



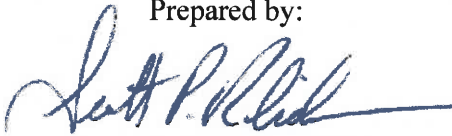
## Natural Resource Services, Inc.

Written Narrative in Support of a  
Request for Application to Alter a Freshwater Wetland

Access Road Replacement  
Quonset Business Park; A.P. 192, Lots 1, 5, 7, 8, 10 and Portion of 2  
North Kingstown, Rhode Island



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## **Introduction**

Natural Resource Services, Inc. (NRS) has been retained by Quonset Development Corporation (QDC) to assist with the preparation and submission of a Request for an Application to Alter a Freshwater Wetland to the RI Coastal Resources Management Council (CRMC). The properties within the project area are owned by the Rhode Island Commerce Corporation and the Department of Transportation. The applicant, QDC, is proposing to construct a new access road within the Quonset Business Park and to abandon the majority of Thompson Road and replace it with a new access road. This will require alterations to a freshwater swamp and its 50-foot perimeter wetland.

QDC is a quasi-state agency, established as a special purpose subsidiary of the Rhode Island Commerce Corporation which is responsible for the development and management of the Quonset Business Park (QBP). Their stated goals are to attract and retain successful businesses that provide diversified jobs within Rhode Island. Previously, the QBP was a naval military installation, dating back to 1941. Post World War II, the base was decommissioned on June 28, 1974 and the remaining Davisville Construction Battalion Center was closed on April 1, 1994. The QBP is now home to over 200 companies and the economic development within the park is managed by QDC.

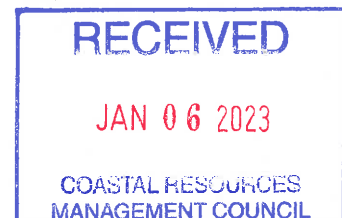
The land within the project area is a mix of existing developed roadway, cleared land, and forested land. The main project area is comprised of A.P 192, Lots 1, 5, 7, 8 and 10 that total approximately 74.92 acres. The project area is bordered to the north by a secured parking lot located on A.P. 192, Lot 2. There is an infiltration pond located on its southern border that shall be expanded onto the subject parcel. Additionally, the Quonset airport, also owned by the Department of Transportation, is located to its immediate west.

Dana R. Nisbet, PE, employed by DiPrete Engineering (DiPrete), has designed the engineering plans referenced throughout the narrative. DiPrete also performed the wetland delineation associated with the project.

This narrative has been prepared pursuant to Section 2.10(B) of the Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast (hereafter the regulations).

## **Project Scope**

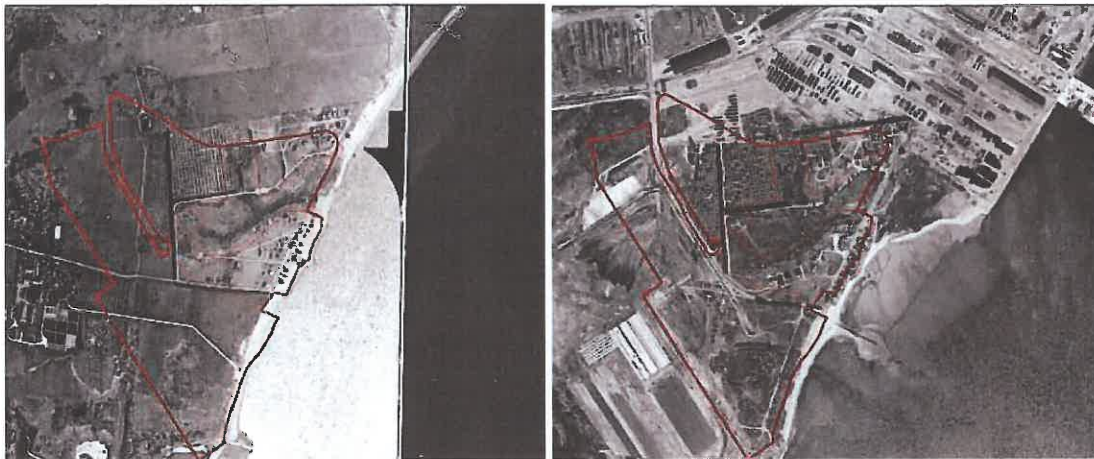
The applicant is proposing to construct a new access road within the QBP and abandon the majority of the existing shoreline adjacent road, Thompson Road. This shall provide more security to the operations within Lot 2, as well as more security around the proposed development. The proposed development includes a helipad that connects to the Quonset State Airport directly to the west, significant parking and a building for Quonset Multi-modal Off-shore Wind Transport Center (QMTC). The QMTC “will be a transportation hub for development, operations and maintenance of the off-shore wind



farms planned for the waters off of Massachusetts and Rhode Island” (Quonset Development Corporation 2020).

The flag series labeled A1 through A160 on the plans represent the limit of a swamp. This receives a 50-foot perimeter wetland designation. There is an intermittent stream located within the swamp that receives a 100-foot riverbank wetland. The proposed alterations are to take place within the swamp, 50-foot perimeter wetland, stream and 100-foot riverbank wetland. Additionally, the coastal feature associated with a section of salt marsh and shoreline associated with Type 6 waters, or Industrial waterfronts, was delineated with the B series. The salt marsh portion of the B series was restored by QDC for a previous project under CRMC Assent 2007-06-075.

The applicant plans to abandon the majority of Thompson Road, the existing access road that cuts between the swamp and coastal wetlands. The roadway is U-shaped, connecting two locations of Maritime Way. There is a public parking lot located at its northeastern edge that provides access to the local hiking trail and beach access on A.P. 192, Lot 2. The northern portions of the roadway are platted between existing lots, but the southern bend cuts through platted lots A.P. 192 Lot 1 and Lot 8. The roadway appears to have been constructed between 1939 and 1951, while the naval installation was being built. However, a portion of the road existed prior to that time as depicted in the aerial photographs below. The roadway currently separates the coastal marsh from the delineated swamp. The marsh appears to have been created during the construction of the military installation, and the swamp appears to have previously been a coastal wetland based on these aerial photographs.



*RIGIS Aerial 1939*

*RIGIS Aerial 1951/1952*

The applicant proposes the removal of the majority of Thompson Road as depicted in the plans. Removal shall include the culvert, the road, and its base course. The area will be graded to match the surrounding wetlands. The removal process and subsequent grading shall take place within the swamp and 50-foot perimeter wetland. In addition, a very small amount of coastal marsh shall be altered. However, this alteration is for the express purpose of removing fill to match the natural grade and perform habitat restoration. The area shall be spread with six to eight inches of plantable topsoil and



seeded with a northeast wildlife conservation mix. The area will also be planted with a mix of arrowwood (*Viburnum dentatum*), witch hazel (*Hamamelis virginiana*) and sweet pepperbush (*Clethra alnifolia*). This shall remove the barriers between the swamp and coastal wetland. The restoration effort will serve as an offset to the filling of wetland for the proposed crossing. The total area of restored wetland and buffer equals 38,612 square feet or a 1 to 1 ratio of alteration to restoration resulting from the project.

The proposed new access route requires the crossing of a swamp, perimeter wetland, intermittent stream and riverbank wetland across one of the thinnest points of swamp (about 120 feet in width). The sewer force main will also be installed under this roadway as depicted on the plans. An arch culvert will be used for the stream crossing. The stormwater management for this proposed access route is also depicted on the plans and requires the alteration of perimeter and riverbank wetland. All locations disturbed within the perimeter wetland that are not within the roadway footprint or stormwater management channel shall be planted with a mix of arrowwood, sweet pepperbush, and mountain laurel (*Kalmia latifolia*), as depicted on the plans.

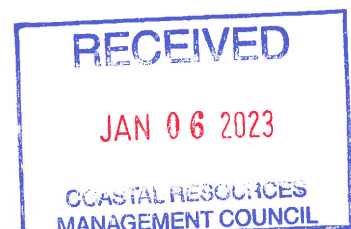
Additionally, a small section of perimeter wetland adjacent to one of the proposed parking lots and the expanded infiltration pond shall be altered. The necessary lot and pond expansion requires some grading, primarily within areas already cleared although within the perimeter wetland.

Table 1:	
<u>Wetland Type</u>	<u>Impact Area</u>
Swamp	11,328 sq ft
50 ft. Perimeter Wetland	Permanent: 7,220 sq ft Temporary: 11,640 sq ft
100 ft. Riverbank Wetland	8,232 sq ft
	<b>Total Impact: 38,420 sq ft</b>

The engineering plans depict the proposed crossing and development along with all the infrastructure and required elements. The appropriate Best Management Practices (BMPs) shall be utilized, including stormwater management on site via an expansion of an existing infiltration pond, a new smaller infiltration pond, and an underground infiltration system. The plans identify appropriate erosion controls to be utilized around the limit of disturbance (LOD) and throughout the property in accordance with the RI Soil Erosion and Sediment Control Handbook (2016).

**Avoidance and Minimization**

Section 2.10(B) of the regulations require Applications to Alter a Freshwater Wetland to include a written narrative which describes in detail the efforts made to avoid impacts to wetland functions and values. For any impacts which are considered unavoidable, the narrative must also address the efforts undertaken by the applicant to minimize these impacts to the maximum extent possible.



The assessment of impact avoidance and minimization must be made with a clear knowledge of the project's primary purpose. In this instance, the applicant is requesting to construct a new access road to accommodate the QMTC. This facility must be secure and have a direct connection to the Quonset Airport.

### Avoidance

*(AA) Whether the primary proposed activity is water-dependent or whether it requires access to freshwater wetlands as a central element of its primary purpose (e.g., a pier);*

The primary purpose of constructing a new access road is not water dependent nor does it require access to freshwater wetlands as a central element of the primary purpose.

*(BB) Whether any areas within the same property or other properties owned or controlled by the applicant could be used to achieve the project purpose without altering the natural character of any freshwater wetlands;*

There is no alternative location which the access roadway could be moved to without the alterations of wetlands. The project is location dependent within the QBP. The removal of the exiting roadway will ensure more security within Lot 2 and the proposed development. This location also has the required proximity to the exiting airport infrastructure for the helipad and taxiway to the airport. It should also be noted that the entire area, including within the wetlands, has a history of significant disturbance. Old aerial photographs depict portions of the area as being farmed, cleared or otherwise under human use especially due to the naval operation, from prior to 1939 into the early 1980s. Even after the area began to reforest, significant land use disturbances occurred surrounding the wetland in association with the QBP operations. As such, the natural character of the wetland has been significantly disturbed prior to the proposed alterations.

*(CC) Whether any other properties reasonably available to, but not currently owned or controlled by, the applicant could be used to achieve the project purpose while avoiding wetland alterations. A property is reasonably available if, in whole or in part, it can be acquired without excessive cost, taking individual circumstances into account, or, in the case of property owned or controlled by the same family, entity, group of affiliated entities, or local, state or federal government, may be obtained without excessive hardship;*

As previously mentioned, the proposed project is location dependent and necessary for the QDC to ensure security within Lot 2 as well as the proposed development including transportation infrastructure. This is necessary to continue to expand the economic development of the business park and Quonset Airport.

*(DD) Whether alternative designs, layouts or technologies could be used to avoid freshwater wetlands or impacts on functions and values on the subject property or whether the project purpose could be achieved on other property that is reasonably available and would avoid wetlands;*

There are no alternative designs or layouts which could be used to avoid wetlands while still achieving the project purpose. The proposed development is the minimum necessary for the expansion of the business park operations in a secure way.

*(EE) Whether the applicant has made any attempts (and if so what they were) to avoid alterations to freshwater wetlands by overcoming or removing constraints imposed by zoning, infrastructure, parcel size or the like;*

There are no constraints imposed by zoning which restrict the project. Wetland alterations are necessary due to the project size, scope, security needs and location within the QBP.

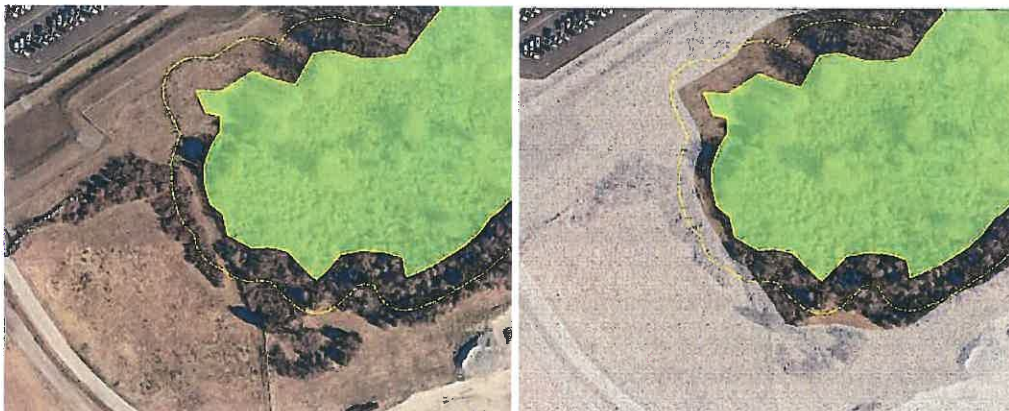
*(FF) Whether the feasible alternatives that would not alter the natural character of any freshwater wetlands on the subject property or on property that is reasonably available, if incorporated into the proposed project would adversely affect public health, safety or the environment.*

There are no feasible alternatives which would not alter the natural character of freshwater wetlands but would negatively impact public health, safety, or the environment.

#### Minimization

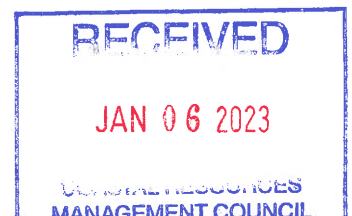
*(AA) Whether the proposed project is necessary at the proposed scale or whether the scale of the wetland alteration could be reduced and still achieve the project purpose;*

The project is necessary at the proposed scale. The crossing has been placed within the thinnest portion of swamp adjacent to the proposed project area. Additionally, the grading within the perimeter wetland shall occur within a location already predominately cleared and separated from the rest of the swamp and perimeter wetland vegetation. There is no way to minimize the wetland alteration while still achieving the project purpose.



*Existing conditions*

*Proposed conditions (LOD in gray)*



*(BB) Whether the proposed project is necessary at the proposed location or whether another location within the site could achieve the project purpose while resulting in less impact to the wetland;*

As described in the avoidance section, the project is location dependent. There is no location which could be utilized to avoid wetland impacts while still maintaining security for the existing and proposed developments.

*(CC) Whether there are feasible alternative designs, layouts, densities or technologies, that would result in less impact to the wetland while still achieving the project purpose;*

The current design minimizes impacts to wetlands to the extent practicable while still achieving the project purpose. The impacts to wetlands shall be minimized by restoring the existing access road that separated the freshwater wetland from the coastal marsh. The plans utilize BMP's and erosion controls to minimize any impacts to the freshwater wetland. There are no design alternatives or technological improvements which would further minimize impacts to wetlands.

*(DD) Whether reduction in the scale or relocation of the proposed project to minimize impact to the wetland would result in adverse consequences to public health, safety or the environment.*

Reducing the scale or relocating the project would not result in adverse consequences to public health, safety or the environment. However, such a reduction or relocation of the proposed features would undermine the primary purpose of the project.

### **Mitigation Measures**

In addition to the design features mentioned in the previous avoidance and minimization sections, several mitigation measures will be implemented to control for erosion and mitigate storm water effects.

Soil erosion and sedimentation control measures shall encircle the LOD. The erosion controls shall be installed prior to construction and be monitored throughout. A detailed plan is depicted within the engineering plan set. The design, installation and maintenance of these measures have been configured in accordance with the RI Soil Erosion and Sediment Control Handbook (2016).

The existing infiltration pond along the northern edge of the proposed development shall be expanded and an underground infiltration system shall be utilized to manage the majority of stormwater on site. An additional small infiltration basin shall be constructed to manage stormwater generated from the proposed access road. These measures have been designed in accordance with the RI Stormwater Design and Installation Standards Manual (2015).



Screening vegetation will also be used to mitigate disturbance to wetland functions and values within the proposed wetland crossing. Arrowwood, sweet pepperbush, and mountain laurel shall be planted within the perimeter and riverbank wetland along the inner LOD along both sides of the roadway through the wetland. Once established these plantings will provide a buffer between wetlands and human disturbances. Screening vegetation can provide additional benefits to water quality and minimize erosion by slowing the flow of runoff and promoting infiltration before surface water reaches wetland.

Lastly, the existing access roadway shall be removed, and the habitat shall be restored. As previously mentioned, although a small area of swamp, salt marsh, and perimeter wetland shall be disturbed, it is for the express purpose of removing fill and performing restoration activities. Once the road base is removed, six (6) to eight (8) inches of plantable topsoil shall be spread over the area. The area shall be seeded with a northeast wildlife conservation mix. If seeded manually the area shall be covered with a thin layer of loose straw. The area will then be planted with a mix of arrowwood, witch hazel, and sweet pepperbush. The shrubs shall be two (2) to three (3) feet tall once planted, spaced five (5) to six (6) feet on center.

**Freshwater Wetland Characteristics & Surrounding Environments**

*Topography*

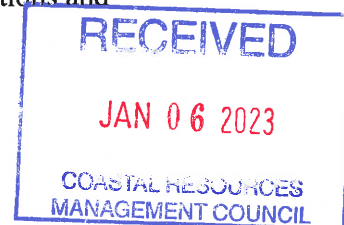
The project area is generally flat or gently sloping across the majority of its area. The slope generally falls from north to south, with depressions in the delineated wetland and down to the shoreline.

*Soils*

<b>Table 1</b>		
<b>Soil Type</b>	<b>Map Unit</b>	<b>Hydric</b>
Freetown muck	Fe	Yes
Sandyhook mucky peat, 0 to 3 percent slopes	Sa	Yes
Quonset gravelly sandy loam, rolling	QoC	No
Quonset gravelly sandy loam, 0 to 3 percent slopes	QoA	No
Udorthents-Urban land complex	UD	No

The Rhode Island Soil Survey (2018) depicts five soil series located within the project area.

Fe soils are hydric soils associated with wetland. They are mapped within the inner section of the delineated swamp, most likely associated with the portions of swamp that are consistently saturated or flooded with water. Fe soils are nearly level, very poorly drained soil found in depressions of outwash plains and glacial upland till plains. The high-water table and the low strength of the surface layer are the main limitations and when the soil is drained, the surface layer shrinks and subsides.



Sa soils are coastal hydric soils found in tidal marshes and subject to tidal flooding. This nearly level, very poorly drained soil is primarily found in salt marshes, some areas are in brackish phragmites marshes. The daily tidal flooding and a high salt content make this soil unsuitable for most uses except as habitat for saltwater-tolerant wildlife. This soil is mapped leading from the coastal marsh into the swamp. Prior to the roadway that was constructed these wetlands would have been connected.

QoA, QoC and UD soils make up the majority of the project area. The QoA soils are nearly level, excessively drained soil located on terraces and outwash plains. QoC are the same but found also in kames and eskers and are generally more significantly sloped. Onsite septic systems need careful design and installation to prevent pollution of ground water in these soils and slopes of excavated areas are commonly unstable. It should be noted that the QoC areas mapped on the property are generally flattened due to human activities and only slope down towards the edge of the forested land. Additionally, a large portion of the QoA soils mapped were determined to be wetland in the field.

The UD soil complex consists of moderately well drained to excessively drained soils that have been disturbed by capping or filling, and areas that are covered by buildings and pavement. Most cut areas were used as a source of fill material, but in some areas, cuts were made in order to level sites for buildings, recreational facilities, and roads. Most of the filled areas were built up and leveled for urban development. In some areas fill has been used to build up recreational areas and highways. The on-property areas mapped as UD have been cleared and associated with parts of the airport built in the 1940s. Use of any soils in this unit require onsite investigation and evaluation.

#### *Water Resources*

This property is located in the Narragansett Bay watershed (HU10), and the Upper West Passage subwatershed (HU12). There is a small intermittent stream located within the swamp in the parcel.

#### *Wildlife Habitat*

#### Flora

The subject parcel is significantly disturbed. Much of the area is cleared save for the swamp and its surrounding perimeter and riverbank wetland. The outer edge of the vegetated area is forested giving way to a primarily shrub dominated interior with a mix of shrub swamp and phragmites marsh in the center.

- Sweet Pepperbush (*Clethra alnifolia*)
- Canada goldenrod (*Solidago canadensis*)
- Arrowwood (*Viburnum dentatum*)
- Hazel alder (*Alnus serrulata*)
- Sphagnum moss (*Sphagnum sp.*)
- Dewberry (*Rubus hispidus*)

- Common reed (*Phragmites australis*)
- Eastern star sedge (*Carex radiata*)
- Cinnamon fern (*Osmundastrum cinnamomeum*)
- Poison sumac (*Toxicodendron vernix*)
- Virginia creeper (*Parthenocissus quinquefolia*)
- Fox Grape (*Vitis labrusca*)
- Red maple (*Acer rubrum*)
- Black cherry (*Prunus serotina*)
- Highbush blueberry (*Vaccinium corymbosum*)
- Canada mayflower (*Maianthemum canadense*)
- Eastern red cedar (*Juniperus virginiana*)
- Royal fern (*Osmunda regalis*)
- Skunk cabbage (*Symplocarpus foetidus*)
- Red oak (*Quercus rubra*)
- Morrow's honeysuckle (*Lonicera morrowii*)
- Wrinkleleaf goldenrod (*Solidago rugosa*)
- Bittersweet (*Celastrus orbiculatus*)
- Poison Ivy (*Toxicodendron radicans*)
- Striped wintergreen (*Chimaphila maculata*)
- White wood aster (*Eurybia divaricata*)

#### Fauna

There were a few features observed throughout the property which provided evidence of wildlife use, or useful habitat features. Only three species were directly observed within the site visit however, it should be noted that the assessment occurred during a portion of extreme drought and high temperatures. Direct observations included many catbirds, a red winged blackbird, a cardinal and a gray squirrel.

There were a number of snags present within the upland and wetland of the property, primarily along the transition between forest and shrub. These may serve as a source of cover or food for birds and small mammals. Additionally, some large diameter living trees within the edge of the forested area contained cavities that also serve as a potential nesting or cover location for birds and small mammals. The dense shrub layer including arrowwood, sweet pepperbush and highbush provide resting, nesting and escape cover for small mammals and birds. These shrubs also serve as an attraction for pollinators when blooming. The berry producing shrubs including arrowwood and highbush blueberry serve as a food source for mammals and bird species in different seasons as their fruit ripens. In addition to resident species like the gray catbird found on site, other migratory species of warblers, vireos, flycatchers, thrushes, and gnatcatchers may utilize this coastal forested area as a stopover. There are stone walls located within the property, primarily along its eastern side which may give cover to small mammals (such as mice voles and chipmunks) and reptiles (such as the eastern milk snake and garter snakes). There was also significant downed woody debris within the more frequently saturated or flooded areas that may give cover to the red backed salamander.



Emergent vegetation within the interior provides potential habitat for odonates although there is no open water component within the wetland which may limit the habitat potential.

There are some limiting factors present for wildlife within the parcel. The interior phragmites marsh dominated area most likely provides little habitat value to the native fauna. Additionally, the vegetated area dominated by wetland is separated from surrounding forested land. The man-made deterrents include many paved areas including parking lots, airports and roadways, in addition to fences, cleared land, and buildings. These human altered areas may obstruct wildlife from reaching or utilizing the wetland on property especially larger land mammals that cannot navigate through fencing. The intense human utilization of the surrounding areas is also most likely a deterrent to some wildlife.

#### *Freshwater Wetland Characteristics*

The field work was completed by DiPrete Engineering Services. The A series, flagging labeled A1 to A60 delineated the swamp located on site. The B series delineates the approximate coastal feature located south of the project area.

NRS staff biologist Hannah Chace conducted an on-site habitat assessment on August 8<sup>th</sup>, 2022. The worksheet and graphic included in Appendix B provide a description of the habitat types present within the depicted assessment points. The habitat available includes a forested outer edge, a shrub dominated interior and a phragmites dominated marsh within some sections of the interior.

#### **Anticipated Impacts – Wildlife Habitat**

As proposed, the project will result in the permanent alteration of swamp, 50-foot perimeter wetland as well as the crossing of a stream and its 100-foot riverbank wetland. Restoration and/or screening vegetation is proposed within the LOD where indicated on the plans. Once fully established, the vegetation will help to attenuate visual and auditory impacts generated from the new roadway within the property and restore the disturbed areas associated with the construction of the road and drainage pond. Additional perimeter wetland shall be disturbed by the permanent intrusion associated with a portion of parking lot along the western side. However, this location is already partially cleared, and the existing vegetation is separated from the rest of the perimeter wetland as depicted in the minimization section.

Post construction, there will be a direct loss of natural habitat available for wildlife feeding, resting, breeding and escape cover within the swamp and perimeter wetland. The roadway shall also fragment the northern portion of the swamp from the southern portion of the swamp. Despite this fragmentation, the proposed project is not expected to alter existing plant communities or result in the extirpation or significant displacement of any wildlife species. Also, the southern portion of the swamp will regain more connectivity to the shoreline and coastal wetlands with the removal of the existing

roadway. This will also mean a reduction in visual and auditory impacts from the commercial trucking traffic to the coastal resource area.

This project shall afford QDC reasonable use of this section of property while minimizing impacts to wildlife habitat on the property.

### **Recreation and Aesthetics**

The wetland systems described in the previous section of this report provides minimal active and passive wetland associated recreational pursuits. Hunting, trapping and fishing are not appropriate activities within this wetland. Hiking is not supported due to the small wetland size and thick vegetation, including poison sumac as well as security fencing along much of the parcel which inhibits travel. The aesthetic quality of the resource area does support some nature study, photography and birdwatching but is limited again due to the thick vegetation as well as surrounding commercial activity. The recreational pursuits are limited due to the small wetland size, thick vegetation, security fencing and surrounding development.

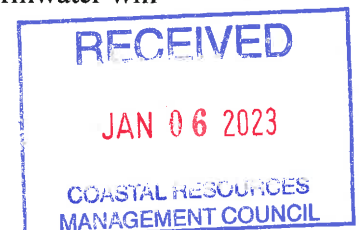
The construction of the proposed development should not change the limited recreational opportunities within this wetland resource area. The coastal habitat located south of the proposed development is however available to the public via a hiking trail and provides more opportunities to see wildlife including coastal wildlife. This area shall remain undisturbed, provided with more connection to the swamp, and available for wetland related recreational activities.

### **Flood Protection, Groundwater and Surface Water Supplies, and Water Quality**

The applicant is seeking to construct a large helipad, parking lot, and building within the business park. The existing roadway presents security challenges to the existing and proposed lots and thus a new access road must be provided.

As proposed, the construction should not impact the capacity of the swamp to provide flood protection. The project shall result in the direct impact of swamp, perimeter wetland and riverbank wetland. The alteration occurs within wetlands that are seasonally flooded, but do not appear to flood into the outskirts. The engineers have developed a plan to offset the filling of swamp. The restoration of Thompson Road via the removal of the road and matching the proposed grade to that of the wetland shall form additional wetland and increase the potential flood capacity of the wetland. Additionally, the culvert crossing proposed is properly designed to not obstruct flood water flows during storm events.

The project is not anticipated to have an adverse impact on the wetland's ability to provide groundwater and surface water. The development plan incorporates design measures for stormwater management, including screening vegetation along the proposed crossing. The engineer has also developed a stormwater management plan consistent with the RI Stormwater Design and Implementation Standards Manual. Stormwater will





be managed on site by expanding the existing infiltration pond, installing a large underground infiltration system, and creating an additional smaller drainage pond in order to meet standards outlined by the Wetland Best Management Practices Manual. The development plan proposed ensures that proper recharge of surface water supplies shall be maintained post project construction.

Those portions of the wetlands subject to the proposed work are vegetated and capable of protecting water quality via the uptake and/or retention of nutrients and other pollutants. Although portions of the subject wetlands will be altered under the current proposal, the remainder of the wetland features will remain intact and will still be capable of protecting water quality. In addition, measures have been incorporated into the overall project design to protect water quality within the subject wetlands. Such measures include the use of erosion controls to prevent sedimentation and degradation of water quality, the use of stormwater management BMPs to treat and control stormwater associated with the development as well as screening vegetation and mitigation plantings. Thus, the water quality of the on-site wetlands shall be maintained upon completion of this project.

### **Conclusion**

The applicant is seeking permission to construct a helipad, building and series of associated parking lots within a portion of the QBP. The existing access road does not provide the security necessary for the proposed development or existing development north of it. This application to alter is being submitted to the CRMC to requesting permission to construct a new access roadway through swamp and perimeter wetland in addition to an intermittent stream and its 100-foot riverbank wetland.

The applicant has demonstrated that complete wetland avoidance cannot be achieved in order to fulfill the project purpose. It has been further demonstrated that unavoidable wetland impacts have been reduced to the maximum extent practicable to achieve a wetland crossing. A series of mitigation measures have been incorporated into the development plan which will attempt to offset certain impacts to freshwater wetlands occurring within the subject property including stormwater management, screening vegetation and restoration. Erosion controls shall be placed along the LOD where indicated and a detailed plan is included within the engineering plans.

The applicant has demonstrated through the submission materials that the project does not represent a random alteration of freshwater wetlands. While the loss of swamp and perimeter wetland is significant, the design and mitigation measures are such that the alteration should not rise to the level of undesirable as defined in the rules.

It is the applicant's position that based upon all of the information provided with this application that the project does in fact qualify for a Permit to Alter from the CRMC.

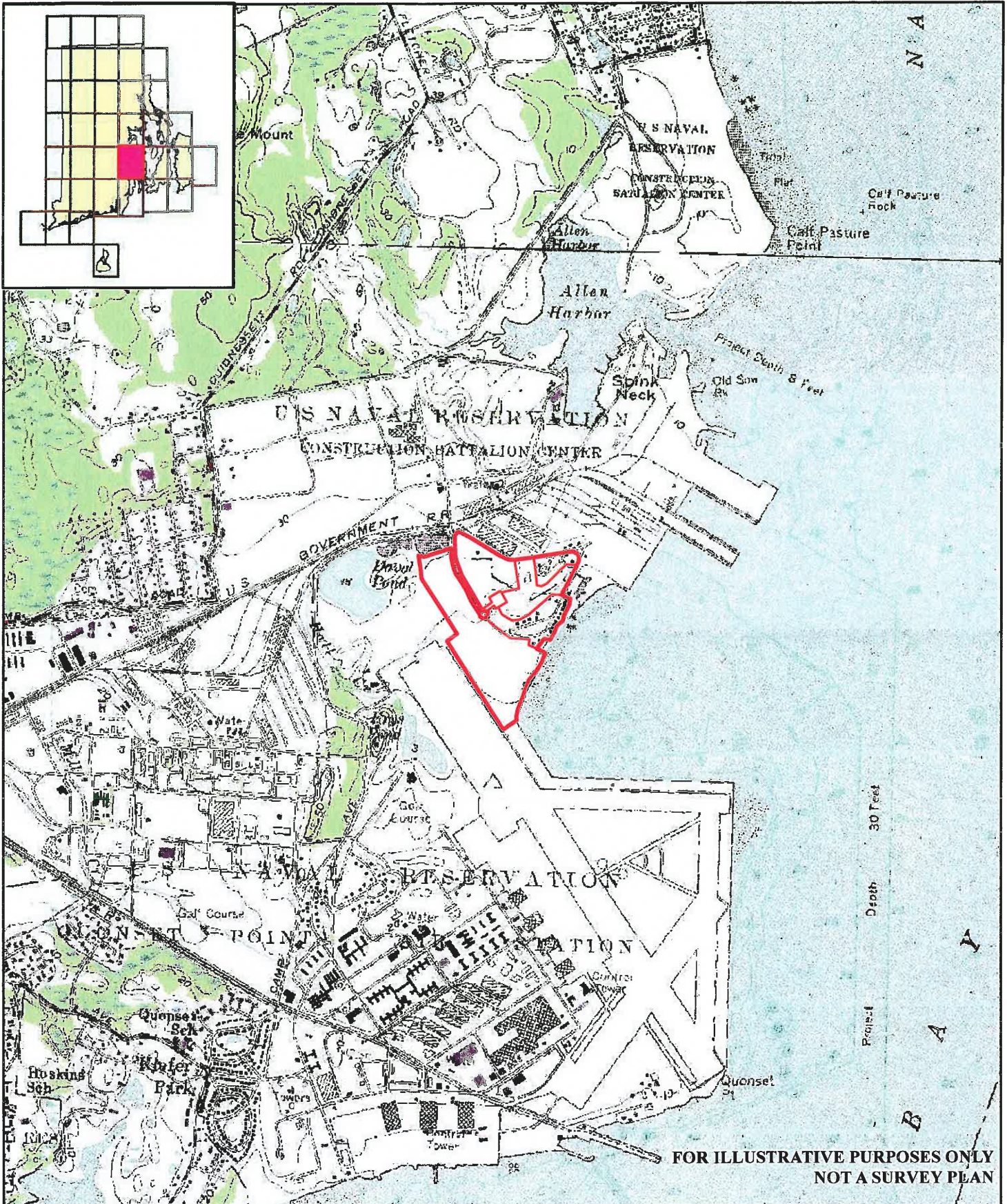
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## Appendix A





**USGS Topographic Map**  
**Quonset Business Park**  
**Maritime Way and Thompson Road**  
**A.P. 192, Lots 1,5,7,8 & P.O. 2**  
 North Kingstown, RI  
 Wickford Quad Map

— Approximate Site Location  
 USGS Topographic Series  
 Contour Interval 10 Feet  
 National Geodetic Vertical Datum of 1929

0 1,000 2,000 4,000 Feet

**RECEIVED**

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IAN 06 2023

Natural Resource Services, Inc.  
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 Harrisville, RI 02830  
 p: (401) 568-7390  
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**MANAGEMENT COUNCIL**

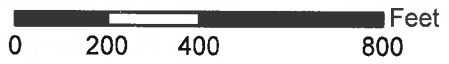




FOR ILLUSTRATIVE PURPOSES ONLY  
NOT A SURVEY PLAN

**USDA Soil Survey Map**  
**Quonset Business Park**  
**Maritime Way and Thompson Road**  
**A.P. 192, Lots 1,5,7,8 & P.O. 2**  
 North Kingstown, RI

— Approximate Site Location

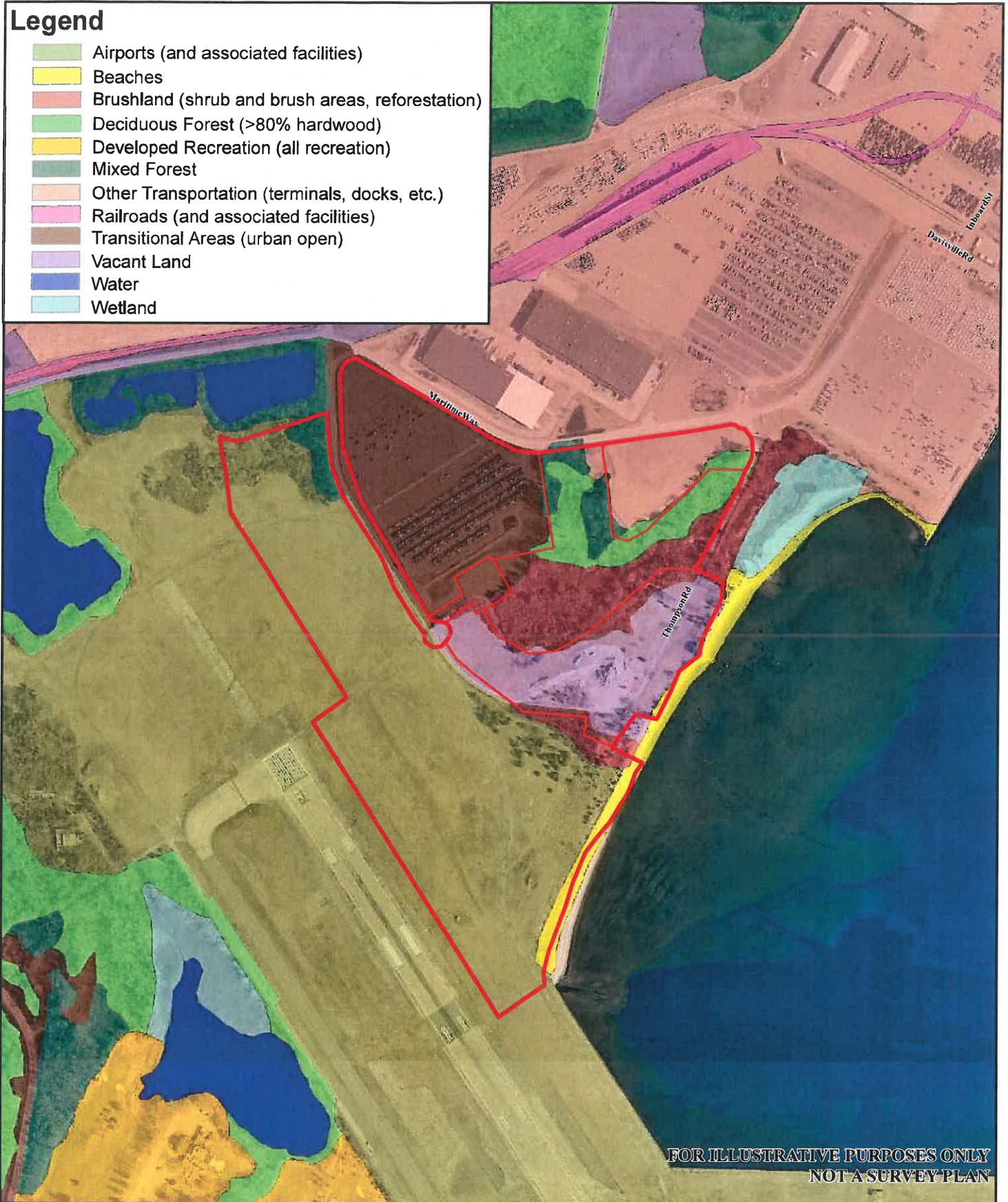


April 2022 aerial  
 RI DEM mapping  
**RIGIS**  
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# Legend

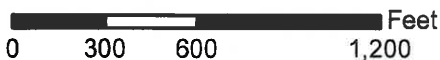
- Airports (and associated facilities)
- Beaches
- Brushland (shrub and brush areas, reforestation)
- Deciduous Forest (>80% hardwood)
- Developed Recreation (all recreation)
- Mixed Forest
- Other Transportation (terminals, docks, etc.)
- Railroads (and associated facilities)
- Transitional Areas (urban open)
- Vacant Land
- Water
- Wetland



**Landuse Map**  
**Quonset Business Park**  
**Maritime Way and Thompson Road**  
**A.P. 192, Lots 1,5,7,8 & P.O. 2**  
 North Kingstown, RI

— Approximate Site Location

*RIDEM Land Use and Land Cover (2020)*



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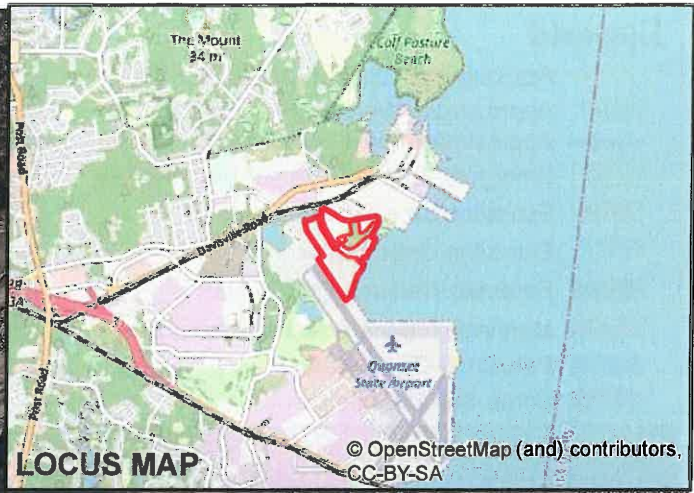
April 2022 aerial  
 RI DEM mapping  
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**Appendix B**

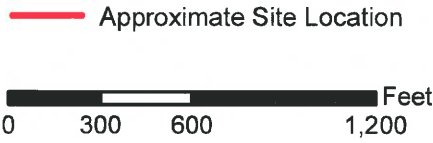
03/20/2021  
10:00 AM  
10:00 AM  
10:00 AM





FOR ILLUSTRATIVE PURPOSES ONLY  
NOT A SURVEY PLAN

**Aerial Location Map**  
**Quonset Business Park**  
**Maritime Way and Thompson Road**  
**A.P. 192, Lots 1,5,7,8 & P.O. 2**  
 North Kingstown, RI



**RECEIVED**

April 2022 aerial  
 DEM mapping

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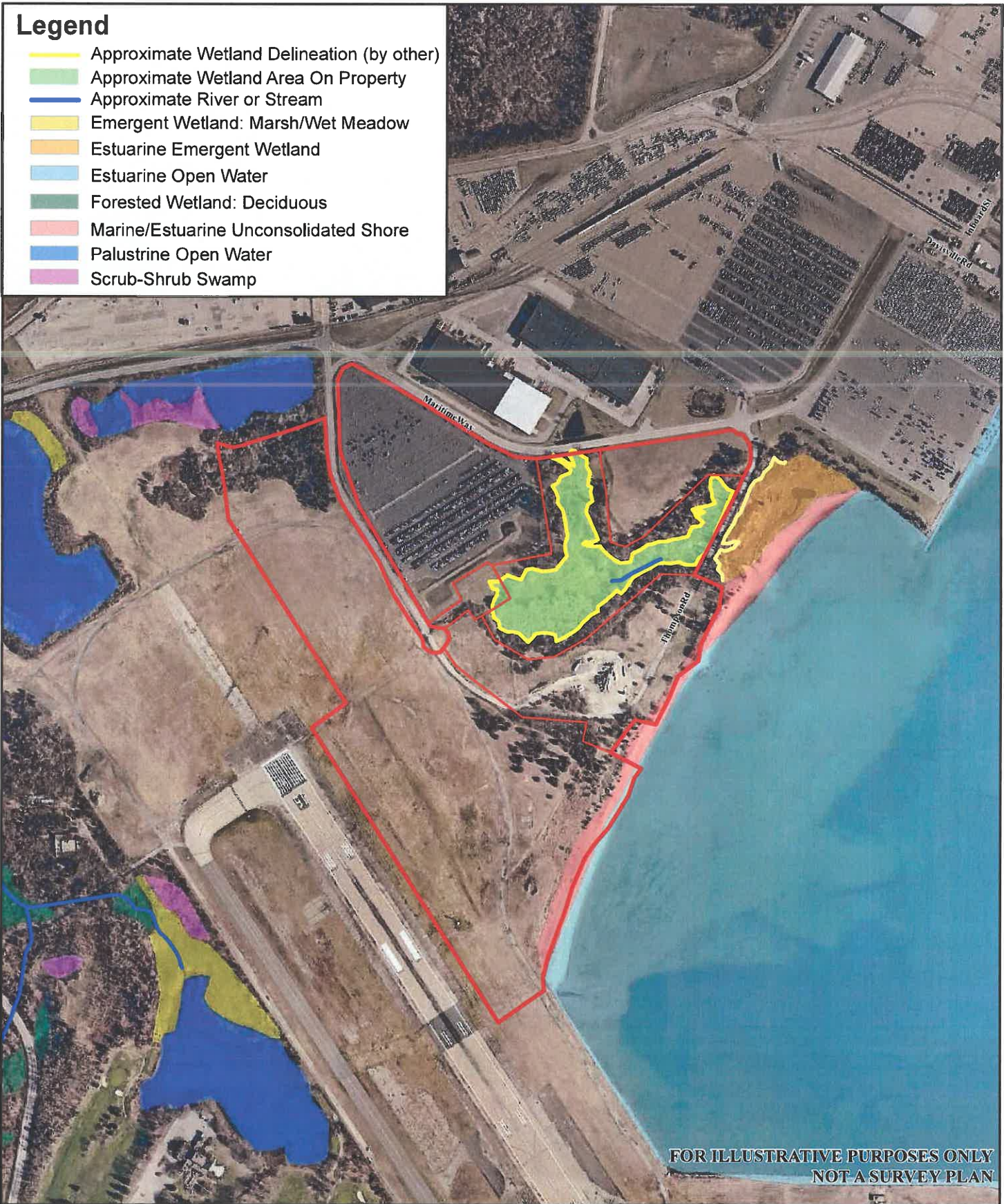
(c) RIGIS

**COASTAL RESOURCES MANAGEMENT COUNCIL**



# Legend

- Approximate Wetland Delineation (by other)
- Approximate Wetland Area On Property
- Approximate River or Stream
- Emergent Wetland: Marsh/Wet Meadow
- Estuarine Emergent Wetland
- Estuarine Open Water
- Forested Wetland: Deciduous
- Marine/Estuarine Unconsolidated Shore
- Palustrine Open Water
- Scrub-Shrub Swamp



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**Surrounding Wetlands Map**  
**Quonset Business Park**  
**Maritime Way and Thompson Road**  
**A.P. 192; Lots 1,5,7,8 & P.O. 2**  
 North Kingstown, RI

Approximate Site Location

*RIDEM Wetland Types Map and  
Aerial Photo Interpretation*













April 2022 aerial  
RI DEM mapping

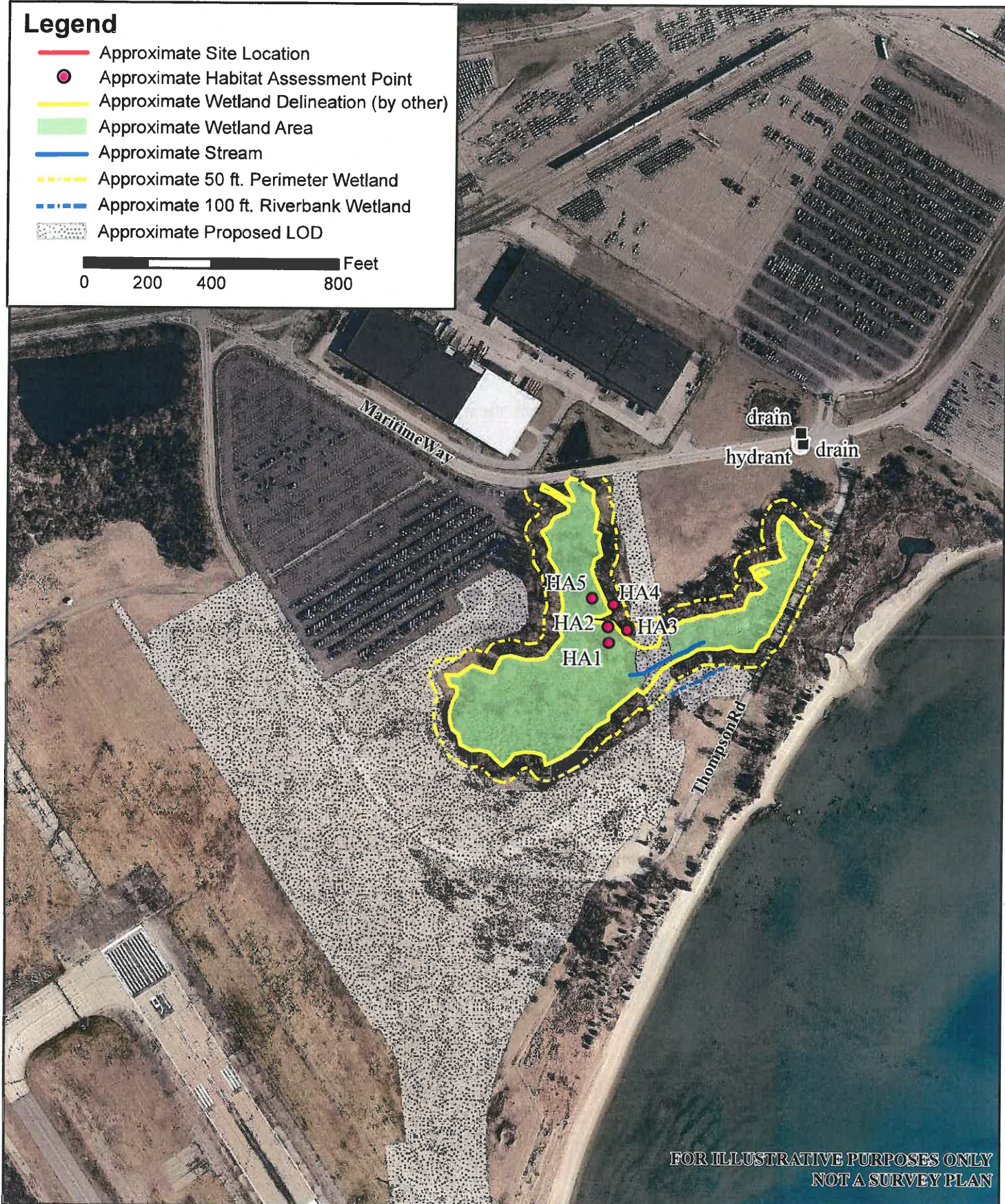
**RIGIS**  
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**Legend**

-  Approximate Site Location
-  Approximate Habitat Assessment Point
-  Approximate Wetland Delineation (by other)
-  Approximate Wetland Area
-  Approximate Stream
-  Approximate 50 ft. Perimeter Wetland
-  Approximate 100 ft. Riverbank Wetland
-  Approximate Proposed LOD



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NOT A SURVEY PLAN

**Habitat Assessment**  
**Quonset Business Park**  
**Maritime Way and Thompson Road**  
**A.P. 192, Lots 1,5,7,8 & P.O. 2**  
 North Kingstown, RI

Performed by:  
 Staff biologist Hannah Chace - 8/8/2022  
 Located using hand-held Trimble GeoXH

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## HABITAT ASSESSMENT WORKSHEET

NRS Project #: 22-154

Date: 8/8/2022 Time: 9:30 -11:00 Weather: 84°F Cloud Cover: Mild

Observer: HC

### Wetland Questions

- In watershed of public drinking water supply?
  - No
- Does the wetland extend off-site/ is it connected to a larger wetland system?
  - Connected to a large network of wetlands via a culvert but separated by a thin roadway
- Flowing waterbodies?
  - There is a small intermittent stream channel

### Wetland (HA1 – furthest interior layer)

- At least seven (7) vegetative species listed.
  - Sweet Pepperbush (*Clethra alnifolia*), Canada goldenrod (*Solidago canadensis*), Arrowwood (*Viburnum dentatum*), Hazel alder (*Alnus serrulata*), Sphagnum moss (*Sphagnum sp.*), Dewberry (*Rubus hispidus*), Common reed (*Phragmites australis*), Eastern star sedge (*Carex radiata*), Cinnamon fern (*Osmundastrum cinnamomeum*), Poison sumac (*Toxicodendron vernix*), Virginia creeper (*Parthenocissus quinquefolia*), Fox Grape (*Vitis labrusca*)
- Evidence of flooding?
  - Yes, most likely seasonally flooded within the interior, buttressed roots, flow paths
- Any evidence of human disturbance present?
  - Old stone walls nearby. Majority was previously cleared for agriculture.
- Notes
  - Many catbirds, visual and call, potential cardinal (call). Thick understory, shrubs and emergent vegetation primarily



### Wetland (HA2 – outer edge of wetland)

- At least seven (7) vegetative species listed.
  - Red maple (*Acer rubrum*), Sweet Pepperbush (*Clethra alnifolia*), Cinnamon fern (*Osmundastrum cinnamomeum*), Arrowwood (*Viburnum dentatum*), Poison sumac (*Toxicodendron vernix*), Fox Grape (*Vitis labrusca*), Black cherry (*Prunus serotina*), Highbush blueberry (*Vaccinium corymbosum*), Canada mayflower (*Maianthemum canadense*), Eastern red cedar (*Juniperus virginiana*)
- Evidence of flooding?
  - No, seasonal saturation
- Any evidence of human disturbance present?
  - Only the old stone walls
- Notes
  - Cleared understory than HA1 but still significant herbaceous and shrub cover. A few smaller trees here

### Wetland (HA5)

- At least seven (7) vegetative species listed.
  - Red maple (*Acer rubrum*), Cinnamon fern (*Osmundastrum cinnamomeum*), Arrowwood (*Viburnum dentatum*), Poison sumac (*Toxicodendron vernix*), Fox Grape (*Vitis labrusca*), Highbush blueberry (*Vaccinium corymbosum*), Eastern star sedge (*Carex radiata*), Royal fern (*Osmunda regalis*), Skunk cabbage (*Symplocarpus foetidus*)
- Evidence of flooding?
  - Yes, stained leaved buttressed roots
- Any evidence of human disturbance present?
  - Previously cleared

### Perimeter wetland (HA3)

- At least seven (7) vegetative species listed.
  - Red oak (*Quercus rubra*), Highbush blueberry (*Vaccinium corymbosum*), Arrowwood (*Viburnum dentatum*), Eastern red cedar (*Juniperus virginiana*), Morrows honeysuckle (*Lonicera morrowii*), Black cherry (*Prunus serotia*), Wrinkleleaf goldenrod (*Solidago rugosa*), Bittersweet (*Celastrus orbiculatus*), Poison Ivy (*Toxicodendron radicans*), Striped wintergreen (*Chimaphila maculata*)
- Evidence of human disturbances?
  - Edge of the clearing nearby
- Any existing development on-site?
  - Large parking lots nearby on opposite side of wetland
- Surrounding upland development (i.e. residential community; commercial development; busy roadways; etc.).
  - Very significant development throughout Quonset Point.



#### Perimeter wetland (HA4)

- At least seven (7) vegetative species listed.
  - Red oak (*Quercus rubra*), Black oak (*Quercus velutina*), Arrowwood (*Viburnum dentatum*), Black cherry (*Prunus serotia*), Canada mayflower (*Mainthemum canadense*), White wood aster (*Eurybia divaricata*), Cinnamon fern (*Osmundastrum cinnamomeum*)
- Evidence of human disturbances?
  - Edge of the clearing nearby
- Any existing development on-site?
  - Large parking lots nearby on opposite side of wetland
- Surrounding upland development (i.e. residential community; commercial development; busy roadways; etc.).
  - Very significant development throughout Quonset Point.

#### Rule 10.02E.4.a – Wildlife and Wildlife Habitat

- A listing of observed and potential wildlife species; see attached
  - Observed
    - Gray Catbird
    - Cardinal
    - Red winged blackbird
    - Gray squirrel
- What type of wildlife species benefit most in this wetland? What features are available to support this determination? Place corresponding number next to feature:  
  
1.) Birds; 2.) Small mammals; 3.) Large mammals; 4.) Reptiles 5.) Amphibians; 6.) Odonata 7.) Fish

#### Feature:

Tree cavities/nest holes: 1,2

dead snags: 1

rock crevices:

flat rocks:

Beaver lodges/dams:

stone walls: 2,4

organic debris/leaf litter: 6

Water soaked/rotten logs: 5

overhanging branches:

steep, dirt banks with nest holes (swallow nests)

sphagnum carpet:

emergent vegetation: 6

Nests observed:

Extreme dense vegetation: 1,2

**Rule 10.02E.4.b – Recreation and Aesthetics**

- Overall aesthetic value of wetland?
  - Moderate. The wetland falls within a forested area surrounded by clearings. The edge of the vegetated area has some large trees, including a few notable large diameter maple trees. The vegetation then transitions to thicker shrubs with fewer trees. The wetland begins as the shrub layer begins to dominate. The interior of the wetland appears to mainly consist of thick shrubs with a marshy interior comprised of some native emergent sedges grasses and rushes, however the primary species appears to be Phragmites. Due to this there is some valuable habitat especially within the thick shrubs and native emergent but the wetland is moderately degraded from its previous history and the surrounding development and landscape. There is also a significant amount of poison sumac within the interior of the wetland making it more intolerable to humans.
  
- Potential onsite for:

Hunting		No
Trapping		No
Wildlife observation	Yes	
Photography	Yes	
Bird watching	Yes	
Swimming		No
Canoeing		No
Fishing		No
Hiking		No
  
- Public access to wetland?
  - No public access as the property is private

**Rule 10.02E.4.c – Flood Protection**

- Can the wetland temporarily store flood waters?
  - Yes
- Will the inflow of flood waters endanger surrounding upland development?
  - No, water flows out of the wetland
- Does the wetland currently receive waters from existing adjacent stormwater facilities?
  - Yes from some of the surrounding development some stormwater is directed into the wetland from some BMPs
- What is the hydrology of the wetland?
  - Seasonally flooded/ saturated
- Will an influx of flood waters (as a result of the filling of a portion of the wetland) result in an increase potential for flood events in areas surrounding the wetland/ downstream?
  - No, very little filling is required within the flooded portions of wetland and the culvert is sized to convey any potential floodwaters downstream.



**Rule 10.02E.4.d – Groundwater and Surface Water Supplies**

- Is the wetland groundwater fed?
  - Yes
- Does the wetland receive surface waters from surrounding uplands or via a culvert?
  - Both
- Does water flow out of the wetland or is it retained?
  - Flows out

**Rule 10.0E.4.e – Water Quality**

- Evidence of human disturbances that negatively impacted water quality?
  - Surrounding development upslope
- Inflow of waters from culverts, stormwater runoff, etc. that may negatively affect water quality?
  - None specifically observed
- Evidence of eutrophication?
  - No



**Appendix C**

**RECEIVED**  
**JAN 06 2023**  
COASTAL RESOURCES  
MANAGEMENT COUNCIL

# SCOTT P. RABIDEAU

1001 Hill Road, Pascoag, RI · (401) 556-6095 · nrsscott@gmail.com

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## PROFESSIONAL EXPERIENCE

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**PRESIDENT/PRINCIPAL BIOLOGIST** 1987-PRESENT  
NATURAL RESOURCE SERVICES, INC, HARRISVILLE, RI

Natural Resource Services, which was founded by Scott Rabideau in 1987, is a private environmental consulting firm specializing in freshwater and coastal wetland studies in Rhode Island and Massachusetts. Experience within the company includes:

- Conducting wetland delineations
- Designing replacement wetlands
- Restoring wetlands
- Conducting wildlife habitat evaluations
- Permitting alterations through state and federal agencies
- Providing representation at public hearings
- Providing expert testimony
- Hiring, training, and managing a staff of up to 12

**ADMINISTRATOR** 1987-1988  
NORTHBRIDGE NURSING HOME, NORTHBRIDGE, MA

Oversaw operations and management of a 100-bed non-union skilled nursing facility.

**PERSONNEL DIRECTOR** 1985-1987  
HOPKINS HEALTH CENTER, NORTH PROVIDENCE, RI

Responsible for hiring, managing, and scheduling all professional and non-professional nursing staff in a 200-bed unionized skilled nursing facility.

**MANAGER, FAXON FARM** 1982-1985  
LINCOLN SCHOOL, PROVIDENCE, RI

Managed a 32-acre environmental education center and athletic facility, developed nature programs, and managed wetland and upland habitat at a private K-12 school.

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## EDUCATION

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**MASTER OF SCIENCE, APPLIED MANAGEMENT** 1986  
LESLEY COLLEGE, CAMBRIDGE, MA

**BACHELOR OF SCIENCE, NATURAL RESOURCES** 1982  
UNIVERSITY OF RHODE ISLAND, KINGSTON, RI

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## PROFESSIONAL LICENSES & CERTIFICATIONS

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**SENIOR PROFESSIONAL WETLAND SCIENTIST** #1410  
SOCIETY OF WETLAND SCIENTISTS

**OWTS INSTALLER** #L1379  
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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## ELECTED POSITIONS

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**STATE REPRESENTATIVE, DISTRICT 60** 1995-2002  
RI GENERAL ASSEMBLY, BURRILLVILLE, RI

- Ranking minority member, Committee on Judiciary
  - Ranking minority member, House Committee on Environmental Accountability
  - Ranking minority member, Joint Committee on Energy and the Environment
  - Ranking minority member, Committee for Redistricting
- 

## PUBLIC APPOINTMENTS

---

**SPECIAL MASTER, SUPERIOR COURT** 2009-PRESENT  
TILLINGHAST VS. RI DEPARTMENT OF ENVIRONMENTAL  
MANAGEMENT

- Acting on behalf of the Superior Court to seek resolution in dispute between the defendant and plaintiff regarding freshwater wetland alterations.

**JUDICIAL NOMINATING COMMISSION** 2014-2020  
STATE OF RHODE ISLAND

- Appointed by Governor Lincoln Chafee.
- Responsible for vetting candidates seeking appointments to all state courts, including Supreme, Superior, District, Family, Works Compensation, and Traffic.
- Meeting quarterly or as required to fulfill the statutory mandate for providing the governor with qualified candidates for judicial vacancies.

**LEGISLATIVE COMMISSION** 2013-2015  
FRESHWATER WETLANDS ACT REVIEW

- Acted as a small business representative on the commission.
- Held hearings and heard testimony on changes to the RI Freshwater Wetlands Act.
- Drafted a bill to replace the previous statute—the act was passed by the General Assembly and signed into law by Governor Raimondo in July 2015.

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**PUBLIC APPOINTMENTS, CONT.**

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<b>BOARD OF SEWER COMMISSIONERS, CHAIRMAN</b> TOWN OF BURRILLVILLE, RI	2006-2007
<b>BOARD OF SEWER COMMISSIONERS</b> TOWN OF BURRILLVILLE, RI	2004-2008
<b>VICE CHAIRMAN, CONSERVATION COMMISSION</b> TOWN OF REHOBOTH, MA	1983-1985

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**PROFESSIONAL ORGANIZATIONS**

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<b>THE WILDLIFE SOCIETY</b>	1985-PRESENT
<b>INVESTMENT REVIEW COMMITTEE MEMBER</b>	2013-2017
<ul style="list-style-type: none"><li>• Met on a quarterly basis to review TWS Endowment Accounts.</li><li>• Responsible for adjusting account allocations in conformation with TWS Executive Committee's guidelines.</li></ul>	
<b>SOCIETY OF WETLAND SCIENTISTS</b>	1995-PRESENT
<b>RI ASSOCIATION OF WETLAND SCIENTISTS</b>	
<b>CHARTER MEMBER</b>	1992-1998
<b>PRESIDENT/MEMBER OF BOARD OF DIRECTORS</b>	1993-1994
<b>TREASURER/MEMBER OF BOARD OF DIRECTORS</b>	1992-1993
<b>US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE</b>	1989-1990
<b>PROJECT EARTH TEAM</b>	

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**PHILANTHROPIC ORGANIZATIONS**

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<b>TRUSTEE, JUNE ROCKWELL LEVY FOUNDATION</b>	2018-PRESENT
<ul style="list-style-type: none"><li>• One of 10 trustees responsible for administering a \$30 million charitable trust.</li><li>• Responsible for reviewing and distributing grants to qualified non-profits in Providence County.</li></ul>	
<b>RI FOREST CONSERVATORS ORGANIZATION</b>	2001-PRESENT

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**PHILANTHROPIC ORGANIZATIONS, CONT.**

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OCEAN STATE POWER SCHOLARSHIP FOUNDATION 1995-2002  
BOARD OF DIRECTORS

OCEAN STATE POWER COMMUNITY GRANT FOUNDATION 1995-2002  
BOARD OF DIRECTORS

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**VOLUNTEER WORK**

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BURRILLVILLE LITTLE LEAGUE 2009-PRESENT  
• Volunteer umpire for youth baseball

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**EXPERT QUALIFICATIONS**

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WETLAND DELINEATIONS, HABITAT EVALUATIONS, & WETLAND PERMITTING

- RI Department of Environmental Management
- Administration Adjudication Division

WETLAND DELINEATIONS, HABITAT EVALUATIONS, SOIL SCIENCE & COASTAL PERMITTING

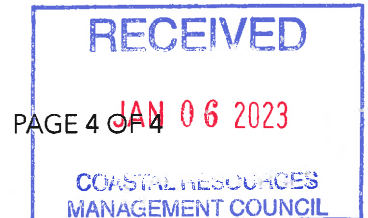
- RI Coastal Resources Management Council

WETLAND DELINEATIONS, HABITAT EVALUATIONS, & SOIL SCIENCE

- Superior Court, Worcester County, MA
- Superior Court, Bristol County, MA
- Superior Court, Fall River, MA

WETLAND DELINEATIONS, HABITAT EVALUATIONS, SOIL SCIENCE & WETLAND PERMITTING

- Superior Court, Providence County, RI
- Superior Court, Kent County, RI
- Superior Court, Newport County, RI







## **Natural Resource Services, Inc.**

**HANNAH CHACE**  
**Wetland Biologist**

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### **EXPERIENCE**

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**Wetland Biologist**

6/2020 – Present

*Natural Resource Services, Inc. Harrisville, RI*

- **Field Work Experience:** Conducted field work including wetland delineations, habitat assessments, wetland restorations, buffer zone management projects and submerged aquatic vegetation surveys throughout Rhode Island, Massachusetts, and Connecticut;
- **Technical Writer:** Interpret plan sets and provide technical written documentation of impact avoidance and minimization techniques for written narratives submitted for permitting to DEM and CRMC.

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### **EDUCATION**

---

**Bachelor of Science Degree, Environmental Science and Management**

May 2020

Soil Science Minor

*University of Rhode Island Kingston, RI*

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### **RELATED SKILLS**

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Wetland delineation; vegetation identification; avian, herp and mammal identification; aerial photograph interpretation; working knowledge of GPS; utilization of the ESRI ArcGIS software and manipulation of RIGIS and MassGIS data; inventorying of wildlife and vegetation.