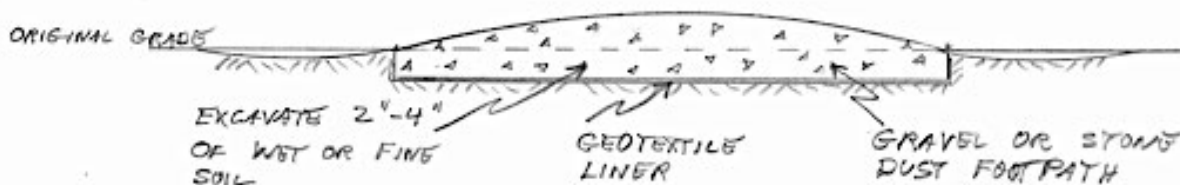
Proper drainage is the key to building a long-lasting footpath, and the cardinal rule when designing a trail is easy to remember: "Water runs downhill."

The notes and sketches below are simplified to illustrate some of the principles of footpath construction. Real-world situations are inevitably more complicated.

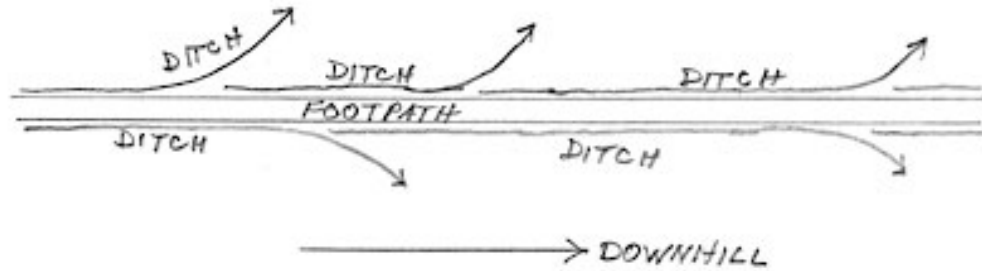
1. Footpaths need to be crowned so rainwater flows off the well-travelled, easily eroded center of the path (which usually is bare with no grass) and into shallow grass ditches alongside the footpath. Lightly used footpaths can be native soil with the leaf-litter and forest duff removed, with more native soil (subsoil, not topsoil) added to form a crown.



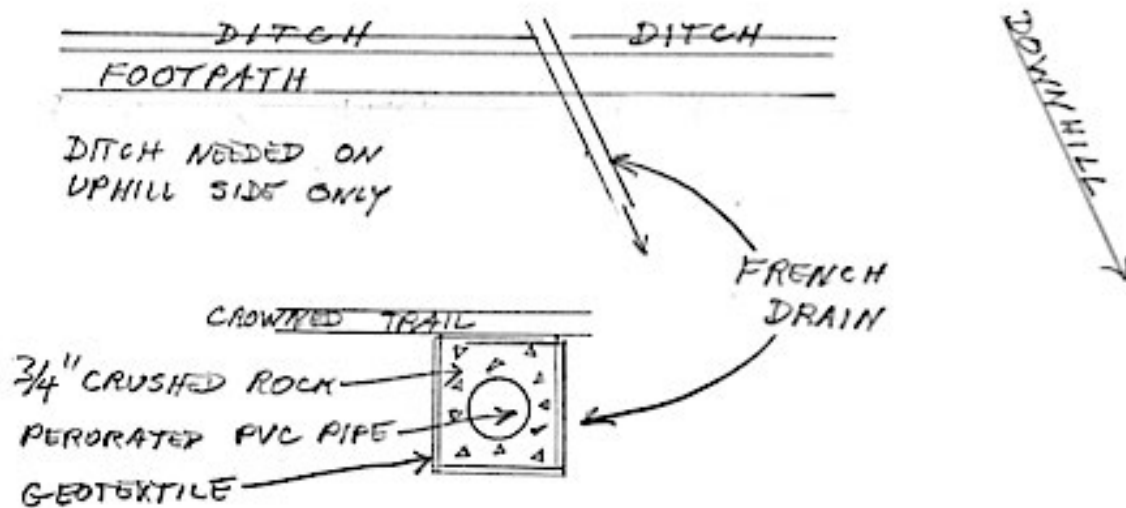
2. Footpaths that get even moderate traffic will hold up better if made from gravel or stone dust. Placing a layer of geotextile fabric over the soil, especially in wet areas, will keep soil particles from mixing with the gravel or stone dust and turning the footpath to mud in wet weather.



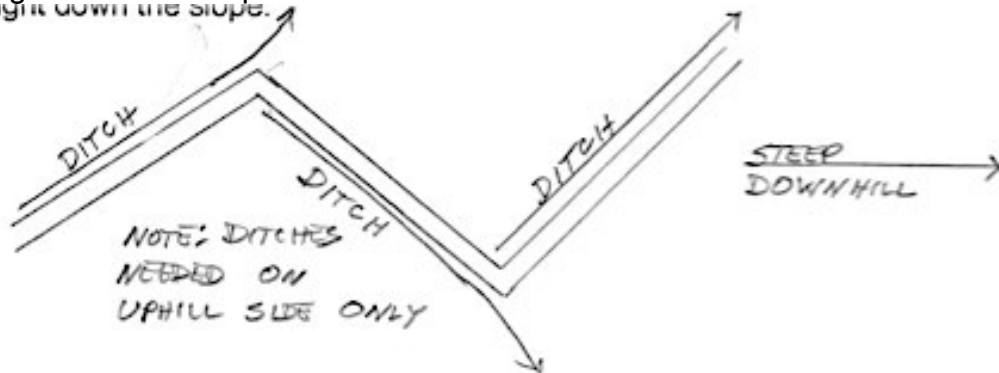
3. When the footpath leads nearly straight down a gentle hill, the ditches on either side should periodically direct the water away from the trail, but in such a direction that it will not flow back across the trail further down and erode it.



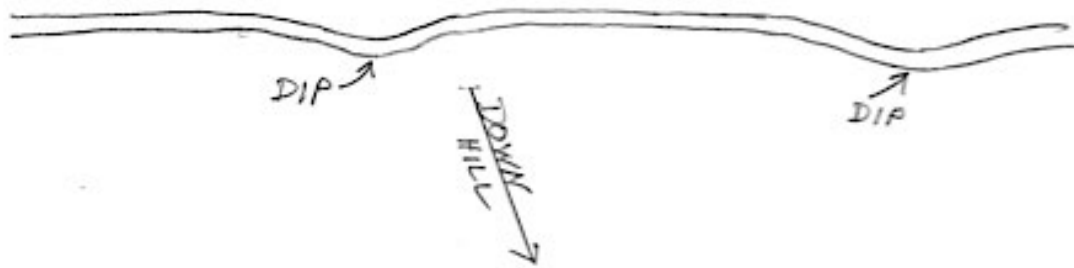
4. Usually the footpath does not go straight down hill, but partially across the slope, so it is necessary to get water to the other side of the footpath. A good way to do this is to use a French drain, 3/4 inch crushed stone wrapped in geotextile (filter fabric). Often a length of PVC pipe with a 1/2 inch hole drilled every 6 inches along the bottom of the pipe is placed within the crushed rock. Whether to use a piece of pipe, and the size of the pipe, depends on the amount of water to be carried by the French drain.



5. On steeper slopes it is often a good idea to use switchbacks instead of running the footpath straight down the slope.



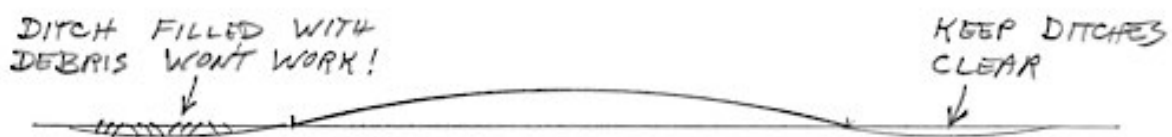
6. When running along the side of a hill, or slightly downhill, an occasional dip in the footpath can sometimes be used to lead water off the trail to the downhill side.



7. Construction of footpaths with earth, gravel, or stone dust is not permanent construction. Foot traffic will wear down the center of the trail pretty quickly, and as soon as the crown is lost - that is, as soon as the center is even slightly lower than the trail on either side, water will run down the center of the trail instead off the sides into the grass ditches. This is erosion, and once it starts, even a little bit, one heavy rain can wash away most of the trail. Earth, gravel, and stone-dust trails need frequent maintenance. Sometimes just raking will do the job, but often a little more stone dust or earth must be added to the center of the trail and compacted. *Maintain that crown!!!* All trails should be maintained every fall. Heavily used trails, or steep trails, may need attention more often.



8. The ditches alongside the footpaths should only be 2 or 3 inches deep (unless they might carry a lot of water). They shouldn't be too noticeable. Because they are so shallow, they will need frequent (probably annual) maintenance. They should be raked clear of debris, fallen vegetation, and heavy grass clippings. Once a ditch fills in it won't do its job any more, and the footpath could wash out



9. In the Taylor Point Cliffs section, the most severe footpath erosion has occurred on the lower ten to twenty feet of the footpaths, where the paths meet the cliff top. The footpath surface must be hardened in these locations to provide good footing, adequate drainage, and a high degree of resistance to erosion.

One technique is to use concrete porous paving blocks with aggregate filling the voids to create a ramp (or, on steeper grades, steps) where the paths transition to the cliff top. In some cases it may be advisable to pin the porous paving blocks to the underlying rock with re-bar pins. (Porous pavers have holes that can be filled with aggregate or vegetation; these are not the same as pervious pavers or permeable pavers.)

Alternatively, steps can be built using rot-resistant Black Locust timbers infilled with aggregate, gravel, or stone dust.

Badly eroded areas of the paths uphill of the pavers will need to be filled to or slightly above the adjacent ground level, crowned to shed water, and have drainage installed on the uphill side, or both sides. French drains beneath the ditches on one or both sides adjacent to the pavers may be necessary.

(Figure to be inserted here.)

Porous concrete pavers are typically 2 3/8 inches thick. Heavyduty pavers for streets and industrial areas may be 3 1/8 inch thick. Typical stair dimensions for maximum comfort (based on the formula: height of riser x width of tread = 75 (h x t = 75)) are:

Slope (Rise/ Run)	Riser Height	Tread Width
12% (1" / 8.33")	3"	25"
13% (1" / 7.68")	3 1/8"	24" - one heavy-duty paver
21.3% (1" / 4.7")	4"	18 3/4"
30% (1" / 3.3")	4 3/4"*	15 3/4" - Two light-duty pavers
33% (1" / 3")	5"	15"
39% (1"/2.6")	5 3/8"	13 7/8" - Two light-duty pavers w/ 5/8" mortar joint
48% (1" / 2.1")	6"	12.1/2"
52% (1" / 1.9")	6 1/4"*	12" - Two heavy-duty pavers
63% (1" / 1.6")	6 7/8"	10 7/8" - Two heavy-duty pavers with 5/8" mortar joint
65% (1" / 1.5")	7"	10 3/4"
85% (1" / 1.17")	8"	9 3/8"

* add 5/8" for mortar joint if blocks are mortared together.

Annex E: Public Access (Footpath Rehabilitation)

Tab E-3: Federal Accessibility Guidelines

The United States Access Board in 2013 updated their guidelines for the construction of outdoor recreation facilities covered by the American With Disabilities Act (ADA) of 1990. These guidelines are available on-line at <https://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/a-summary-of-accessibility-standards-for-federal-outdoor-developed-areas/introduction>

While facilities at Taylor Point are not required to comply with these guidelines, the section on trails provides useful guidance for determining if the slope of the ground and other terrain features will allow trails meeting the standard and, if so, how such a footpath might be built. As footpath rehabilitation projects are designed determinations will be made on the feasibility of building them to ADA standards. A downhill footpath ending at the top of a cliff above the water requires careful evaluation before a decision is made to build to the ADA standard.

Below is a fragment of the guideline pertaining to footpath slope. The entire chapter on trails should be consulted before design.

Running Slope [1017.7.1]

Running slope, also referred to as grade, is the lengthwise slope of a trail, parallel to the direction of travel. Trails or trail segments of any length may be constructed with running slopes up to 1:20 (5 percent). To accommodate steep terrain, trails may be designed with shorter segments that have a running slope and length, as shown in table 2, with resting intervals at the top and bottom of each segment.

Table 2—Maximum Running Slope and Segment Length		
Running Slope of Trail Segment		Maximum Length of Segment
Steeper Than	But Not Steeper Than	
1:20 (5%)	1:12 (8.33%)	200 feet
1:12 (8.33%)	1:10 (10%)	30 feet
1:10 (10%)	1:8 (12%)	10 feet

Trail Running Slope

Whenever possible, trails should be constructed with lesser slopes to provide greater independent access and usability.

To ensure that a trail is not designed as a series of steep segments, no more than 30 percent of the total length of the trail may have a running slope exceeding 1:12 (8.33 percent). The running slope must never exceed 1:8 (12 percent). Resting intervals must be provided more frequently as the running slope increases (figure 8).

CONSTRUCTION TIP—How is running slope measured?

Running slope is often described as a ratio of vertical distance to horizontal distance, or rise to run (figure 9). For example, a running slope of 1:20 (5 percent) means that for every foot of vertical rise, there are 20 feet of horizontal distance. The technical requirements specify running slope as both a ratio and percentage.

Cross Slope [1017.7.2]

Cross slope is the side-to-side slope of a trail tread. Some cross slope is necessary to provide drainage and to keep water from ponding and damaging the trail surface, especially on unpaved or natural surfaces.

When the trail surface is constructed of concrete, asphalt, or boards, the cross slope must be no steeper than 1:48 (2 percent). When the trail surface is constructed of materials other than asphalt, concrete, or boards, cross slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

Resting Intervals [1017.8]

Resting intervals are level areas that provide an opportunity for people to stop after a steep segment and recover before continuing on. Resting intervals are required between trail segments any time the running slope exceeds 1:20 (5 percent).

Resting intervals may be provided within the trail tread or adjacent to the trail tread. When the resting interval is within the trail tread, it must be at least 60 inches long and at least as wide as the widest segment of the adjacent trail tread.

When the resting interval is adjacent to the trail, it must be at least 60 inches long and 36 inches wide. A turning space that complies with section 304.2.3 of the ABA Standards must be provided. The vertical alignment of the trail tread, turning space, and resting interval must be nominally planar so that all the wheels of a mobility device touch the ground when turning into and out of the resting interval.

When the surface of the resting interval is constructed of concrete, asphalt, or boards, the slope of the resting interval must be no steeper than 1:48 (2 percent) in any direction. When the surface of the resting interval is constructed of materials other than concrete, asphalt, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

Annex F: Wetlands

During 2016 Applied Bio-Systems, Inc assessed the wetlands at Taylor Point. They produced an interim report dated November 28, 2016. When TPRA prepares a CRMC Buffer Zone Permit Application for the area(s) containing the wetlands, Applied Bio-Systems will prepare the final report and the CRMC Wetland Application.

At Tab F-1 is the interim Wetlands Assessment

At Tab B-2 is a map produce by Applied Bio-Systems

At Tab B-3 is a list of Vegetation and Wildlife prepared by Applied Bio-Systems and referenced in their report.

Tab F-1: Wetlands Assessment



November 28, 2016

Taylor Point Restoration Project Taylor Point, Jamestown, Rhode Island

Applied Bio-Systems, Inc. inspected the project area to assess the coastal and inland freshwater wetlands habitat, the project habitat unit areas, vegetative plant species and a snapshot of avian use within the site. Our review was confined to the area west of Taylor Point itself. Other information used in this review to develop the Informational Maps includes: RIGIS wetlands mapping, FEMA Floodplain Mapping, Soils Overlay, and the RI Natural Heritage Areas. Three separate field inspections occurred on 3/17/16, 6/13/2016, and 11/28/16. The table of the wildlife and vegetative species noted on the project site are not inclusive, but merely a snapshot of representative species observed during limited site inspections on the dates listed. A more inclusive list, including a list of Invasive Plants, was prepared by one of the members of the Taylor Point Restoration Association.

Please refer to the Appendix for Photographs and informational maps of the overall project area covered by this report.

Habitat Units Observed on the Project Site:

1. **Potter Cove Beach** – A rock and sand beach extends from the western slope of Taylor Point to the west and then north, extending up to the first residential structure on East Shore Road. The Coastal Resources Management Council (CRMC) classifies this shoreline as a Type 1-Conservation Area. These areas are protected for wildlife and wildlife habitat value, scenic value, and, also, that the beach as an unsuitable location for structures due to the dynamic nature of the beach and shoreline. The top of beach is the inland edge of the CRMC Coastal Feature.
2. **Back Beach Area** – This area consists of sand and shale, much of it created by overwash. There is evidence of this overwash sediment that has been trapped by the extensive

invasive shrub honeysuckle growth within the Back Beach Area. Other plant species noted there were typical of back beach habitat such as beach grass (*Ammophila breviligulata*), beach rose (*Rosa rugosa*), and salt marsh grass (*Spartina patens*). The back portion, furthest from the tide line, abuts the upland bank.

3. **Brackish Coastal Wetland** – Behind the southwest corner of the beach is a Brackish Coastal Wetland. This wetland is dominated by tall reed (*Phragmites australis*) with occasional poison ivy (*Toxicodendron radicans*), rose mallow (*Hibiscus moscheutos*), and salt marsh hay (*Spartina patens*) mixed in the understory. This area forms a small barrier pond, however, it is suspected that the water supply is primarily stormwater runoff from East Shore Road and the RITBA administration buildings. It was indicated by the client, that the water breaches at the north end and flows out of this wetland.
4. **Man-Made Features** – Taylor Point Road, a paved access road to Taylor Point and the DPW garage separate the upland forest from the shoreline features. A gravel parking area for beach and fishing access is also located at the top of the coastal bank on the north side of Taylor Point Road. At one time (date uncertain) the Town of Jamestown constructed a rip-rap structure at the toe of the shoreline bank. That structure now needs to be maintained. Sections of the embankment are now eroding.
5. **Freshwater Wetland** – The Freshwater Wetland appears to be more of a drainage feature than biological wetland. It is located on the south side of Taylor Point Road at the downhill apex of the slope and has the appearance of being man-made. A culvert connects this drainage area to the shoreline. The soils indicated in this location by the *Soil Survey of Rhode Island (as amended)* are Newport silt loam, 3-8% slope (NeB). This is a well drained soil that is not typical of those soils found in Rhode Island wetlands. Two drainage swales appear to flow down slope into this area from within the Black Cherry Woodland. Neither of these swales originate in wetland, although there are stories that a spring exists on the upper slope of the Woodland. Presently, this area is vegetated by a grey willow (*Salix cinerea*) and numerous invasive species.

This wetland and the two swales were delineated on a 1997 survey of the site. ABS did not delineate any these areas again in 2016. The 1997 delineation is shown on page #9 of the Appendix.

6. **Black Cherry Woodland** – This upland area has an overstory predominated by black cherry (*Prunus serotina*), but is also dominated by numerous species of invasive shrubs and vines in the understory. Invasive shrubs include (but are not inclusive) two species of honeysuckle (*Lonicera morrowii* and *L. x bella*), and Japanese barberry (*Berberis thunbergii*). Invasive vines observed included black swallowwort (*Cynanchum louiseae*), Japanese honeysuckle (*Lonicera japonica*), and oriental bittersweet (*Celastrus orbiculatus*).

Wildlife and Vegetation Lists:

Observed Wildlife and Vegetation are included on pages 10-12 in the Appendix. Please note that these lists are not inclusive, but are merely a snapshot of the predominant vegetation and wildlife using the area during our field inspections. Vegetation in **bold** type indicates plants that are already on the existing list compiled by the Taylor Point Restoration Association. Wildlife was compiled using observed species, vocalizations, scat, and tracks.

Tab F-2: Maps



Tab F-3: Wildlife and Vegetation

Taylor Point Restoration					
<i>Prepared by Applied Bio-Systems, Inc.</i>					
OBSERVED WILDLIFE SPECIES					
6/13/2016					
species observed by vocalizations, sight, and/or tracks	Beach	Woods	Cliffs	Bridge	Narr Bay
Birds					
american crow (<i>Corvus brachyrhynchos</i>)				X	
American robin (<i>Turdus migratorius</i>)	X	X			X
black capped chickadee (<i>Poecile atricapillus</i>)	X		X		
blue gray gnatcatcher (<i>Polioptila caerulea</i>)	X				
blue-winged warbler (<i>Vermivora cyanoptera</i>)	X				
cedar waxwing (<i>Bombycilla cedrorum</i>)	X	X		X	X
chipping sparrow (<i>Spizella passerina</i>)		X			
common yellowthroat (<i>Geothlypis trichas</i>)	X				
double - crested cormorant (<i>Phalacrocorax auritus</i>)					X
gray catbird (<i>Dumetella carolinensis</i>)	X	X	X	X	
herring gull (<i>Larus argentatus</i>)*			X		
house wren (<i>Troglodytes aedon</i>)		X			
northern cardinal (<i>Cardinalis cardinalis</i>)	X				
northern oriole (<i>Icterus galbula</i>)	X				
ovenbird (<i>Seiurus aurocapilla</i>)	X				
red-winged blackbird (<i>Agelaius phoeniceus</i>)	X				
rufous sided towhee (<i>Pipilo erythrophthalmus</i>)	X				
song sparrow (<i>Melospiza melodia</i>)	X		X		
turkey vulture (<i>Cathartes aura</i>)*	X				
white-breasted nuthatch (<i>Sitta carolinensis</i>)	X				
yellow warbler (<i>Dendroica petechia</i>)	X	X	X	X	
Invertebrates					
azure species (<i>Celastrina</i> sp.)	X				
Species in Bold represent confirmed nesting					
* observed flying over project area					
** identification not confirmed					
Species identified by vocalizations are listed in the habitat where species was identified not necessarily where the species is located					

Taylor Point Restoration			
Prepared by Applied Bio-Systems, Inc.			
2016			
OBSERVED VEGETATIVE SPECIES			
TREES			
Apple (<i>Pyrus malus</i>)			
Black Cherry (<i>Prunus serotina</i>)			
Gray birch (<i>Betula populifolia</i>)			
Norway maple (<i>Acer platanoides</i>)			
Red cedar (<i>Juniperus virginiana</i>)			
Red maple (<i>Acer rubrum</i>)			
Staghorn sumac (<i>Rhus typhina</i>)			
SHRUBS			
Arrowwood (<i>Viburnum dentatum</i>)			
Autumn olive (<i>Elaeagnus umbellata</i>)			
Bayberry (<i>Myrica pensylvanica</i>)			
Beach rose (<i>Rosa rugosa</i>)			
Gray willow (<i>Salix cinerea</i>)			
High bush blueberry (<i>Vaccinium corymbosum</i>)			
Morrow's Honeysuckle (<i>Lonicera morrowii</i>)			
Multiflora rose (<i>Rosa multiflora</i>)			
Sassafras (<i>Sassafras albidum</i>)			
Swamp rose mallow (<i>Hibiscus moscheutos</i>)			
VINES			
Black swallowwort (<i>Cynanchum louiseae</i>)			
Fox grape (<i>Vitis labrusca</i>)			
Greenbrier (<i>Smilax rotundifolia</i>)			
Japanese honeysuckle (<i>Lonicera japonica</i>)			
Oriental bittersweet (<i>Celastrus orbiculatus</i>)			
Poison ivy (<i>Toxicodendron radicans</i>)			
Virginia creeper (<i>Parthenocissus quinquefolia</i>)			
HERBACEOUS PLANTS			
Beach pea (<i>Lathyrus maritimus</i>)			
Bristly dewberry (<i>Rubus hispidus</i>)			
Canada mayflower (<i>Maianthemum canadense</i>)			
Common milkweed (<i>Asclepias syriaca</i>)			
Creeping buttercup (<i>Ranunculus repens</i>)			

Curly dock (<i>Rumex crispus</i>)			
Hay-scented fern (<i>Dennstaedtia punctilobula</i>)			
Joe-pye weed (<i>Hypericum</i> sp.)			
Maritime Orache (<i>Atriplex acadiensis</i>)			
Pokeweed (<i>Phytolacca americana</i>)			
Prickly dewberry (<i>Rhus hispidus</i>)			
Rough-stemmed goldenrod (<i>Solidago rugosa</i>)			
Sand spurry (<i>Spergularia rubra</i>)			
Seaside goldenrod (<i>Solidago sempervirens</i>)			
Spotted St. Johnswort (<i>Hypericum punctatum</i>)			
Wild peppergrass (<i>Lepidium virginicum</i>)			
Wild radish (<i>Raphanus raphanistrum</i>)			
GRASSES			
American beach grass (<i>Ammophila breviligulata</i>)			
Common reed (<i>Phragmites australis</i>)			
Salt hay grass (<i>Spartina patens</i>)			
Switch grass (<i>Panicum virgatum</i>)			
Velvetgrass (<i>Holcus lanatus</i>)			
BOLD - NEW TO EXISTING VEGETATION LIST			

Annex G: Long-term Management and Maintenance *(to be written)*

Annex H: History

This History Annex contains 4 Tabs:

Tab H-1: “A Brief History of Disturbance at Taylor Point”

Tab H-2: Old Maps and Charts of Taylor(s) Point / Potter(s) Point - 3 page typed interpretation of the 13 attached maps and charts (fragments only, showing Taylor(s) Point / Potter(s) Point.), and discussion of other references not attached.

Tab H-3: Air Photos

Oblique air photo showing the western part of Taylor Point, and Freebody Pond, 1920's

9 Air Photos of the Taylor Point area, 1939-2014 from RI DEM.

Tab H-4: Potter family article from May 1913 *Electric Spark*. Probably written by Dr. Lincoln Bates.

Tab H-1: A Brief History of Disturbance at Taylor Point

25 January 2016

A Brief History of Disturbance at Taylor Point

When, in 1637, the English colonists purchased Aquidneck Island from the Narragansett tribe, the purchase agreement included the right to use "...the Marsh or grasse upon Quinunigut..." to feed livestock. These words show that Conanicut Island, almost certainly including the Taylor Point area, had undergone significant human-caused vegetation changes well before European settlement. The Native Americans had likely cleared the land with fire, killing the trees and allowing those grasses, of such great economic importance to the English, to flourish. Very soon after that 1637 agreement, the colonist's sheep were grazing on Conanicut Island, and in 1657 the colonists purchased the island from the Narragansetts and began settlement and farming. The 1658 map of Conanicut Island shows Benedict Arnold (great-grandfather of the infamous Revolutionary War general) as the first European owner of Taylor Point.

Those early colonists constructed houses and barns, cut wood, cultivated the land, planted orchards, grazed their sheep, and built roads and stone walls. Old records show that one of the earliest settlers, "...John Green...immediately sowed hay seed on his land where about he intended to build his house." Was this the first European vegetation deliberately planted on Conanicut Island?

Sometime before the Revolutionary War a farmhouse and barn was built at Taylor Point, and the area was actively farmed. A descendent of Benedict Arnold sold the farm to Andrew Freebody (perhaps with an intermediate owner), who leased it to Peleg Potter then gave it to his son Andrew Potter. Farming continued until the deaths of Andrew and Phoebe Potter in 1874; the abandoned farmhouse burned in 1884. The nature of the farming is uncertain. Certainly some of the land must have been pasture and hayfield. The soil profile for Taylor Point reportedly shows the top 20 centimeters as an Ap layer, indicating that the land had once been plowed; the extent of that plowing is undetermined. An 1873 nautical chart shows two farm buildings, several stone walls, some dirt roads, and two orchards.

In 1900 the old Potter Farm at Taylor Point was subdivided for development, but apparently only one lot sold, the one where the Newport Overlook timeshares now stand overlooking the East Passage. Records show little use of the rest of Taylor Point during the first half of the 20th century, and in 1954 the Town of Jamestown acquired the 56 acres for non-payment of \$16,000 in taxes. Ownership was contested in court until 1965, when the Town's title was confirmed.

Aerial photos from 1939 and 1951/52 show Taylor Point to be fairly open on the east side, with scattered shrubs and trees, but more heavily wooded toward the west. One small house can be seen where the timeshares now stand. The roads were dirt. Strikingly obvious is a pond (Freebody Pond) just west of the Taylor Point cliffs and north of where the Potter Cove Beach parking area now stands. About 1952 the barrier

beach forming the northern border of this pond was excavated and used as fill for the reconstruction of East Shore Road (which was west of the current East Shore Road) and Conanicus Avenue. The 1962 air photos show the pond had disappeared. Today the water north of Potter Cove Beach, where the pond once was, is still very shallow, and, at very low tides, a mud flat appears, extending about 300 feet north into Potter Cove. The CRMC's Beach Special Area Management Plan map shows up to 286 feet of shoreline regression in this area, but we know it is not all from natural causes.

In 1965 the State of Rhode Island acquired more than half the Town-owned land for the construction of the Newport Bridge, which included construction of the massive approach ramp and the current East Shore Road embankment bordering the west side of Potter Cove Beach. In 1969 the bridge opened. The remaining Town-owned land at Taylor Point was just under 25 acres.

Aerial photos from 1962 and 1972 show increasing tree cover at Taylor Point, but with the new bridge fragmenting the woodland.

In 1978 and 1979 the Town of Jamestown built the sewer plant at Taylor Point, just north of the bridge. The sewer outfall pipe, requiring extensive excavation, was buried in the Bridge Section, running parallel to the bridge to the East Passage. Excavated material from sewer plant construction was used to build the embankment for Freebody Drive, creating a small wetland at the northwest end of the Black Cherry Woodland. Excavated material also was used to build the Potter Cove Beach parking area and the Taylor Point Cliffs parking area, including the open grass area immediately to its north. The 1982 aerial photo shows these areas of fill; Freebody Drive is paved, but Bay View Drive is still dirt or gravel and very narrow.

In the late 1980s the Taylor Point Cliffs parking area was paved and landscaped, and two stairways built from the Potter Cove Beach parking area north to the beach. This parking and landscaping is the only work done at Taylor Point that might resemble "restoration." A 1992 aerial photo shows this new parking area, and also shows the Newport Overlook timeshares having replaced the small house, and a paved Bay View Drive, all since the 1982 air photo.

About 2001 rip-rap was emplaced to protect the Potter Cove Beach parking area, and a new stairway to the beach constructed at the west end of the parking area to replace the two built in the late-1980's, which had been destroyed by erosion about 1995. The Town Highway Barn was built immediately north of the bridge in 2009 in part on land purchased from the Bridge Authority, and was incorporated into the Sewer Plant complex.

Over the decades, unmanaged woodlands and shrublands have grown up, changing the once-open character of Taylor Point. The open fields and wide vistas of the 1950's and earlier years are mostly gone. The composition of the new woodlands has been greatly influenced by fragmentation caused by the roads and various structures. This fragmentation increases the woodland borders exposed to sunlight, which in turn promotes extensive growth of vines, smothering and strangling the trees and imperiling the long-term health of the woodlands.

Tab H-2: Old Maps and Charts of Taylor(s) Point

with 13 attached fragments of maps and charts

NOTE: These maps and charts were assembled as part of the effort to determine the origin of the names “Taylor(‘s) Point” and “Potter(‘s) Point” but there is much other useful information to be found here, such as locations of stone walls, orchards, roads, and buildings.

What’s in a Name?

Old Maps and Charts of Taylor(s) Point / Potter(s) Point

The names “Potter(s) Point” and “Taylor(s) Point” are both used to refer to the same geographical feature, and a question has been raised about the origin and usage of those names.

1. Maps and charts, most found with an internet search of “Historical Nautical Charts” and “Historical Topographic Maps”, the Taylor Point portions copied and attached:

1658 Joshua Fisher survey map of Conanicut Island, surveyed and drawn the year after the Newport colonists purchased Conanicut Island from the Narragansett tribe. This fragment shows the Taylor Point area as owned by “Mr. Arnold”, that is, Benedict Arnold, 3-time governor of the Colony of Rhode Island.
(from a photograph of the original map hanging in the Town Clerk’s office.)

1854 Chart of Newport Harbor by Capn Wadsworth, Lts Gedney, Wilkes & Blake, USN, for the American Coast Pilot 17th Ed, 1854. E&GW Blunt, 179 Water Street New York, 1954. Labeled “Taylors”.

1777 Blaskowitz Map, scale 1:50,700. Shows 2 buildings. Labeled as “Taylors Point”.

1864 nautical chart of “Newport Harbor and Approaches” published by the U. S. Coast Survey, 1:20,000. Apparently the first edition of this nautical chart. Labels the point “Freebody’s Pt.”

1870 DeBeers Atlas Map of Rhode Island, scale 1½ inches = 1 mile. Labels the point “Taylors Pt” and shows a building labeled “A. F. Potter”

1873 nautical chart by the “Survey of the Coast of the United States”, 1:40,000. Shows stone walls, one (possibly two) building(s), two orchards. The point is not labeled, but “Potter’s Cove” and “Freebody’s Hill” are.

1887 nautical chart titled “Newport Harbor” (Chart #353), 1:20,000, published by the US Coast and Geodetic Survey. Shows stone walls, two buildings (one house, one

outbuilding), one orchard, a road not on the 1873 chart. Labeled are “Potters Cove”, “Taylors Pt.”, and Freebodys Hill”.

1892 topographical map, “Prudence Island Quadrangle”, 1:62,500. Labeled are “Potter’s Cove” and “Freebody’s Hill”. The point is not labeled. No buildings shown.

1921 Town of Jamestown Plat Map, from the “Jamestown.ri.gov” website, showing roads, property lines, and owners. Overlaid in blue on the 1921 plat map are the 2015 property lines of Plat 7, Lot 1, owned by the Town of Jamestown.

1931 nautical chart, “Newport Harbor and Entrance to Narragansett Bay, Rhode Island”, Chart #236, 1:20,000, published by the US Coast and Geodetic Survey. Several roads not on earlier maps or charts are shown. Earlier buildings not shown. Labeled are “Potter Cove”, “Taylor Pt.” and “Freebody Hill”.

1942 topographical map, “Prudence Island Quadrangle” 1:31,680. Roads similar to 1931 chart. One building (the Ferguson house?) shown. Labeled are “Potter Cove”, “Taylor Pt” and “Freebody Hill”.

1976 nautical chart titled “Narragansett Bay Including Newport Harbor” (chart #13223 formerly C&GS 236), 23rd edition, Nov 1996, published by the National Oceanic and Atmospheric Administration”, 1:20,000. Shows 1 house (presumably the Ferguson house). Labeled are “Potter Cove”, Taylor Pt.”, and “Freebody Hill”. (image not attached; paper copy in private collection).

2. There are four maps and charts hanging in the second floor hallway of the Town Hall:

1658: A copy of the original 1658 survey map of Conanicut Island, prepared by surveyor Joshua Fisher, which subdivided the island among the European settlers who purchased it from the Narragansett tribe in 1657. (A reduced copy of this map, along with a more legible printed version, appears on pages 26 and 27 of *Jamestown, a History of a Narragansett Bay Town*, Enright and Maden, 2010.) The 1658 Fisher map shows Taylor Point being owned by Benedict Arnold, with Caleb Carr possibly owning what is now the most northerly portion of Potter Cove Beach. The point is not labeled.

1776: “A Chart of the Harbour of Rhode Island and Narragansett Bay by T. F. W. Des Barres esq., 20th July 1776.” The chart (a reprint, copyright 1966 by Barre Publishers) contains notes on the July – August 1778 Battle of Rhode Island. “Taylor Point” is labeled (with “Point” spelled out, not abbreviated). It also shows two buildings at Taylor Point in roughly the same locations as on the 1777 Blaskowitz map (presumably both are part of the Freebody/ Potter Farm).

1928: “Ye Olde Map of James Towne or Quononoquitt Island” designed and executed by S. C. King, Jr. in 1928. The same map is reproduced on the endpapers of *Jamestown Affairs* by Sue Maden and Patrick Hodgkin, 1996. It shows an early house at Taylor Point, labeled “Potter House.” The point is not labeled.

1945: A November 1945 edition of the 1:20,000 US Coast & Geodetic Survey Chart of Newport Harbor, which, like the other 20th century USC&GS Charts, labels “Taylor Pt”

3: Other references:

1761 Ezra Stiles map of Conanicut Island (reproduced in *Jamestown Sampler*, Bertram Lippincott, 1980, p.11) shows a house at Taylor Point. The point is not labeled.

1846 map of Jamestown by James Stevens, reproduced opposite p. 1 of *Historical and Architectural Resources of Jamestown, Rhode Island*, (“The Purple Book”) by the Rhode Island Historical Preservation & Heritage Commission, 1995) labels the point “Freebody’s Point.”

19?? – *The Electric Spark*, Volume 5, Numbers 5 and 6, both have references to Potter’s Point. One of these is the text of a lecture to the Jamestown Historical Society on the history of the Potter family at Potter’s Point. (*The Electric Spark*, a periodic publication of Dr. Bates Sanitarium in the first half of the 20th century, is available in three bound volumes in the local collection of the Jamestown Philomenian Library.)

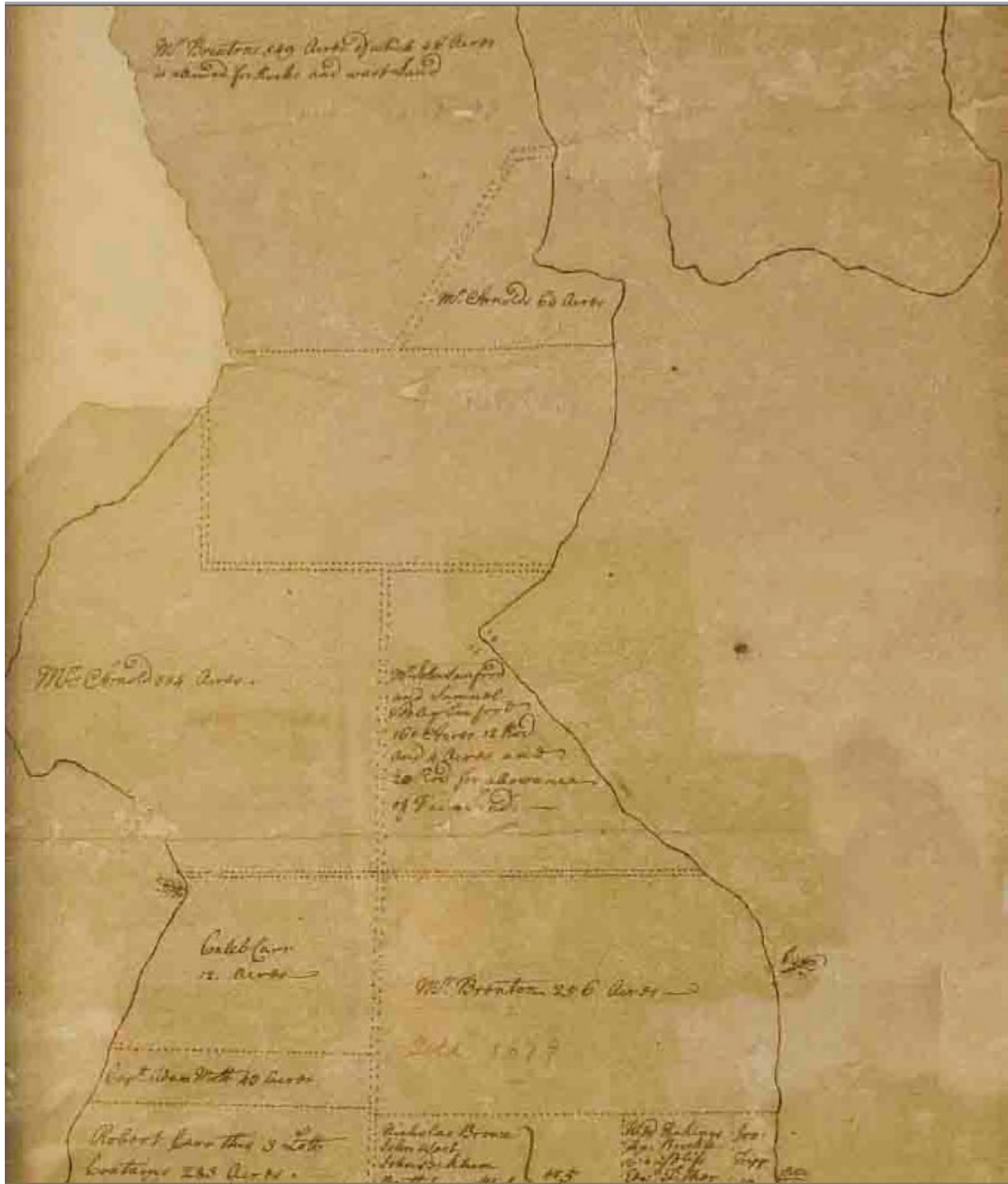
4. The earliest use of the name “Potter’s Cove” found is on the 1873 nautical chart. Earlier charts do not label the cove at all.

5. Before 1900, maps and charts typically labeled geographical features using the possessive form, sometimes with an apostrophe, sometimes without, as in “Freebody’s Hill” or Freebodys Hill.” By 1930, the naming convention had changed; maps and charts had dropped the “s” from the names of features, as in “Freebody Hill.” When spoken, names are pronounced both with and without the “s” sound at the end.

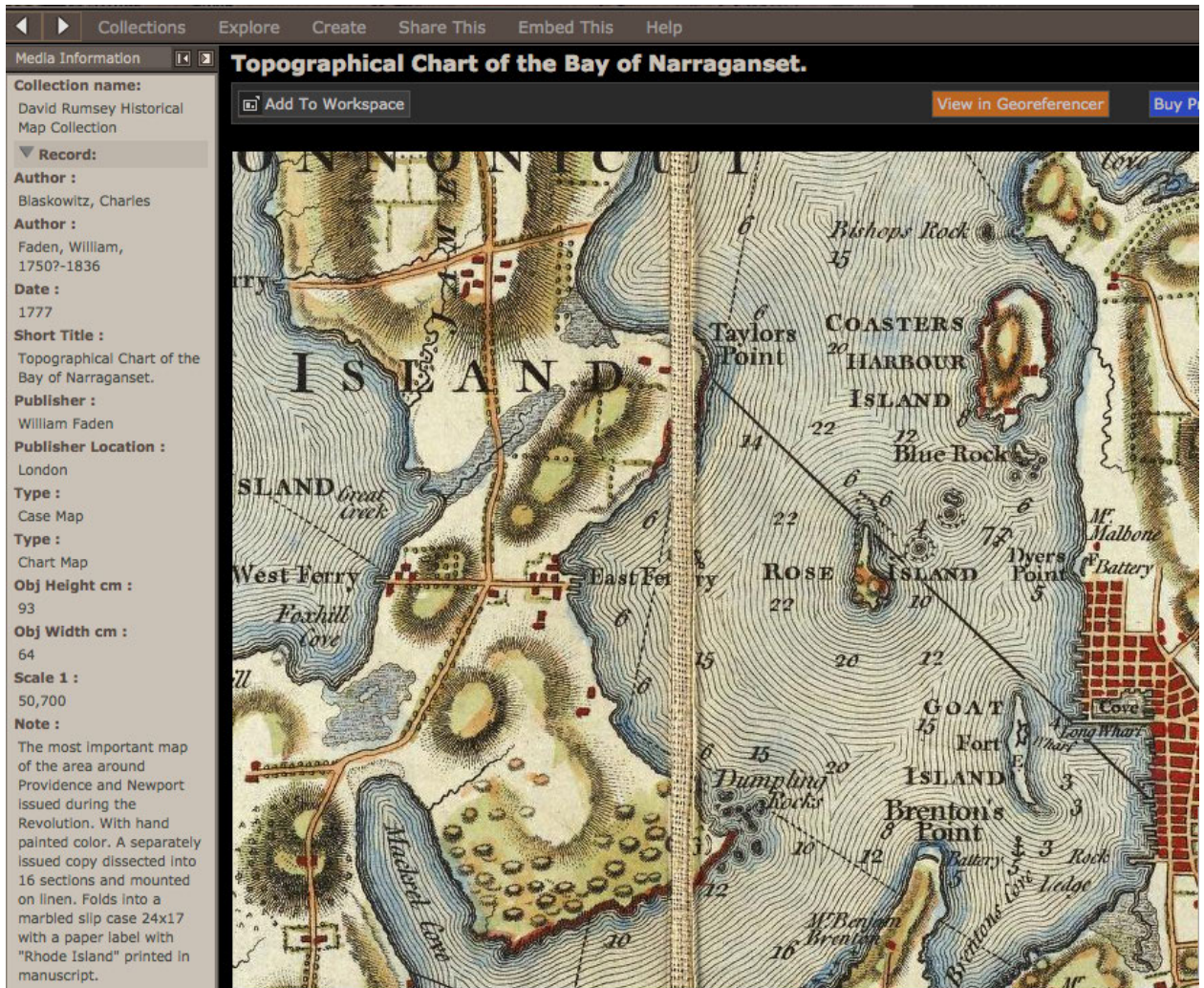
6. Local name(s): Several residents who were raised in Jamestown from the 1930s through the 1960s (Donald Richardson, Mary McGrath Webster, Quentin Anthony, and Beth Sheehan Dicenso) grew up calling it “Potter’s Point,” or perhaps “Potter Point.” Presumably that name is from the Potter family, who lived at and farmed the area from the late 1700’s to the late 1800’s. So “Potter(’s) Point” was apparently the local name at least as recently as 40 or 50 years ago. While the name Taylor(’s) Point appears to be older, we should recognize that the long-used local name of Potter(’s) Point is just as

valid, even if not used on official government charts and maps. A name is what people use to identify something, and a place can have more than one name.

7. The origin of the name “Potter(‘s) Point” seems fairly evident, but further research is needed to determine the origin or the name “Taylor(‘s) Point.” Who was Taylor? When was the name first used for the point? Did the point ever have another, perhaps earlier, name? (On the 1846 map and 1864 chart noted above it was labeled “Freebody’s Point.”)



1658 Joshua Fisher survey map of Conanicut Island, surveyed and drawn the year after the Newport colonists purchased Conanicut Island from the Narragansett tribe. This fragment shows the Taylor Point area as owned by "Mr. Arnold", that is, Benedict Arnold, 3-time governor of the Colony of Rhode Island. (from a photograph of the original map that hangs in the Town Clerk's office.)



1854 Chart of Newport Harbor by Capn Wadsworth, Lts Gedney, Wilkes & Blake, USN, for the American Coast Pilot 17th Ed, 1854. E&GW Blunt, 179 Water Street New York, 1954. The point is labeled "Taylors".

NEWPORT HARBOR, BY CAPT WADSWORTH, LIEUTENANTS GEDNEY, WILKES & BLAKE, U. S. N.



For the American Coast Pilot 1776, E.A. 1858

E.A. G.W. Blunt, 179 Water Street, New York, 1858.

Reduced & Engraved by William Hooper

Ship

1777 Blaskowitz Map, scale 1:50,700. Shows 2 buildings. The point is labeled "Taylors Point".

SURVEY OF THE COAST OF THE UNITED STATES

Triangulation by E. BLUNT Asst.

Topography by W. M. BOYCE H. L. WHITING & A. M. HARRISON Assists.

Hydrography by H. MITCHELL & F. P. WEBBER Assists.

Scale 24000

1864



Verified

J. E. Hilgard

Assist. Coast Survey
In charge of Office.

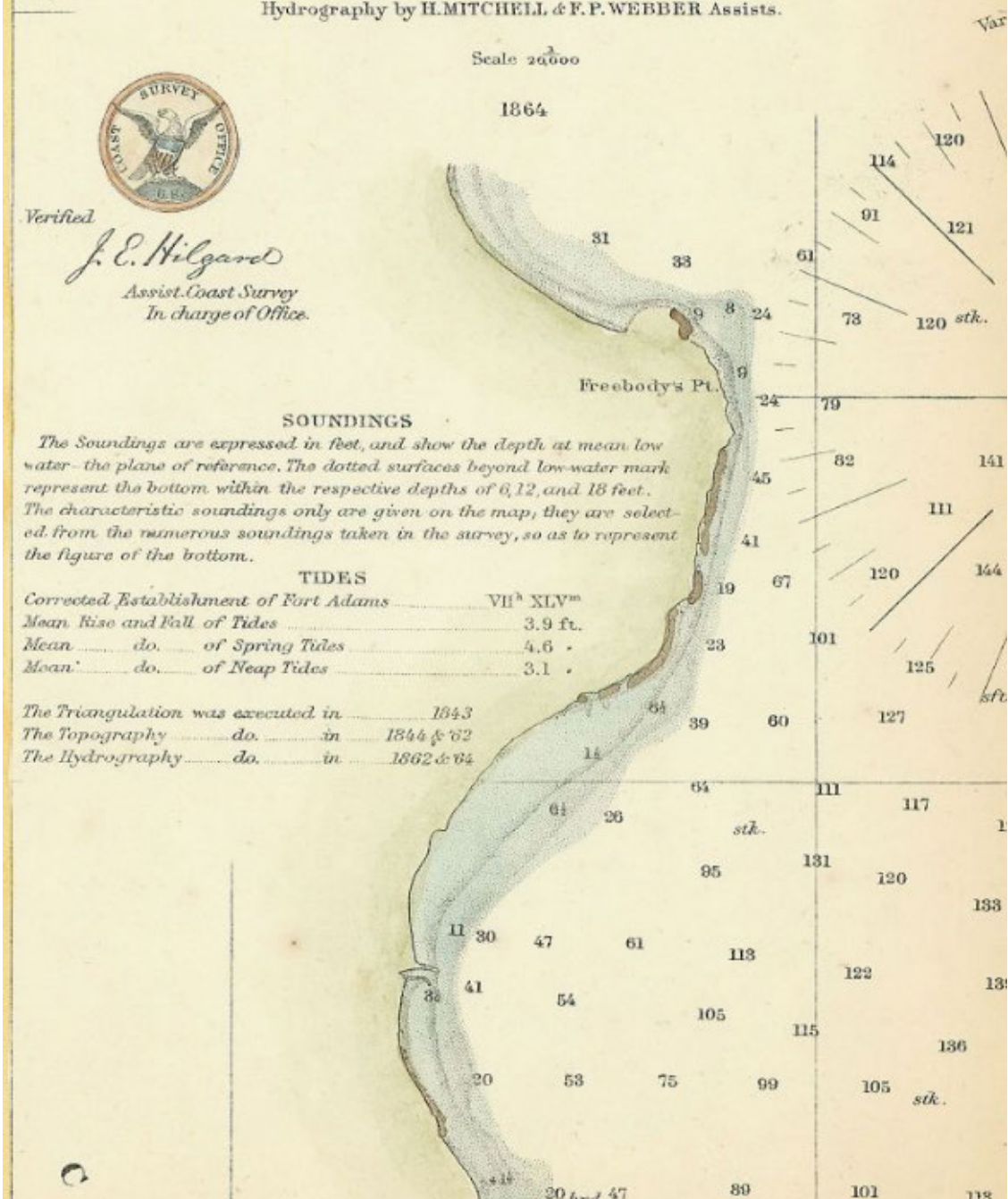
SOUNDINGS

The Soundings are expressed in feet, and show the depth at mean low water—the plane of reference. The dotted surfaces beyond low-water mark represent the bottom within the respective depths of 6, 12, and 18 feet. The characteristic soundings only are given on the map, they are selected from the numerous soundings taken in the survey, so as to represent the figure of the bottom.

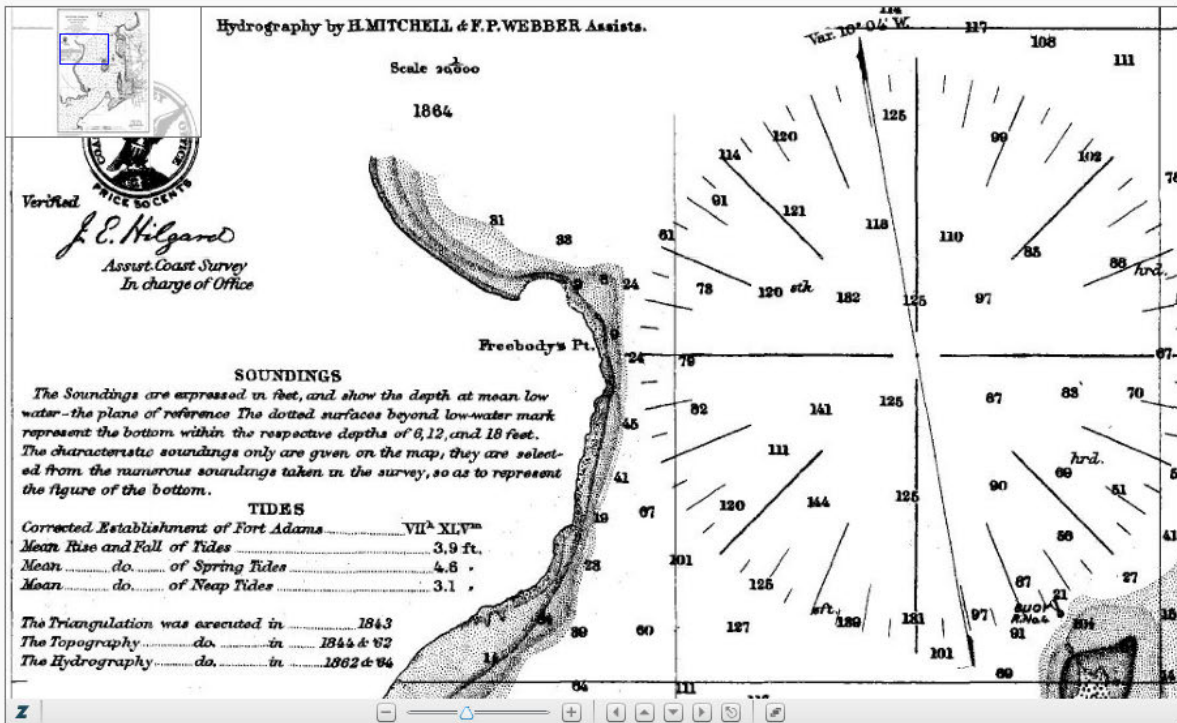
TIDES

Corrected Establishment of Fort Adams	VII ^h XLV ^m
Mean Rise and Fall of Tides	3.9 ft.
Mean do. of Spring Tides	4.6 "
Mean do. of Neap Tides	3.1 "

The Triangulation was executed in	1843
The Topography do. in	1844 & '62
The Hydrography do. in	1862 & '64



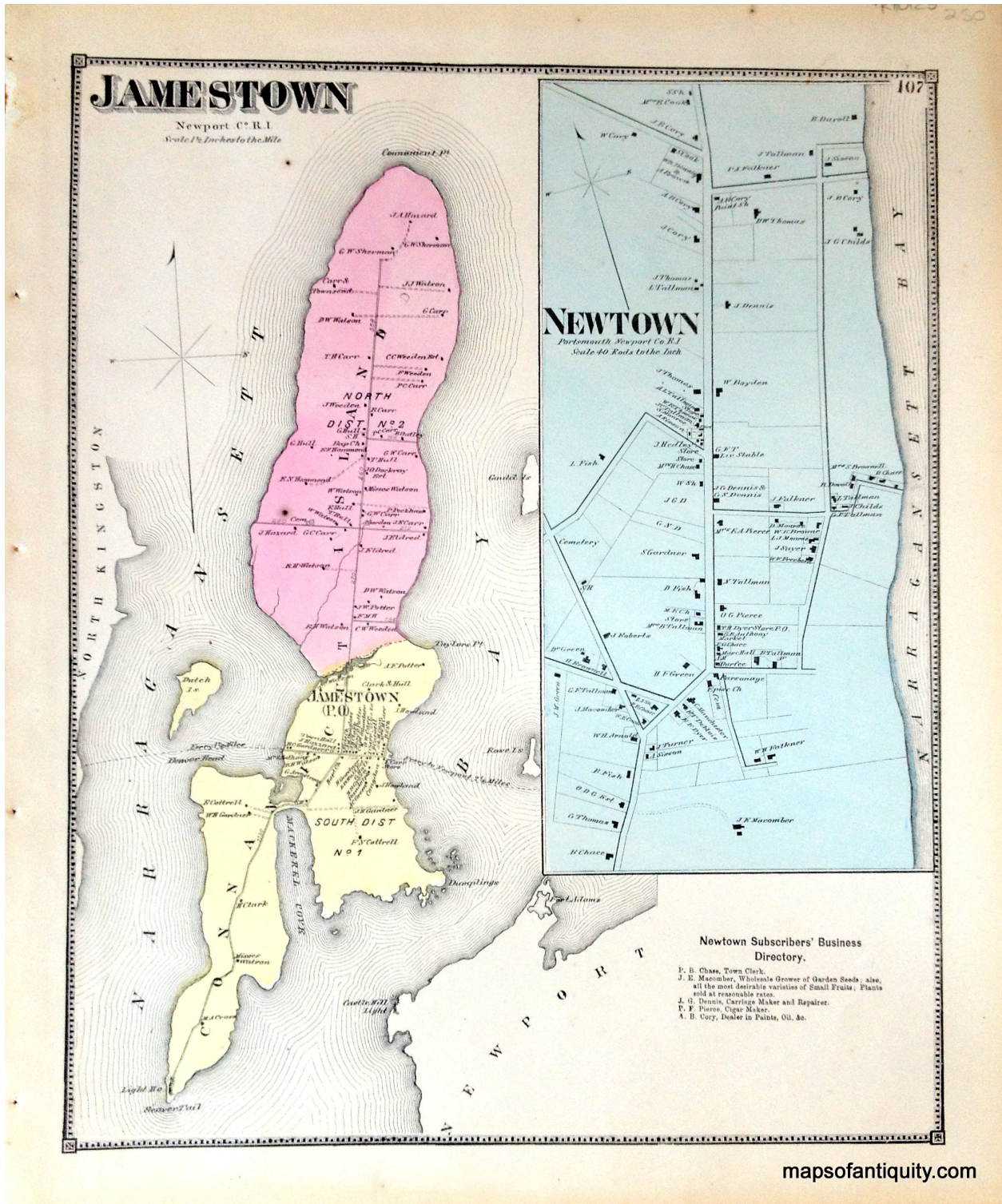
1864 nautical chart of "Newport Harbor and Approaches" published by the U. S. Coast Survey, 1:20,000. Apparently the first edition of this nautical chart. Labels the point "Freebody's Pt."



Bookmark, Share or Download this Image Directly: <http://historicalcharts.noaa.gov/historicals/preview/image/CP934C>

Image: CP934C
 Title: Newport Harbor and Approaches
 Type: Nautical Chart
 Year: 1864
 Scale: 1:20000
 Publisher: U.S. Coast Survey
 Size: 26.0x17.0

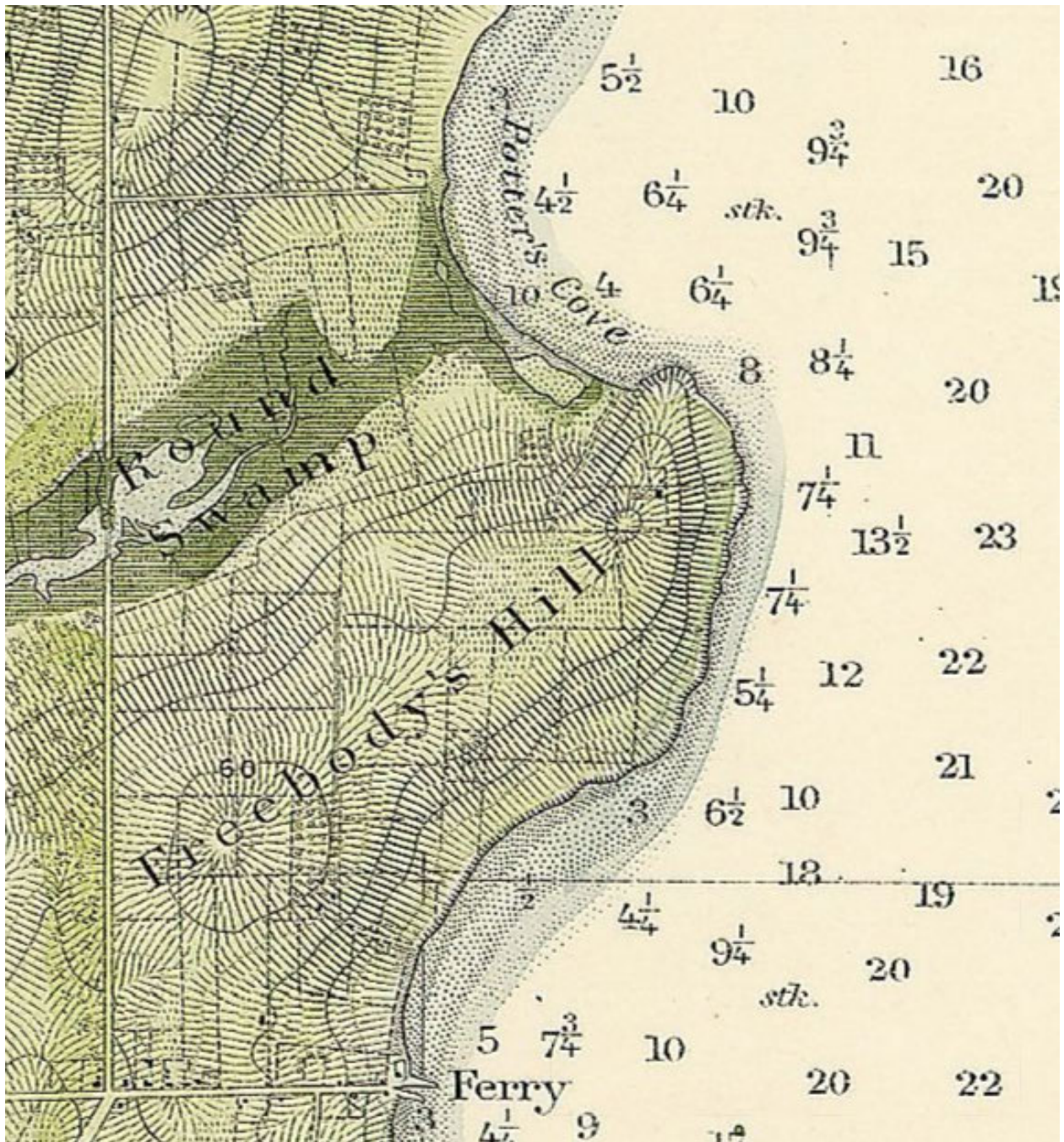
1864 nautical chart of “Newport Harbor and Approaches” published by the U. S. Coast Survey, 1:20,000. Apparently the first edition of this nautical chart. Labels the point “Freebody’s Pt.”



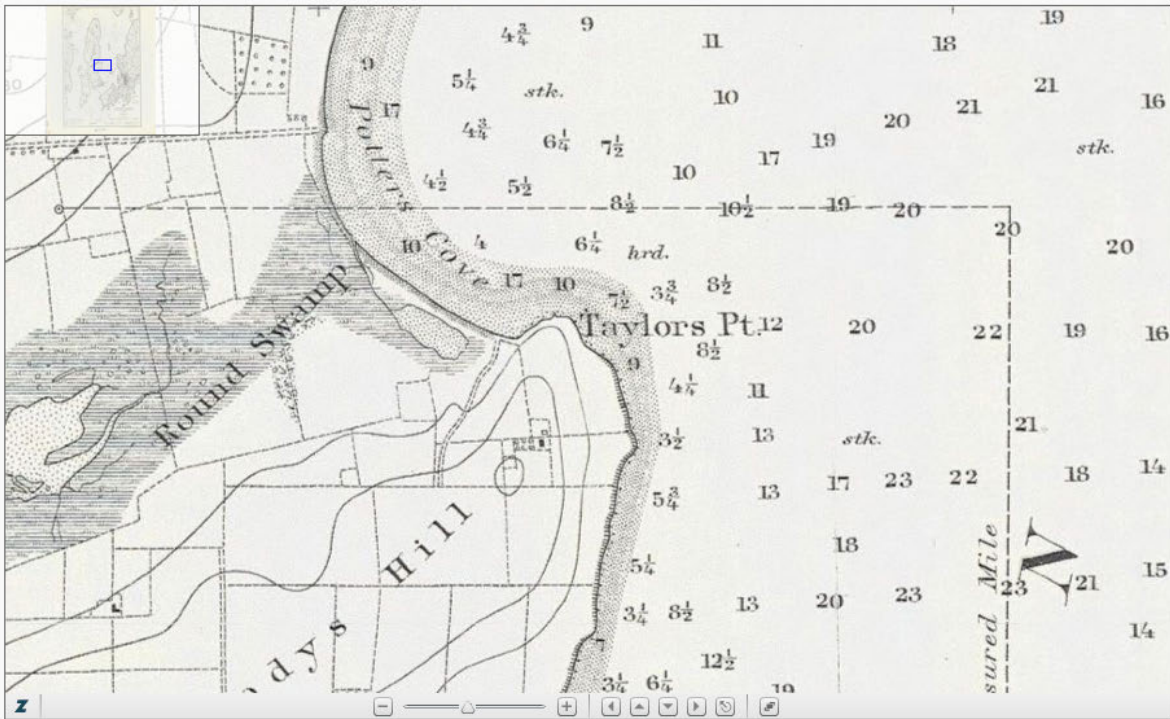
1870 DeBeers Atlas Map of Rhode Island, scale 1½ inches = 1 mile. Labels the point “Taylors Pt” and shows a building labeled “A. F. Potter”



1870 DeBeers Atlas Map of Jamestown



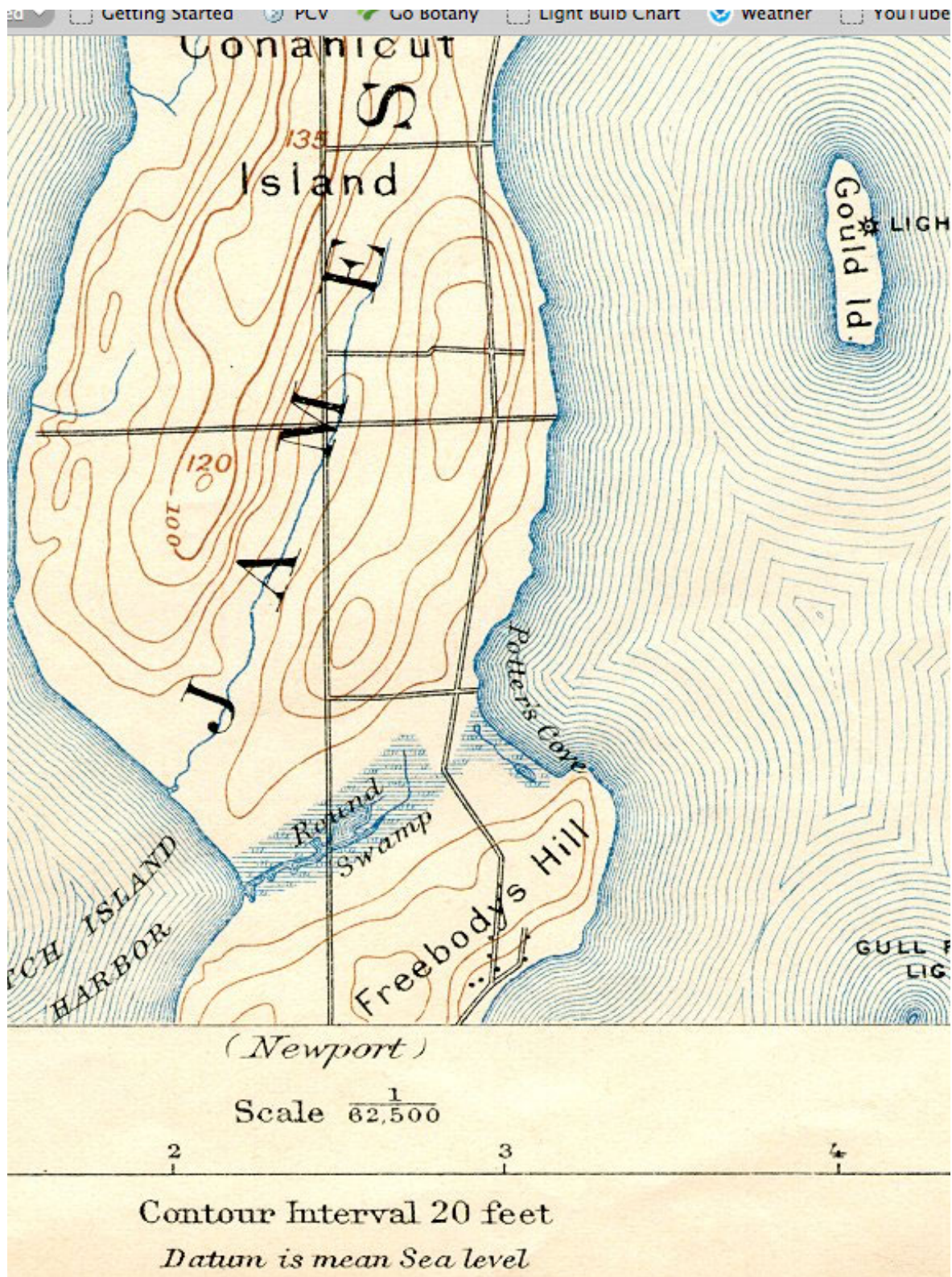
1873 nautical chart by the "Survey of the Coast of the United States", 1:40,000. Shows stone walls, one (possibly two) building(s), two orchards. The point is not labeled, but "Potter's Cove" and "Freebody's Hill" are.



Bookmark, Share or Download this Image Directly: <http://historicalcharts.noaa.gov/historicals/preview/image/353-00-1887>

Image: 353-00-1887
 Title: NEWPORT HARBOR
 Type: Nautical Chart
 Year: 1887
 Scale: 1:20000
 Publisher: US Coast & Geodetic Survey
 Size: 34.0x40.0

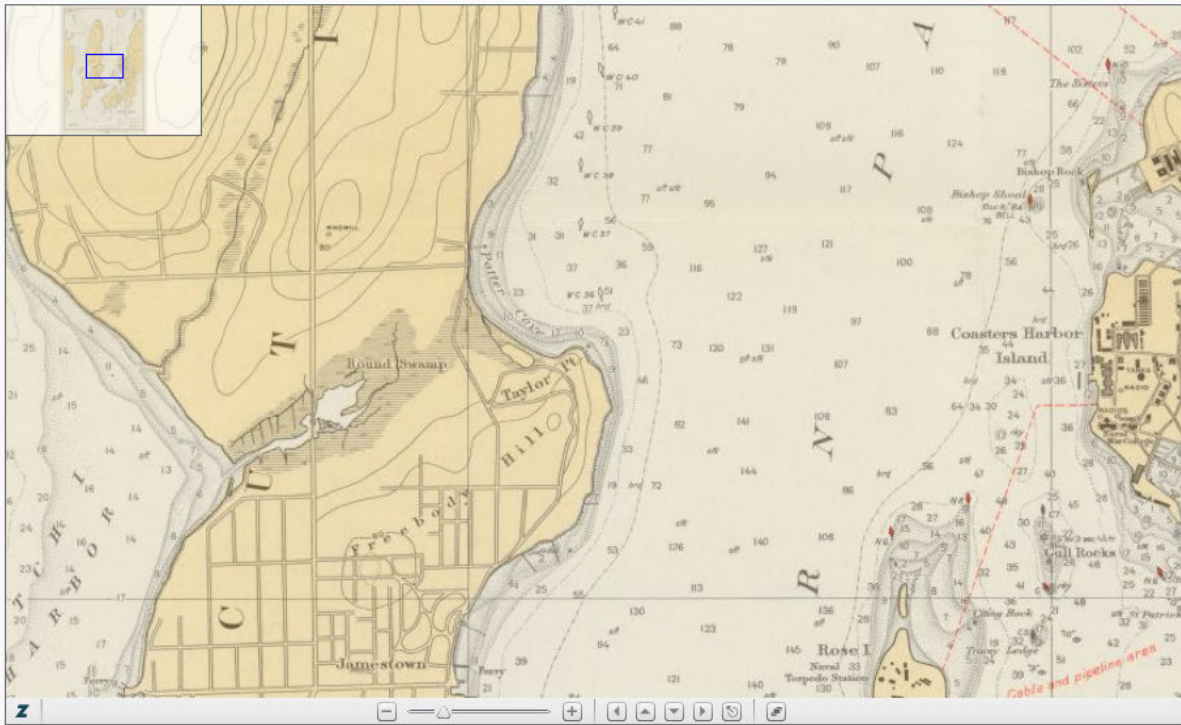
1887 nautical chart titled “Newport Harbor” (Chart #353), 1:20,000, published by the US Coast and Geodetic Survey. Shows stone walls, two buildings (one house, one outbuilding), one orchard, a road not on the 1873 chart. Labeled are “Potters Cove”, “Taylors Pt.”, and Freebodys Hill”.



1892 topographical map, “Prudence Island Quadrangle”, 1:62,500. Labeled are “Potter’s Cove” and “Freebody’s Hill”. The point is not labeled. No buildings shown.



1921 Town of Jamestown Plat Map, from the “Jamestown.ri.gov” website, showing roads, property lines, and owners. Overlaid in blue on the 1921 plat map are the 2015 property lines of Plat 7, Lot 1, owned by the Town of Jamestown.



Bookmark, Share or Download this Image Directly: http://historicalcharts.noaa.gov/historicals/preview/image/LC00236_08_1931

Image: 236-08-1931

Title: NEWPORT HARBOR AND ENTRANCE TO NARRAGANSETT BAY, RHODE ISLAND

Type: Nautical Chart

Year: 1931

Scale: 1:20000

Publisher: US Coast & Geodetic Survey

Size: 26.982x39.903

1931 nautical chart, "Newport Harbor and Entrance to Narragansett Bay, Rhode Island", Chart #236, 1:20,000, published by the US Coast and Geodetic Survey. Several roads not on earlier maps or charts are shown. Earlier buildings not shown. Labeled are "Potter Cove", "Taylor Pt." and "Freebody Hill".

Annex H: History

Tab H-3: Air Photos, 1920's to 2014

At this Tab are:

An Oblique air photo showing the western part of Taylor Point, and Freebody Pond, 1920's

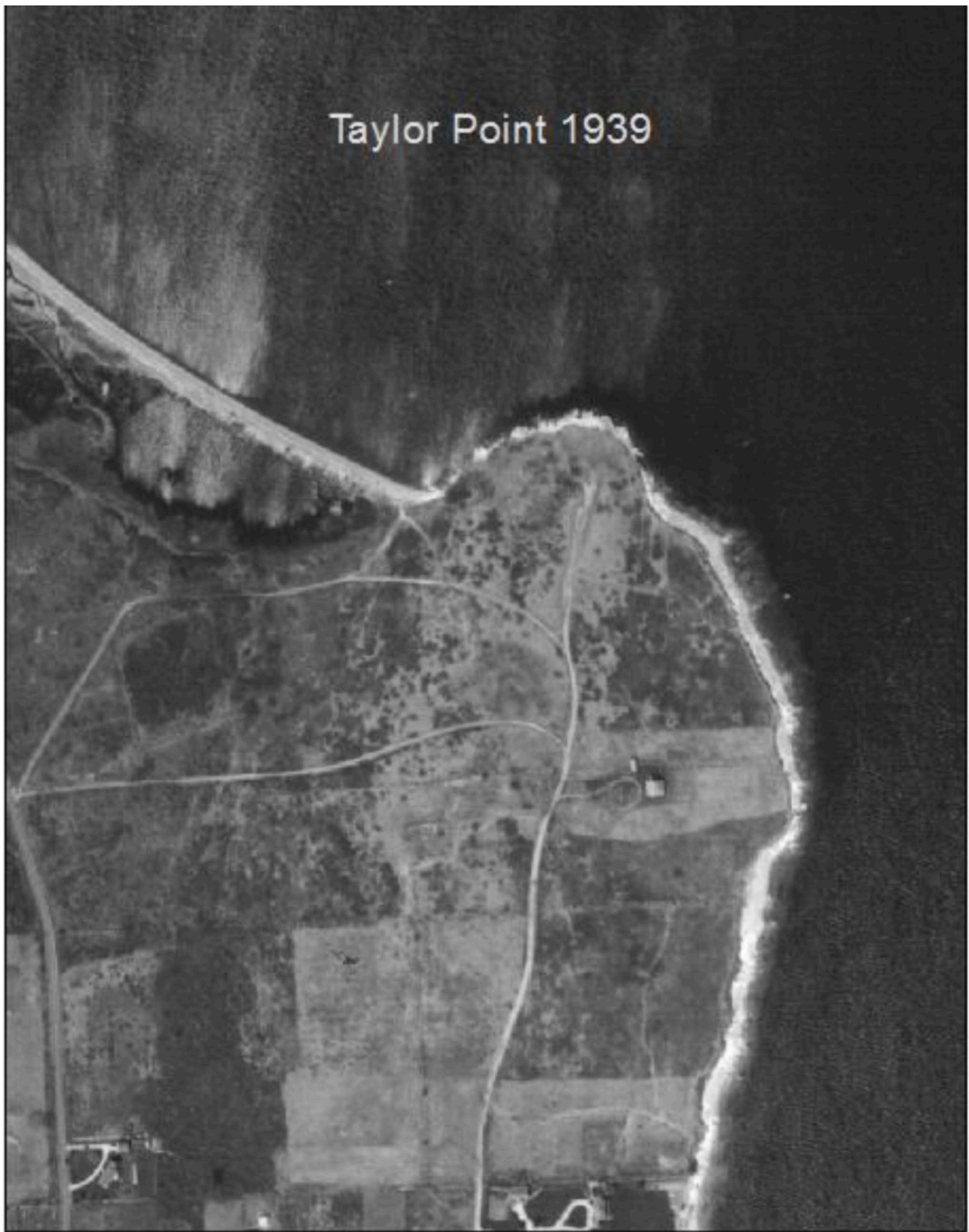
9 Air Photos of the Taylor Point area, 1939-2014, from RI DEM.

Oblique air photo showing the western part of Taylor Point, and Freebody Pond.



JHS photo #P2004M.400, Sanitarium 2 (Plat 8, Conanicus Ave: Aerial View, early 1920s) – “Caption: In the foreground of this photo, ca. 1920’s, is Dr. Bates Sanitarium. Going north, in the center of the picture Mt. Hope Avenue intersects with Conanicus Avenue. In the background are Freebody Pond and Potter’s Cove. Photo courtesy of F. W. Allen, Jr.” (Note: the barrier beach that formed Freebody Pond was excavated for road fill ca. 1952.)

Taylor Point 1939



Taylor Point 1951-52



Taylor Point 1962



Taylor Point 1972



Taylor Point 1981



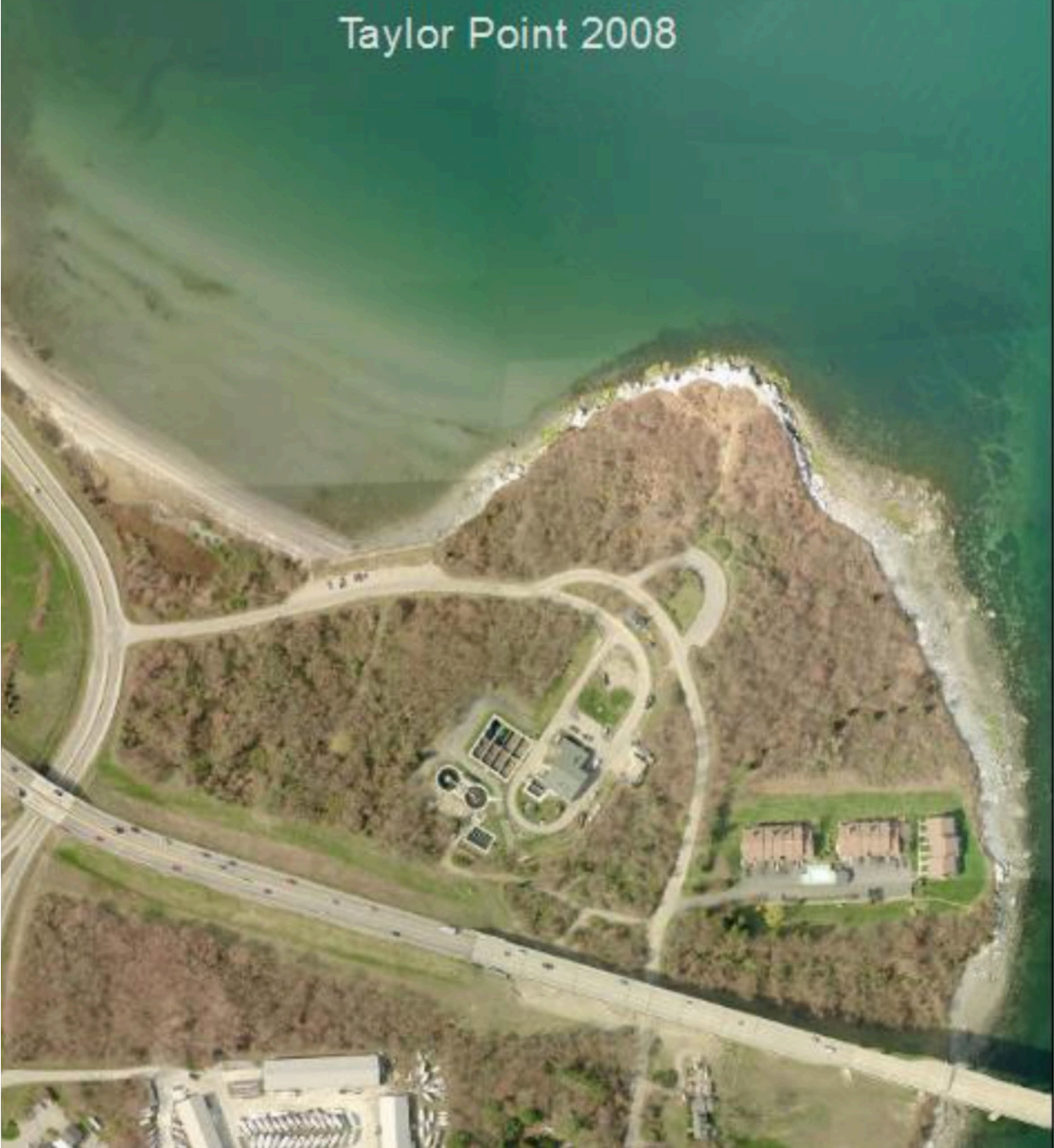
Taylor Point 1992



Taylor Point 2008



Taylor Point 2008



Taylor Point 2014



**Paper Read at the Last Meeting of the
Jamestown Historical Society**

Potters Point was originally owned by Benedict Arnold, who also owned the Bryer farm, and the Dockray farm, now used by the Golf Club. He gave these three farms to his three daughters. There was a family burying ground of Arnolds, on Potters Point farm, and when the farm was sold to Mr. Wilcox, the graves were moved to Cedar Cemetery.

Andrew Freebody bought Potters Point farm from one of Benedict Arnold's daughters. Andrew Freebody was a bachelor. In his will he gave the town of Jamestown \$30 per year, to be used for the needy poor, to be paid by the owner of the farm. When the farm was sold \$700 was put in the Savings Bank of Newport, to be known as the Freebody Fund, and the interest of this is now used by the overseer of the poor, to bestow as he sees fit.

The Freebody Pond on Potters Point, used to be a favorite skating ground, for the boys and girls of Jamestown. This Andrew Freebody also gave land to the City of Newport, including our lot now known as Freebody Park.

Andrew Freebody rented this farm to one Peleg Potter. This Peleg Potter married a Widow Taggart, whose husband was killed in the street of Newport by a Tory, who came up behind him and without provocation thrust his sword through him. Peleg Potter and his wife, Widow Taggart, had four children, John, Martha, Peleg and Andrew. This is the Andrew Potter whom some of us remember. He was named for the Landlord, Andrew Freebody, who gave him the farm for his name.

Andrew Freebody Potter married Phebe Congdon, and lived and died at Potters Point. They had no children, but two of his nephews, John and Isaac, at different times owned, and ground corn in our Windmill.

A "darkey" named Harry, had his home with Andrew Potter many years at Potters Point. He lived to be so old that his long locks had whitened with age, and he had gained the sobriquet of "Old Harry." He always drove Mrs. Andrew Potter to old St. Mathews Church on Sundays in a chaise, drawn by an old white horse.

She alone enjoyed the distinction of being driven to church by the "Old Harry."

It is not known just when the house on Potters Point was built, but it was before the Revolutionary War, for during that war, a cannon ball was fired into it, which passed through the kitchen, and lodged in the back of the big fire-place and the place where it landed was visible as long as the house stood.

After Andrew Potter's death the house was unoccupied, and many old relics were left there by the heirs. Among other things, an interesting cradle, which was built especially for the twins, Isaac and Ann, a niece and nephew of Andrew Potter. This cradle was built of oak, and must be in existence somewhere now, but the house was entered and the marks on three pairs of stairs plainly seen, where it was dragged from attic to cellar, and carried away. If this cradle had not been stolen we might have had it for our Historical exhibit next summer.

Students Accepting

College Men Eager for Training on Battleships

Officials of the Navy Department have been surprised by the wide-spread interest in the proposal of the departments for placing college students on board the battleships of the Atlantic fleet for a two-months' period this summer, to give them training in the rudiments of a sailor's life. Nearly all the institutions which have been invited to recommend students have accepted the invitation. Among the universities and colleges from which favorable replies have been received are Yale, Harvard, Princeton, Perdue, Massachusetts Institute of Technology and the universities of Ohio, Illinois, Minnesota and Michigan.

About 20 students from each institution will be placed on board the battleships. All students from the same college or university will be quartered on the same vessel, so that a spirit of competition will be developed among the different student groups. While the students will be permitted to select the branch of work in which they are especially interested, a course of study in training will be mapped out by the Navy Department. The students on each vessel will be in charge of a junior officer.

Annex J: Projected Work Plan

The attached Projected Work Plan currently runs through 2018.

YEAR	ACTION	V/C	SECTION	SUBSECTION	OBJ
2015	Develop Taylor Point Restoration Plan	V			
	Pull Garlic Mustard pilot project	V	Bridge	Upland	
	Vegetation Management pilot project	V	Woodland	East	3c
2016	Mapping	C	All		
	Wetland Delineation	C	Woodland	West Thickets	
	Maintenance	V	Areas restored in 2015		
	Pull Garlic Mustard	V	Bridge Section	Upland	4a
	Design and Permitting, (Vegetation Management)	V	Black Cherry Woodland	East	3c
	Vegetation Management	V/C	Black Cherry Woodland	East	3c
	Design and Permitting, (Vegetation Management)	V	Potter Cove Beach	North Beach Road Embankment	1a 1b
	Plant Virginia Rose	C	Potter Cove Beach	North Beach	1a
	Design and Permitting, (Vegetation Management)	V	Taylor Point Cliffs	Successional Field Parking Area Public Access Overlay	2c 2g 2h
	Design and Permitting (Footpath Rehabilitation)	C	All		
2017	Maintenance	V	Areas Restored in 2015 and 2016		

YEAR	ACTION	V/C	SECTION	SUBSECTION	OBJ
	Pull Garlic Mustard	V	Bridge Section	Upland	4a
	Vegetation Management	V/C	Black Cherry Woodland	East	3c
	Vegetation Management	V/C	Potter Cove Beach	North Beach Road Embankment Upper Beach	1a 1b 1d
	Vegetation Management	V	Taylor Point Cliffs	Successional Field Parking Area Public Access Overlay	2c 2g 2h
	Design and Permitting, (Vegetation Management)	V	BlackCherry Woodland	West Wetlands Thickets Roadside	3a 3b 3d 3e
	Design and Permitting, (Vegetation Management)	V	Beach	Upper Beach Wooded Swamp	1d 1g
	Footpath Rehabilitation	V/C	Taylor Point Cliffs	Central Footpath	5c
	Design and Permit Signage 2 Kiosks	V	Potter Cove Beach & Taylor Point Cliffs	Parking Area Parking Area	11a 11b
2018	Maintenance	V	Areas Restored in 2015, 2016, & 2017		
	Pull Garlic Mustard	V	Bridge Section	Upland	4a
	Vegetation Management	V/C	Black Cherry Woodland	East West	3c 3a
	Vegetation Management	V	Potter Cove Beach	North Beach Road Embankment Upper Beach Wooded Swamp	1a 1b 1d 1g
	Vegetation Management	V	Taylor Point Cliffs	Successional Field Parking Area Public Access Overlay	2c 2g 2h

YEAR	ACTION	V/C	SECTION	SUBSECTION	OBJ
	Footpath Rehabilitation	V	Taylor Point Cliffs	West East	5d 5e
	Design and Permitting, (Vegetation Management)	V	Potter Cove Beach	Parking Area	1h
	Design and Permitting, (Vegetation Management)	V	Black Cherry Woodland	Wetlands Thickets	3b 3d
	Construct and Install Signage - 2 Kiosks	V/C	Potter Cove Beach & Taylor Point Cliffs	Parking Area Parking Area	11a 11b

Annex K: Values of Native Plants and Biodiversity (*to be written*)

Annex L: Legal Foundation

The vision of “restoring with native vegetation,” “improving shoreline access,” and “improving and maintaining views” is well supported by various constitutional, legal, policy, and regulatory documents (emphasis below is added):

1. RI Constitution, Article 1, Section 17. Fishery rights -- Shore privileges -- Preservation of natural resources. -- **The people shall continue to enjoy and freely exercise all the rights of fishery, and the privileges of the shore, to which they have been heretofore entitled under the charter and usages of this state, including but not limited to fishing from the shore, the gathering of seaweed, leaving the shore to swim in the sea and passage along the shore; and they shall be secure in their rights to the use and enjoyment of the natural resources of the state with due regard for the preservation of their values; and it shall be the duty of the general assembly to provide for the conservation of the air, land, water, plant, animal, mineral and other natural resources of the state, and to adopt all means necessary and proper by law to protect the natural environment of the people of the state by providing adequate resource planning for the control and regulation of the use of the natural resources of the state and for the preservation, regeneration and restoration of the natural environment of the state.**

2. RIGL 46-23-1(2)...**that it shall be the policy of this state to preserve, protect, develop, and, where possible, restore the coastal resources of the state for this and succeeding generations through comprehensive and coordinated long range planning and management designed to produce the maximum benefit for society from these coastal resources; and that preservation and restoration of ecological systems shall be the primary guiding principle upon which environmental alteration of coastal resources will be measured, judged, and regulated.**

3. RI Coastal Resources Management Program (Red Book).
<http://www.crmc.ri.gov/regulations/RICRMP.pdf>

Section 150 (Coastal Buffer Zones), D. (Policies) 4. **Coastal Buffer Zones shall remain covered with native flora and in an undisturbed state in order to promote the Council's goal of pre-serving, protecting, and restoring ecological systems.** However, the Council may permit minor alterations to Coastal Buffer Zones that facilitate the continued enjoyment of Rhode Island's coastal resources.

Section 210.1 (Coastal Beaches), C. (Policies) 1. **“The Council's goals are (a) to preserve the qualities of, and public access to those beaches which are an important recreational resource (adjacent to Type 1 and 2 waters); (b) to prevent activities that will significantly disrupt longshore and/or onshore-offshore beach processes, thereby creating an erosion or flooding hazard; and, (c) to prevent**

construction in high hazard areas; and (d) to protect the scenic and ecologic value of beaches.”

Section 210.1 (Coastal Beaches), C. (Policies) 2. ***“Alterations to beaches adjacent to Type 1 and Type 2 waters are prohibited except where the primary purpose of the project is to preserve or enhance the area as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.”***

Section 210.3 (Coastal Wetlands), C. (Policies) 3. *“The Council’s policy is that all alterations to salt marshes and contiguous freshwater or brackish wetlands abutting Type 1 waters are prohibited **except for minimal alterations required by the repair of an approved structural shoreline protection facility (see Section 300.7), or when associated with a Council-approved restoration activity.** In Type 1 waters, structural shoreline protection may be permitted only when used for Council-approved coastal habitat restoration projects”.*

Section 300.12. (Coastal Wetland Mitigation), A. (Definitions) 1. *“Alterations to coastal wetlands are defined to include, but shall not be limited to: ... and **any significant cutting or removal of vegetation;**.. “.*

Section 330. (Guidelines for the Protection and Enhancement of the Scenic Value of the Coastal Region), A. (General Guidelines) 1. *“The primary goal of all Council efforts to preserve, protect, and, where possible, restore the scenic value of the coastal region is to retain the visual diversity and often unique visual character of the Rhode Island coast as it is seen by hundreds of thousands of residents and tourists each year from boats, bridges, and such public vantage points as roadways, public parks, and public beaches.” 2. “Every effort should be made to safeguard from obstruction significant views to and across the water from highways, scenic overlooks, public parks, and other vantage points enjoyed by the public.”*

Section 335. (Protection and Enhancement of Public Access to the Shore), B. (Findings) 4. *“...The ability to view the coast and shoreline areas without obstruction by structures is an integral component of public access to the shore in Rhode Island.”*

Section 335. (Protection and Enhancement of Public Access to the Shore), C. (Policies) 1. *“It is the Council's policy to protect, maintain and, where possible, enhance public access to and along the shore for the benefit of all Rhode Islanders.”*

Section 335. (Protection and Enhancement of Public Access to the Shore), E. Guidelines for the Development of Public Access Plans 6. *When developing public access plans, applicants may incorporate the following examples:*

(a) Physical access: the ability to reach the shoreline from upland areas via perpendicular access points such as rights-of-way, boat launch ramps, and fishing piers; and, the ability to pass and re-pass laterally along the shore.

(b) Visual access: the ability to view the coast and shoreline areas without obstruction by structures. Visual access can be provided or enhanced through the provision of viewing platforms, observatories, scenic drives, and innovative architectural designs.

(c) Interpretive access: the provision of signage, plaques, or other techniques to educate the public about the historical, ecological, economic, cultural or other significant aspects of a coastal site.

4. CRMC Policy (from “Topics”> “Invasive Species” at

<http://www.crmc.ri.gov/invasives.html> : ***“It is the policy of the CRMC to encourage the restoration of upland coastal buffer zone habitats through the management of invasive plants and the protection and enhancement of native plant communities. A successfully restored buffer zone is one that contains a diversity of native plants, varied plant layers and suitable vegetative structure for wildlife cover. ...”***

5. Jamestown Zoning Ordinance, Article 2, Section 82-200: “OS-I Conservation Preserve. Intended to preserve, protect, and enhance where appropriate environmentally sensitive and natural resource areas such as conservation areas, watersheds, reservoirs, wildlife refuges, and wetlands.”

6. Jamestown Community Comprehensive Plan, 2014

Map 14 - “Shoreline Access: Existing and Potential Rights-of-Way”

ROW # 20 East Shore Road Park (“no recommendation until further review”) (check for exact location of this ROW)

ROW # 21 Potter’s Cove (No. 1 Priority Site)

ROW # 22 Taylor’s Point (No. 1 Priority Site)

Map 13 - Projected Sea Level Rise

Map 2 - Conservation Areas

Map 17 - Protected Areas

Map 21 - Municipal Facilities & Areas of Interest (label: “Taylor Point Town Park and Beach”)

P. 72, Section I.D.1.2., Water Resources.

a. Coastal Resources, 2) Public Rights-of-Way “Number 1 sites should be fully supported and maintained with existing parking and facilities. Number 1 indicates that the Town assigns the site the greatest importance and priority for public access. These sites can support the most people, have facilities already in place, need little if any improvement, and should be fully maintained. It is interesting to note that the Number 1

sites in Jamestown alone constitute roughly 15% of Jamestown’s total shoreline. The Town should give these primary sites the highest priority for full maintenance. These should be posted as public rights-of-way.”

P. 262, Coastal Resources, Policy #1, “Encourage acquisition of unique, fragile, and scenic coastal areas,” Action b, “Actively seek outside funding for shoreline acquisition and protection.” (Conservation, Planning Commissions) - “ongoing as opportunities arise”

P. 263, Coastal Resources, Policy #2, “Encourage land management that provides opportunities for public waterfront access,” Action c, “Actively seek outside funding for enhancement of selected right-of-ways.” (Recreation Dept) - “ongoing as needed”

P. 270, Wildlife and Vegetation, Policy #1, “Properly manage areas designated as significant habitats.”

Action a, “Prepare, apply, and enforce Management Plans for all areas identified as significant habitats. Periodically re-evaluate the existing Management Plans for areas of habitat diversity and update as appropriate with assistance from the State Natural Heritage Program.” (Conservation Commission)

Action b, “Establish contacts with appropriate federal, state, and non-profit agencies that have responsibility for habitat management in Jamestown and coordinate management plans with these agencies.” (Conservation Commission)

P. 273, Cultural and Historic Resources, Policy #3, “Preserve scenic views and corridors on the island.” Action a. “Investigate methods of controlling vegetation growth that will impact scenic views.” (Town Administrator, Public Works)

P. 277, Conservation and Open Space,

Policy #3, “Support community educational programs with focus on open space conservation.” Action a, “Encourage continued educational lectures and field trips to open space areas on the Island.” (Conservation Commission)

Policy #5, “Manage publicly owned open space areas to preserve their integrity.” Action a. “Develop management plans for all public open space areas that focus on the protection of the specific features that make them valuable.” (Conservation Commission) Action b. “Establish a system and means whereby management plans are carried out.” (Town Administrator) Action d. “Manage publicly owned spaces to insure historic view sheds are corridors are not lost.” (Recreation Dept)

P. 285, Recreation, Policy #4, “Expand available passive and active recreational facilities to accommodate the growing population of the island.” Action a, “Review property for potential active and passive recreation opportunities.” (Recreation Dept). Action b, “Review and preserve public access to water to accommodate growing demands for active and passive recreational water activities (Town Administrator).

Annex M: Education and Community Engagement *(to be written)*

Annex N: Volunteer Support *(to be written)*

Annex R: References and Resources

General:

Vascular Flora of Rhode Island, A List of Native and Naturalized Plants by Lisa Gould, Richard Enser, Richard Champlin, and Irene Stuckey, The Rhode Island Natural History Survey, 1998. This book lists every species of vascular plant growing in the wild in Rhode Island, and identifies them as native or non-native. (Our goal is to have only plants listed as native to Rhode Island, indicated by a “1” in the “RI Status” column, growing at the Taylor Point Natural Area.) This is our primary reference of what’s native and what’s not. Available from the RI Natural History Survey, as of early 2017 it is under revision; some of the scientific names are outdated.

www.gobotany.newenglandwild.org (On the New England Wildflower Society website) A useful, up-to-date online guide to wild plants in New England, with multiple photos, list of characteristics, native/alien status, invasive status, and rarity status by state.

www.rinhs.org (Rhode Island Natural History Survey website) At the top of the page, click on “Partners & Resources,” then on the left click on “Download RINHS PDF of “Rhode Island Ecological Communities Classification” by Richard W. Enser, 33 pages. We may need expert advice to determine what ecological communities exist at Taylor Point, what ecological communities would be appropriate to develop there (if different), and what species of plants should be planted in which areas to establish these appropriate ecological communities.

Native Plants:

uri.edu/cels/ceoc/coastalPlants/CoastalPlantGuide or <http://cels.uri.edu/testsite/coastalPlants/CoastalPlantGuide.htm> (URI/CRMC Rhode Island Coastal Plant Guide.) Lists plants, native and non-native, suitable for growing along the Rhode Island coastline, searchable by various plant characteristics.

web.uri.edu/rinativeplants This is the new (as of late 2014) web-based RI Native Plant Guide. On the “Search” page, if you put in certain plant attributes that you are searching for, it will give you a list of plants that fulfill your search requirements. While on the search page, click on and read “what are native plants” on the right hand side. On the “Resources” page, click “Propagation Protocol Database,” then “Search Continental US...” for useful propagation information.

www.crmc.ri.gov/coastallandscapes.html (CRMC Coastal Landscapes Program) provides links to

(1) Coastal Buffer Zone Planting Guide

(2) CRMC Coastal Buffer Zone Management Guidance (instructions for submitting an Application for Buffer Zone Management)

<http://rinhs.org/who-we-are-what-we-do/programs-projects/rhody-native-home/> (Rhody Native page on the RI Natural History Survey website) From the Rhody Native home page, click on “About” for several pages of useful guidelines about the way Rhody Native propagates native plants.

www.riwps.org (Rhode Island Wild Plant Society website). Click on “Growing Natives”, then “Cultivation Notes” to find instructions for propagating many native species, and growing them from seed.

<http://www.newfs.org/conservestateoftheplants> (New England Wild Flower Society). This link goes to the New England Wild Flower Society’s page on “*The State of the Plants*”, their report released in April 2015 that is “the most comprehensive assessment of New England plant communities ever assembled.” Download the full 73 page report or the 10 page summary report.

The following three books by William Cullina contain instructions for propagating plants:

Native Trees, Shrubs, and Vines: A Guide to Using, Growing, and Propagating North American Woody Plants by William Cullina, New England Wildflower Society, Jun 12, 2002. Hardcover. \$120.71 new at Amazon.com

The New England Wild Flower Society Guide to Growing and Propagating Wildflowers of the United States and Canada, by William Cullina, New England Wildflower Society, Apr 15, 2000. Hardcover. \$109.50 new at Amazon.com

Native Ferns, Moss, and Grasses: From Emerald Carpet to Amber Wave, Serene and Sensuous Plants for the Garden, by William Cullina, New England Wildflower Society, Feb 19, 2008. Hardcover. \$96.58 new at Amazon.com

nsl.fs.fed.us/nsl/wpsm.html (US Forest Service) Link to *The Woody Plant Seed Manual*, US Dept of Agriculture Handbook 727, July 2008. A large book with detailed seed starting descriptions. Available on-line.

Raising Native Plants in Nurseries: Basic Concepts, General Technical Report RMRS-GTR-274, by R. K. Dumroese, T. D. Landis, and T. Luna, USDA Forest Service, Rocky Mountain Research Station, 240 West Prospect Rd., Fort Collins, CO 80526. An 84 page booklet, hard copy can be ordered for free, online pdf at www.fs.fed.us/rm/pubs/rmrs_gtr274.html

Invasive Plant Species:

www.rinhs.org (Rhode Island Natural History Survey). Click “Invasive Species Portal,” then click “Invasive Species Lists.” In paragraph 5 of the document, click on [Download a copy of the 2001 invasive plant list. PDF/90KB](#) or in paragraph 6 click on [Rhode Island Invasive Species 2013 b](#). Both lists are still valid, the 2001 list has not been superseded by the 2013 list.

www.eddmaps.org Website of The Invasive Plant Atlas of New England (IPANE), intended to be “a comprehensive web-accessible database of invasive and potentially invasive plants in New England...,” this site appears to have had little recent activity. Nevertheless, it contains some worthwhile information.

web.uri.edu/ceoc/invasive-plant-management-certification-program-ipmcp/
(URI Outreach Center - Invasive Plant Management Certification Program (IPMCP))

(1) Signup for 2-day training course and certification as Invasive Plant Manager, Wed and Thurs, July 22 and 23, 2015, 9 am to 4 pm, URI - tuition \$100

(2) Scroll to bottom and click on “Management Fact sheets” for detailed info on eliminating various invasive species. We will use these fact sheets for planning and implementation of invasive eradication.

(3) At the bottom, click on “Invasive Plant FAQ” for useful information.

www.crmc.ri.gov/invasives.html (CRMC Invasive Species page) CRMC policy statement on Invasive Terrestrial Plants, and links to various resources

www.dem.ri.gov/programs/bnatres/agricult/pesticide.php RIDEM web page on Pesticides, with a link to the 2-day URI pesticide course leading to a pesticide applicator’s license.

www.invasive.org/gist/handbook.html Weed control methods handbook published by The Nature Conservancy

www.newss.org/index.php The website of The Northeastern Weed Science Society. Many resources including fact sheets, proceedings of annual meeting research papers, links to many other useful sites.

www.cdms.net/labelsmsds/lmdefault.aspx or www.cdms.net/label-database useful to view the entire label of any herbicide product on-line.

Invasive Plants: Guide to Identification and the Impacts and Control of Common North American Species, 2nd Edition by Sylvan Ramsey Kaufman and Kaufman, 2007

Regulations and Guidelines:

<http://www.crmc.ri.gov/regulations/RICRMP.pdf> to download a PDF of the Coastal Resources Management Program (CRMP), also known as the Red Book. This is the basic foundational regulation of the Rhode Island Coastal Resources Management Council (CRMC), which regulates all activities along the Rhode Island shoreline. Any work at Taylor Point requires a CRMC permit.

http://www.crmc.ri.gov/applicationforms/BZGuidance_Invasives_Checklist.pdf goes to the CRMC's "Buffer Zone and Invasive Plant Management Guidance" page, which contains the Buffer Zone Management Application and supporting information. Because of the size and nature of the Taylor Point project, TPRA application requirements will vary in a few respects from the guidance found here. However, TPRA (and the Town of Jamestown, the landowner, and thus the applicant) must submit an Application for Buffer Zone Management for all work at Taylor Point.

<http://www.crmc.ri.gov/coastallandscapes.html> goes to the CRMC's Coastal Landscapes Program page, which contains a list of useful links.

http://www.crmc.ri.gov/coastallandscapes/Coastal_Buffer_Planting_Guide.pdf CRMC's Coastal Buffer Zone Planting Guide

www.access-board.gov/news/1656-guide-on-access-to-outdoor-sites-available-from-the-board goes to a page on US Access Board website with a downloadable 100-page guide of accessible outdoor sites, including trails, published August 2014. While these standards are only mandatory on federal lands, this guide appears to provide useful information.

http://www.iucn.org/about/work/programmes/gpap_home/gpap_quality/gpap_pacategories/ A page from the IUCN (International Union for the Conservation of Nature) website which defines six categories of "Protected Areas." The definition of a Category IV (Habitat/Species Management Area) Protected Area seems to fit Taylor Point perfectly.

Trails:

Email from David Smith, Friends of Canonchet Farm: When we were visiting Taylor Point with you, I mentioned that the National Park Service office in Boston, and John Monroe in particular, provides training and other support for trail building and maintenance. Here is the contact info for John:

NPS Connecticut, Massachusetts, Rhode Island:
National Park Service, Rivers, Trails, and Conservation Assistance
15 State Street, Boston, MA 02109
Fax (617) 223-5164

Doug Evans
douglas_evans at nps.gov
(617) 223-5124
John Monroe
john_monroe@nps.gov
(617) 223-5049
Charles Tracy
charles_tracy@nps.gov
(617) 223-5210

Mentioned by Caitlin Chaffee in October 2015 during discussion of footpath design:
<http://wilkinsecological.com/home.html>

Grants:

Google “Invasive Plant Removal Grants” and similar phrases.

<http://www.weedcenter.org/funding/funding.html>

<http://www.fws.gov/invasives/partnerships.html>

<http://www.dem.ri.gov/programs/bpoladm/plandev/pdf/trailfact.pdf> -DEM Trail Grant Program Link. Up to \$3000, 20% match required. Point of contact for assistance is Lisa Primiano, RI DEM, 487-4552 Greg Cassidy, 222-2776 ext 4310. Application form is at: <http://www.dem.ri.gov/programs/bpoladm/plandev/grants.htm#bikepath>

DEM may also have Fishing Access grants. (says Chris Powell)

<http://www.rifoundation.org/WorkingTogether/ForNonprofits/GrantOpportunities/SmallGrants.aspx> A rolling deadline for capacity-building, up to \$10K (sent by Maureen Colman)

And for next year - Feb. and March deadlines (sent by Maureen Coleman)

<http://www.rifoundation.org/WorkingTogether/ForNonprofits/GrantOpportunities/NewportCountyFundSmallGrants.aspx>

<http://www.nbep.org/>

[vbcfoundation.org](http://www.vbcfoundation.org) Van Buren Charitable Foundation Grants for Newport County - Proposals due annually about June 1:

<http://www.crmc.ri.gov/habrestteam.html> The Rhode Island Habitat Restoration Team, contact: Caitlin Chaffee, cchaffee@crmcr.ri.gov She is point of contact for grant below.

<http://www.publiclandseveryday.org/grants/capacity-building-grants>

<http://www.dredgingtoday.com/2014/10/15/ri-crmc-habitat-restoration-project-fund-2014-2015/> This is about the 2014/2015 fund, but grants are apparently available every year, \$5000 to \$50,000. There are both planning grants and construction grants.

<http://grassrootsfund.org/dollars>. New England Grassroots Environmental Fund. \$250 - \$3500. Courtesy Nancy Farrell, ncfarrell@aol.com.

“National Fish and Wildlife Foundation” gave a \$43K grant to Avalonia Land Conservancy (CT) for a native plant restoration project. (see eco ri News article on Mar 23, 2015) (<http://www.nfwf.org/pti> .)

This website has a list of funding sources. It does not have a date, but the info may be a little old:

<http://www.edc.uri.edu/restoration/html/fund/fundsea.htm>

Maps:

<http://www.dem.ri.gov/maps/index.htm> RI DEM Website with Interactive Digital Maps in two categories, “Environmental Resource Maps” and “Topo Map and Aerial Photo Viewer”

<http://jamestownri.gov/Home/ShowDocument?id=2557> 2014 Jamestown Comprehensive Community Plan Maps

<http://www.beachsamp.org/> The RI Sea Grant website for “RI CRMC Shoreline Change SAMP” Click on “Shoreline Change Maps” and go to the map for Taylor Point (or anywhere else along the RI shore.)

epa.gov/wed/pages/ecoregions/level_iii_iv.htm ecoregions, US EPA Website

Shoreline Protection:

<http://netcomanage.com/coastal-bank-dune-and-shoreline-stabilization> website for NETCO, a commercial company that designs and installs both hard and soft shoreline protection.

Volunteers:

The Armed Services award a Volunteer Service Medal to service members performing a certain amount of volunteer service. The Navy in Newport awards the medal for 80 hours of service, and I’m told there are more volunteers than there are projects to work on. A member of the Junior Enlisted Association (?) says he can arrange for volunteers,

once we qualify. Michael James Haws, 260-580-1510, corpsmanhaws@gmail.com is the point of contact, give him a few months notice to get started.

For estimating the value of volunteer time, I always use this website:

https://www.independentsector.org/volunteer_time. They list the current rate at \$23.07 / hour. -

(Provided by Caitlin Chaffee, CRMC, January 2016)

Outhouses:

Clivus Multrum restroom structures. <http://www.clivusmultrum.com/index.php>

The M54 Trailhead Series is probably the one we would want.

Clivus New England, Inc. also has a web site: <http://clivusne.com/> Clivus New England, Inc, P. O. Box 127, North Andover, MA 01845 978-794-9400

Tab R-1: Taylor Point Acreage and Shoreline Length

A mapping-GIS page on the DEM Website at <http://www.dem.ri.gov/maps/index.htm> has a useful tool to measure area and length. It gave the following figures for Taylor Point:

Shoreline Length:

Potter Cove Beach:	2323 feet
Taylor Point Cliffs:	1600 feet
<u>Sewer Outfall:</u>	<u>234 feet</u>
TOTAL:	4157 feet = 0.79 miles, almost 8/10 mile

The length of the two rip-rap sections:

Freebody Road parking area rip-rap:	222 feet
East Shore Road rip-rap:	400 feet

Area:

Potter Cove Beach Section:	4.13 acres
Taylor Point Cliffs Section:	9.38 acres
Black Cherry Woodland Section, Total:	6.39 acres
BCW Section west of Sewer Plant:	5.94 acres
BCW Section east of Sewer Plant	0.45 acres
<u>Bridge Section:</u>	<u>1.86 acres</u>
TOTAL:	21.75 acres

According to the Town's Land Evidence Records, the Town-owned land at Taylor Point totals 25.76 acres, which includes the Sewer Plant / Highway Barn complex.

These figures are not very precise, not as accurate as the two decimal figures used for acreage might suggest. Property lines and high tide line could not be determined exactly on the air photo

Annex S: Safety *(to be written)*

Annex T: Species Lists

A thorough inventory of plant species growing at Taylor Point has been conducted between September 2014 and December 2016, and is ongoing. A few more species are likely to be found, and will be added to the lists.

As of December 2016, 144 plant species have been found, as follows:

	<u>Native</u>	<u>Alien</u>	<u>Invasive</u>
_____ Trees:	13	3	4
_____ Shrubs	15	1	11
_____ Vines:	4	0	6
_____ Herbaceous:	47	24	3
_____ Grasses:	9	0	2
_____ Ferns:	1	0	0
_____ TOTAL	89	28	26

_____ Summary:

_____ Native Species:	89
_____ Alien, Non-invasive Species:	28
_____ <u>Alien and Invasive Species:</u>	<u>26</u>
_____ TOTAL	143 (+ 1 species undetermined = 144)

The following Tabs are a part of this annex:

Tab T-1: Invasive Plant Species

Tab T-2: Non-Invasive Plant Species

Tab T-3: Invasive Species List for Plants Present in Rhode Island, October 2013

Tab T-4: Animal Species at Taylor Point (*to be written*)

TAYLOR POINT RESTORATION PLAN

15 Dec 2016

Tab T-1: Invasive Plant Species

SPECIES	BEACH	CLIFFS	WOOD S	BRIDG E	FLOWERS
TREES					
English Oak (<i>Quercus robur</i>)		P	P	P	
Norway Maple (<i>Acer platanoides</i>)	U	U	U	U	
Sycamore Maple (<i>Acer pseudoplatanus</i>)		U(1)	U(1)	U	
Black Locust (<i>Robinia pseudoacacia</i>)	P				
SHRUBS					
Morrow Honeysuckle (<i>Lonicera morrowii</i>)	C	V	V	V	20-30May
Pretty Honeysuckle (<i>Lonicera x bella</i>)	P		U		20-30May
Multiflora Rose (<i>Rosa multiflora</i>)	P	P	P	P	10-30 Jun
Beach Rose (<i>Rosa rugosa</i>)	V	P		U	20Jun--
Privit (<i>Ligustrum sp.</i>)		U	P	U	25--Jun
Autumn Olive (<i>Elaeagnus umbellata</i>)	P	U		P	
Wineberry (<i>Rubus phoenicolasius</i>)		U	P		
Japanese Barberry (<i>Berberis thunbergii</i>)		U	U(1)		
Glossy Buckthorn (<i>Frangula alnus</i>)	U(1)	P	U		--20 Jun
False Indigo (<i>Amorpha fruticosa</i>)				P	15--Jun
Gray Willow (<i>Salix cinerea</i>)	P		P		
VINES					
Oriental Bittersweet (<i>Celastrus orbiculatus</i>)	P	C	V	V	
Japanese Honeysuckle (<i>Lonicera japonica</i>)		C	V	V	20Jun-
Black Swallowwort (<i>Cynanchum louiseae</i>) (p)	V	C	U	P	10Jun-
Bittersweet Nightshade(<i>Solanum dulcamara</i>) (p)	U		U		10 Jul-
Porcelain-berry (<i>Ampelopsis brevipedunculata</i>)	U		U		
Climbing Euonymus (<i>Euonymus fortunei</i>)				U(1)	
HERBACEOUS PLANTS					
Japanese Knotweed (<i>Fallopia japonica</i>) (p)				P	
Garlic Mustard (<i>Alliaria petiolata</i>) (b)	U	P		C	25Apr-15May
Black Knapweed (<i>Centaurea nigra</i>) (p)		P	P		10Jul-
GRASSES / SEDGES / RUSHES					
Common Reed (<i>Phragmites australis</i>) (p)	V				
Chinese Silvergrass (<i>Miscanthus sinensis</i>)(p)	U(1)		U(2)		

Tab T-2: Non-Invasive Plant Species

TAYLOR POINT RESTORATION PLAN
Annex T, Tab T-2, Non-Invasive Plant Species, 3 December 2016 (page 1 of 4)

SPECIES	NATIVE			WOOD-		FLOWER
	STATUS	BEACH	CLIFFS	LAND	BRIDGE	DATES
TREES						
Apple (<i>Pyrus malus</i>)	A		P	P		10-15 May
Norway Spruce (<i>Picea abies</i>)	A			P	U(4)	
Box Elder (<i>Acer negundo</i>)	N-NA	U(1)	U(1)			
Black Cherry (<i>Prunus serotina</i>)	N	U	C	V	C	20--May
Red Maple (<i>Acer rubrum</i>)	N	P	P	P	C	Feb - Mar
Staghorn Sumac (<i>Rhus typhina.</i>)	N	P	C	P	C	20--Jun
Smooth Sumac (<i>Rhus glabra</i>)	N	U	P	U		
Winged Sumac (<i>Rhus copallinum</i>)	N		P			
Red Cedar (<i>Juniperus virginiana</i>)	N	P	P	U	C	
Gray Birch (<i>Betula populifolia</i>)	N		P			
Eastern White Pine (<i>Pinus strobus</i>)	N		U(1)		P	
White Ash (<i>Fraxinus americana</i>)	N		U(1)	U(2)	U(1)	
Scarlet Oak (<i>Quercus coccinea</i>)	N	U(1)				
Black Oak (<i>Quercus velutina</i>)	N	U(2)				
Quaking Aspen (<i>Populus tremuloides</i>)	N	P		P		
Tupelo (<i>Nyssa sylvatica</i>)	N				U(2)	
SHRUBS						
Poison Ivy (<i>Toxicodendron rydbergii</i>)	N	V	V	P	P	10--Jun
Arrowwood (<i>Viburnum dentatum</i>)	N		V	P	P	10-20 Jun
Bayberry (<i>Myrica pensylvanica</i>)	N	V	V			
High-bush Blueberry (<i>Vaccinium corymbosum</i>)	N	P	V	U		May
Common Elder (<i>Sambucus canadenses</i>)	N	U		P		Jun
Common Shadbush (<i>Amelanchier arborea</i>)	N		C	P		1-10 May
Wild (Virginia) Rose (<i>Rosa virginiana</i>)	N	P	P	U		15-25 Jun
Winterberry (<i>Ilex verticillata</i>)	N		P	P		20-- Jun
Sweet Pepperbush (<i>Clethra alnifolia</i>)	N		U			
Silky (Swamp) Dogwood (<i>Swida amomum</i>)	N	P		U(1)		Jun
Burning Bush (<i>Euonymus atropurpureus</i>)	N-NA				U(1)	1-15 Jun
Meadowsweet (<i>Spiraea latifolia</i>)	N	U				
Steeplebush (<i>Spiraea tomentosa</i>)	N		U			
Common Blackberry (<i>Rubus allegheniensis</i>)	N		C	P		
Black Raspberry (<i>Rubus occidentalis</i>)	N	U	P	U(1)		
Dewberry (<i>Rubus sp</i>)	N		P			

Key: V=Very Common; C=Common; P=Present; U=Uncommon
N=Native; A=Alien N-NA=Native to North America but not RI; a=annual; b=biennial;
p=perennial

TAYLOR POINT RESTORATION PLAN

Annex T, Tab T-2, Non-Invasive Plant Species, 3 December 2016 (page 2 of 4)

	NATIVE			WOOD-		FLOWER
SPECIES	STATUS	BEACH	CLIFFS	LAND	BRIDGE	DATES
WOODY VINES						
Poison Ivy (<i>Toxicodendron radicans</i>)	N	V	C	V	P	10-20 Jun
Greenbrier (<i>Smilax rotundifolia</i> (or <i>glauca</i>))	N	P	C	P	P	
Fox Grape (<i>Vitis labrusca</i>)	N	V	C	V	C	20-30 Jun
Virginia Creeper (<i>Parthenocissus quinquefolia</i>)	N	P	C			15Jul-
HERBACEOUS PLANTS						
Butter-and-Eggs (<i>Linaria vulgaris</i>)	A(p)	P	P			
Mullin (<i>Verbascum tuapsus</i>)	A(b)	P		U	P	25--Jun
Cypress Spurge (<i>Euphorbia cyparissias</i>)	A(p)	P				15--Jun
Tansey (<i>Tanacetum vulgare</i>)	A(p)	P		C		
Wild Radish (<i>Raphanus raphanistrum</i>)	A(a)	C	P			15Jun- Ju
Sand Spurry (<i>Spergularia rubra</i>)	A(a+p)	P				10-30 Jun
Pimpernel (<i>Anagallis arvensis</i>)	A(a)	P	P			20--Jun
Lily-of-the-Valley (<i>Convallaria majalis</i>)	A(p)			P		
Horn Poppy (<i>Glaucium flavum</i>)	A(b)	P				30 May-
Stinging Nettle (<i>Urtica dioica</i>)	A(p)				P	20--Jun
Bull Thistle (<i>Cirsium vulgare</i>)	A(b)	U			U	
Wild Madder (<i>Galium mollugo</i>)	A(p)				U	20--Jun
Common St. Johnswort (<i>Hypericum perforatum</i>)	A(p)	P	P			
Lambs Quarters (<i>Chenopodium album</i>)	A(p)	C				5Jul-
White Sweet Clover (<i>Melilotus alba</i>)	A(a+b)	P				10Jul-
Field Sow-thistle (<i>Sonchus arvensis</i>)	A(p)	U(1)				15Jul-
Figwort (<i>Scrophularia nodosa</i>)	A(p)			P		10Jul-
Queen Anne's Lace (<i>Daucus Carota</i>)	A(b)	P				25Jul-
Spearscale Orache (<i>Atriplex patula</i>)	A(p)	P				1 Aug-
Persian (birdseye) Speedwell (<i>Veronica persica</i>)	A(a)	P		P		May 15, 2
Common Speedwell (<i>Veronica officinalis</i>)	A(p)				U	May 30, 2
Sheep-sorrel (<i>Rumex acetosella</i>)	A(p)			U		
Horse Nettle (<i>Solanum carolinense</i>)	N-NA(p)	U				10 Jul-
Common Sunflower (<i>Helianthus annuus</i>)	N-NA(a)	U(1)				11 Jul-
Hedge Bindweed (<i>Calystegia sepium</i>) - vine	N+A(p)	C				10Jul-
Yellow Star-grass (<i>Hypoxis hirsuta</i>)	N(p)		U			30 May-
---Blue-eyed Grass (<i>Sisyrinchium ---</i>)	N(p)	P-Rd		P-Rd		30 May-
Indian Hemp (Dogbane) (<i>Apocynum cannabinum</i>)	N(p)	U				25--Jun

Key: V=Very Common; C=Common; P=Present; U=Uncommon
 N=Native; A=Alien N-NA=Native to North America but not RI; a=annual; b=biennial;
 p=perennial

Tab T-3: Invasive Species List for Plants Present in Rhode Island, Oct 2013



Rhode Island Natural History Survey
Invasive Species List for Plants
Present in the State, October 2013

Rhode Island Invasive Plant Species
(present and widespread)

Trees

Ailanthus altissima, tree of heaven
Robinia pseudoacacia, black locust

Shrubs

Berberis thunbergii, Japanese barberry
Elaeagnus umbellata, autumn olive
Euonymus alatus, winged euonymus
Frangula alnus, glossy buckthorn
Ligustrum vulgare, common privet
Lonicera morrowii, Morrow's honeysuckle
Rhamnus cathartica, common buckthorn
Rosa multiflora, multiflora rose
Salix cinerea, gray willow

Herbaceous/Grasses

Bromus tectorum, Cheatgrass
Centaurea jacea, black knapweed
Fallopia japonica, Japanese knotweed
Lythrum salicaria, purple loosestrife
Persicaria longiseta, tufted knotweed
Phalaris arundinacea, reed canary grass
Phragmites australis, tall reed

Vines

Celastrus orbiculatus, Oriental bittersweet
Cynanchum louiseae, black swallowwort
Lonicera japonica, Japanese honeysuckle

Aquatic

Cabomba caroliniana, fanwort
Myriophyllum heterophyllum, variable milfoil
Potamogeton crispus, curly-leaved pond-weed

Rhode Island Natural History Survey
 Invasive Species List for Plants
 Present in the State, October 2013

Rhode Island Invasive Plant Species
 (localized distribution and early
 detection)

Trees

Acer ginnala, amur maple
 Acer platanoides, Norway maple
 Acer pseudoplatanus, sycamore maple
 Pawlonia tomentosa, Princess tree
 Phellodendron amurense, amur cork tree
 Populus alba, white poplar
 Quercus robur, English oak

Shrubs

Amorpha fruticosa, false indigo
 Berberis vulgaris, common barberry
 Euonymus europaeus, European spindle-tree
 Ligustrum obtusifolium, obtuse-leaved privet
 Lonicera maackii, amur honeysuckle
 Lonicera tatarica, Tartarian honeysuckle
 Lonicera xbella, pretty honeysuckle
 Rhodotypos scandens, jet bead
 Rhus phoenicolasius, wineberry
 Viburnum dilatatum, linden viburnum

Herbaceous/Grasses

Aegopodium podagraria, bishop's weed
 Alliaria petiolata, garlic mustard
 Carex kobomugi, Asiatic sand sedge
 Centaurea stoebe, spotted knapweed
 Fallopia sachalinensis, giant knotweed
 Hesperis matronalis, Dame's rocket
 Lepidium latifolium, tall pepperweed
 Lysimachia nummularia, moneywort
 Microstegium vimineum, Japanese stiltgrass
 Miscanthus sinensis, Chinese silvergrass
 Ranunculus ficaria, lesser celandine

Vines

Ampelopsis brevipedunculata, porcelain berry
 Cynanchum rossicum, pale swallowwort
 Euonymus fortunei, creeping euonymus
 Persicaria perfoliata, mile-a-minute vine
 Solanum dulcamara, bitter-sweet nightshade

Aquatic

Egeria densa, Brazilian water-weed
 Eichhornia crassipes, water hyacinth
 Glossostigma cleistanthum, mudmat
 Myosotis scorpiodes, forget-me-not
 Myriophyllum aquaticum, parrot-feather
 Myriophyllum spicatum, Eurasian milfoil
 Najas minor, brittle water-nymph
 Nasturtium officinale, watercress
 Nymphoides peltata, yellow floating-heart
 Rorippa nasturtium-aquaticum, watercress
 Trapa natans, water chestnut
 Utricularia inflata, inflated bladderwort

Tab T-4: Animal Species at Taylor Point *(to be written)*

Annex U: Log of Restoration Plan Amendments

All amendments, changes and additions to the Taylor Point Restoration Plan will be recorded below.

<u>Change Number</u>	<u>Date</u>	<u>Paragraph or Annex</u>	<u>Description of Change</u>
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