

## Chapter 5.0 – Environmental Review

The purpose of this Chapter is to conduct a general assessment of the environmental effects of the preferred alternative and to define the potential extent of future environmental analyses that is needed to implement the airfield improvements shown on the ALP.

This environmental review, while not a formal environmental assessment (EA), will consider the environmental elements described in FAA Advisory Circular 150/5070-6B, FAA Order 5050.4B, Airport Environmental Handbook, and relevant Rhode Island environmental regulations and procedures. Unless otherwise identified as “Categorically Exempt” an EA will be necessary for the projects on the ALP that are anticipated to be implemented in the short-term (5 year) planning period. An EA will be conducted for those projects identified in the short-term planning period (Phase 1), . An EA will include opportunity for public comment. This section will also define any “Categorically Exempt” improvements as defined by FAA Order 5050.4B, as well as identify any possible mitigation measures or modifications to the Draft ALP to avoid, minimize or mitigate environmental impacts.

This Chapter includes the following sections:

- Section 5.1 – Noise Impacts
- Section 5.2 – Land Use
- Section 5.3 – Air Quality
- Section 5.4 – Water Quality
- Section 5.5 – U.S. Department of Transportation Act Section 4(f) Lands
- Section 5.6 – Historic, Architectural, Archaeological, and Cultural Resources
- Section 5.7 – Biotic Communities
- Section 5.8 – Threatened or Endangered Species of Flora and Fauna
- Section 5.9 – Wetlands
- Section 5.10 – Floodplains
- Section 5.11 – Coastal Zone Management
- Section 5.12 – Coastal Barriers
- Section 5.13 – Wild and Scenic Rivers
- Section 5.14 – Farmland
- Section 5.15 – Energy Supply and Natural Resources
- Section 5.16 – Light Emissions
- Section 5.17 – Solid Waste Impact
- Section 5.18 – Environmental Justice
- Section 5.19 – Summary

### 5.1 Noise Impacts

Generally, aircraft noise is often one of the most significant environmental issues associated with airports because of the potential it has to disrupt communities adjacent to airports. Because this issue is so important, standard noise models have been developed to analyze the effects of aircraft noise on land both on and off the airport. To address and alleviate noise problems where they exist around an airport various measures are available to address these problems.

With respect to UUU, the projects proposed in this master plan are not designed to generate any changes in the type, size or number of aircraft operating to or from the Airport. As a result significant noise impacts are not anticipated. However, a review of any potential noise impacts will be included as part of the subsequent (EA) process. An area of particular attention will be the T- Hangars proposed adjacent Runway 22 and ground traffic created by aircraft engine run-up or taxiing in that area.

During construction, short term increases in noise levels associated with standard construction activities will occur in the project areas during standard daylight working hours due to the use of equipment that may include bulldozers, loaders, and dump trucks. Increased noise levels are only expected on a temporary basis, and are not expected to occur beyond the project's completion.

## 5.2 Land Use

All projects are located on Airport property and are consistent with aviation uses. These projects will not have land use ramifications, such as disruption of communities or relocation, beyond the Airport boundaries. Some minor changes in traffic patterns may occur as a result of constructing new T-hangars that would be accessible via Oliphant Lane on the north end of the Airport. Any increase in traffic volume along Oliphant Lane is expected to be minimal, on the order of a dozen additional vehicles per day. Consequently, no potential adverse effect is anticipated.

Projects associated with the preferred alternative are not expected to conflict with the height restrictions specified in the Middletown Airport Height Restrictions Ordinance. Areas of the preferred alternative lie within Zone 1 of the Middletown Watershed Protection District, as described in Section 5.4.

## 5.3 Air Quality

As stated in Chapter 1 of the Airport Master Plan, an air quality assessment for long term impacts is not required for proposed projects that will not increase the current UUU passenger and operations numbers. The FAA thresholds are based on an understanding that small airports with the limited operations (existing and projected) like UUU have been found to have essentially no impact on air quality.

The proposed projects would pose no permanent impact to air quality. A temporary effect would potentially occur as a result of use of fresh asphalt necessary for construction of realigned taxiways and expanded parking areas. Additional construction vehicle traffic and activity would also have a temporary impact on air quality resulting from fugitive dust emissions as well as short-term emission of air pollutants originating as the by-product of construction equipment fuel combustion during the construction and demolition phases. Air pollutant emissions would be minimized by the relatively short duration of the proposed projects and the limited amount of earth disturbance associated with the demolition phases of the projects. In addition, air quality impacts are not expected to extend beyond the immediate vicinity of each project area and no impacts are expected following completion of the projects.

The appropriate mitigation measures identified in FAA AC 1505370-10, *Standards for Specifying Construction at Airports*, should be followed during the proposed projects. In addition, FAA specifications included in *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control* should be included in the project contract documents to ensure that construction impacts to air quality be minimized.

## 5.4 Water Quality

Any new development, such as the construction of a terminal building will require that water runoff be properly collected and treated. As such, any new development projects at UUU requires consultation with federal, state, and local agencies with respect to water quality. The coordination process requires that a description of the proposed development be sent to the appropriate agencies requesting a determination of water quality impacts.

### 5.4.1 Surface Water

Section 401 of the Federal Clean Water Act (1972) requires applicants for Federal permits for projects that result in a discharge to waters (including wetlands) of the State of Rhode Island to obtain a State Water Quality Certification (WQC). Projects that fall under the U.S. Army Corps of Engineers (USACOE) Programmatic General Permit (PGP) and require a RI Department of Environmental Management (DEM) Freshwater Wetlands Act (FWA) permit receive the WQC through the PGP review process. For projects that require a so-called individual permit from the USACOE and a DEM FWA permit, the WQC will be issued through the FWA review process.

Applicable activities that likely will require a WQC include those involving any filling of wetlands and/or the waters of the State of Rhode Island. Applicable activities that likely will require a State Water Quality Certification (WQC) include those involving any filling of wetlands and/or the waters of the State of Rhode Island. These potentially include Phase I of the based aircraft apron expansion, which would have a western edge about 150 feet east of wetlands associated with Bailey Brook. The access path from the Runway 16 end to this proposed apron expansion would be within about 50 feet of the wetland edge. The Phase 3 portion of the transient aircraft apron expansion is located less than 50 feet east of the delineated wetlands edge. The locations of wetlands in this area are shown on Figure 5.1. Potential impacts of the preferred alternative on wetlands are discussed further in Section 5.9. Since erosion controls will be maintained throughout the duration of the proposed projects, adverse impacts to surface water are not expected to occur during or following completion of the proposed projects.

Any potential development within Zone 1 of the Middletown Watershed Protection District must be granted a special-use permit from the Middletown Zoning Board of Review. This zoning and permitting requirement does not apply on State property, including Newport Airport. However, the proposed projects will be implemented in a manner intended to minimize impacts on water quality. Zone 1 includes areas of the Newport Airport within 200 feet of Bailey Brook and its tributaries and areas of Stissing soils. Areas of the preferred alternative that lie within Zone 1 include ramps to the partial parallel taxiways, and the Phase 3 portion of the transient aircraft apron expansion, which lie within the 200-foot buffer zone from streams. These areas are shown on Figure 5.2.

A drainage study is recommended for the entire airport as part of the preferred alternative. This is especially important at the Runway 4 end, which continues to experience drainage problems due to limited grades, the presence of stream crossings, and lack of positive drainage (piping and structures). This drainage problem creates a safety hazard, attracting birds and other wildlife.

### 5.4.2 Ground Water

The current septic system located adjacent to the former airport terminal building is not in conflict with the proposed projects. The proposed projects will result in a minor increase in the amount of disturbed lands to approximately 8.06 acres. Proper erosion controls will be maintained throughout the duration of the proposed projects and therefore the proposed projects will not result in the discharge of water or pollutants to groundwater.

The estimated changes in areas of impervious surface at the Newport Airport are not expected to impact the quality and quantity of water providing recharge to the Crystal Spring Water Company, a private water bottling company located adjacent to Newport Airport on West Main Road. The final design of the proposed airport projects must take groundwater protection into account and ensure that all state and local groundwater protection regulations are followed or exceeded.

### 5.4.3 Drinking Water

Newport Airport lies within the watershed of the primary drinking water source for Aquidneck Island. However, the potential effects of the proposed projects on drinking water supply are expected to be minimal. No road salt or other deicing agents are used on paved areas of UUU and there would be no change in the use of petroleum or other chemicals in paved areas or other areas of UUU related to the proposed projects. Increased impervious surface at Newport Airport could result in less direct recharge to the underlying aquifer. Based on the lack of significant adverse effects to surface water and groundwater described in Sections 5.4.1 and 5.4.2, no significant adverse impacts to drinking water on the Airport property or on Aquidneck Island are anticipated as a result of the proposed preferred alternative projects.

### 5.4.4 Stormwater

Construction projects that disturb one acre or more of land and where stormwater runoff drains to waters of the United States are required to seek coverage under a Rhode Island Pollutant Discharge Elimination System (RIPDES) permit. To receive coverage under the permit, an applicant must complete and certify a Notice of Intent (NOI) and implement a Storm Water Pollution Prevention Plan (SWPPP) to control sedimentation and erosion during construction. Upon completion of the project, the applicant must complete and submit a one-page Notice of Termination (NOT) certifying that disturbed soils at the construction site are stabilized, temporary erosion and sediment control measures have been removed and all stormwater discharges associated with the construction activity have been eliminated.

Airport operations are regulated by the EPA under the National Pollutant Discharge Elimination System (NPDES) authorized by Section 402 of the Clean Water Act. The NPDES permit program controls water pollution by regulating "point sources," i.e., pipes, man-made ditches and so on, that discharge pollutants into waters of the United States. The State of Rhode Island is authorized by the EPA to administer this program within Rhode Island, and the DEM Office of Water Resources is the administering authority within Rhode Island. Accordingly, consistent with this authority, RIDEM has issued its own general permit for industrial activity. Specific activities at Newport Airport subject to NPDES include aircraft maintenance, cleaning and deicing activities, among others.

Original development of the Airport property and the subsequent construction of additional facilities and support structures altered the site's natural hydrology by installation of runways, buildings, parking areas, etc. Slight additional alterations to stormwater flow at the Airport will result from the preferred alternative, including increasing the amount of impervious surface by:

- Construction of a partial parallel taxiway from Runway 4-22 to the planned stub taxiway at the northwest end of the expanded based aircraft apron;
- Realignment of Taxiway "A";
- Expansion of the based and transient aircraft aprons; and
- Construction of two new T-hangars to the west of Runway 22.

Construction of these features would require construction of new storm drainage best management practices and modification of the UUU SWPPP. The total area of new impervious surface would be approximately 8.06 acres if the preferred alternative were implemented.

### **5.5 U.S. Department of Transportation Act Section 4(f) Land**

No adverse impacts to Section 4(f)/6(f) properties (publicly owned parks, recreation areas or wildlife refuges) are anticipated as a result of the preferred alternative and, therefore, no measures to mitigate potential impacts resulting from the proposed action appear warranted.

### **5.6 Historic, Architectural, Archaeological, and Cultural Resources**

Preliminary review of the available material suggests that there is a low to moderate probability of encountering archaeological resources in the undisturbed portions of the project area. One region of archaeological sensitivity had been identified located adjacent to the east of the Runway 34 end as part of a previous Environmental Assessment (Dufresne-Henry, 2001). The specific nature of this sensitive area was not specified in that document. There are no proposed activities among the preferred alternative in this area.

The RIHPHC also indicated that "as a property of the recent past" the airport may warrant a re-evaluation for historical significance". The airport air control tower has been listed as a historic/architecturally important building by the Town (Town of Middletown, 2004).

Effects on cultural resources within the Airport can result from project-related activities such as facility operations, modifications to project facilities, or other project-related ground-disturbing activities. The type and level of effects on cultural resources can vary widely, depending upon the setting, size, and visibility of the resource, as well as whether there is public knowledge about the location of the resource.

A field inspection of the UUU facility prior to implementation of the preferred alternative will involve a walkover, photographic documentation of the existing conditions at the Airport including all buildings, and a review of documentation available at the facility regarding the land-use history at the facility (e.g., cut and fill areas, documented depth of disturbance, etc.) and development through time.

Following the site visit and a review of the findings, research will be conducted at the RIHPHC and the Rhode Island Historical Society (RIHS) to develop historic and prehistoric contexts of the UUU vicinity.

After compiling and interpreting the field inspection and background research findings, Berger will meet with the RIHPHC to discuss potential cultural resource impacts and possible mitigation alternatives. Project work will be coordinated with the local Narragansett Indian tribe, as needed.

## 5.7 Biotic Communities

The Airport consists of previously cleared and developed lands, runways, roads, and support structures. The majority of the vegetation found within the developed area of the Airport consists of mowed grasslands. Although there are natural habitats including managed grasslands and wetlands within and surrounding the airport property, the proposed projects would be largely confined to developed areas of the Airport, thereby avoiding large impacts on natural areas.

Wildlife species that congregate around the Airport are typically highly mobile and may be temporarily displaced or disturbed during construction and demolition activities. However, potential impacts to biotic communities are not expected to be adverse.

The obstruction analysis identified obstructions and recommended actions. A copy of the report is included in Appendix E.

## 5.8 Threatened or Endangered Species of Flora and Fauna

According to the U.S. Fish and Wildlife Service (FWS), no Federally-listed or proposed, threatened or endangered species are known to occur on airport grounds. Based on a letter provided by the FWS in response to an inquiry by Berger, preparation of a Biological Assessment or further consultation under Section 7 of the Endangered Species Act is not required. A copy of the letter is included in Appendix G

The DEM has identified two species of concern located in the airport vicinity: the Baltimore butterfly (*Euphydryas phaeton*) and the northern leopard frog (*Rana pipiens*). The proposed projects would be largely confined to developed areas of the Airport, thereby avoiding large impacts on these species.

## 5.9 Wetlands

Work in wetland areas in Rhode Island is regulated by the DEM's *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act* (1998). Under those regulations, a proposed project or activity which may alter freshwater wetlands requires a permit from DEM. Altering or filling of wetlands is administered on the federal level by the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers.

Based on information contained in the 2001 EA, wetlands exist along the perimeter of the airport and consist primarily of palustrine scrub-shrub, palustrine emergent, and forested wetland systems. A 2005 wetlands delineation generally confirmed the findings of the 2001 EA. Wetlands were mapped along the perimeter of the airport as shown in Figure 5.1.

As stated in Chapter 4, Phase I of the based aircraft apron expansion would have a western edge about 150 feet east of wetlands associated with Bailey Brook and the ramp from the Runway 16 end to this apron would be located about 50 feet east of the delineated wetlands. Phase 3 of the transient aircraft apron

expansion is located less than 50 feet east of wetlands associated with the East Branch Bailey Brook. The proposed partial parallel taxiway to Runway 4-22 is located approximately 190 feet east and 470 feet west of wetland boundaries. The locations of wetlands in this area are shown on Figure 5.1. The southern portion of the potential new terminal/hangar building would be located within the wetland area mapped by Rhode Island Geographic Information Systems, but outside of the updated flagged wetland limit performed by Natural Resource Services (200%). Other than the potential new terminal/hangar building, none of the preferred alternative would be located directly within areas of delineated wetlands.

DEM regulates a 50 foot perimeter wetland (i.e. buffer zone) around wetlands (swamps, marshes, bogs, ponds); and 100- and 200-foot riverbank wetlands (i.e. buffer zone) adjacent to rivers and streams depending on their width. When the mean channel width is less than ten feet, the riverbank wetland is 100 feet. When the mean channel width is ten feet or more, the riverbank wetland is 200 feet. Bailey Brook is generally less than ten feet wide in the area of the Airport. Based on these criteria, the Phase I portion of the based aircraft apron expansion, the Phase 3 portion of the transient aircraft apron expansion, and the potential new terminal/hangar building would be located partially within a wetland buffer zone.

### **5.10 Floodplains**

Areas of the Airport along Bailey Brook and the Northeast Branch and East Branch of Bailey Brook are mapped as Zone B, within the 500-year flood zone. A building permit must be obtained through the Town of Middletown Building Inspector prior to any development in an Area of Special Flood Hazard, in accordance with Section 1003 of the Middletown Zoning Ordinances. However, the airport as State property is exempt from this permitting requirement and the preferred alternative does not include any activities within the mapped flood zone.

The addition of about 8 acres of new impervious area as part of the preferred alternative could have potential effects on the occurrence and frequency of flooding on both the airport property and downstream. Flooding in Bailey Brook downstream of the airport has led to road closures and property damage on a fairly regular basis, according to Town officials. An evaluation of the effects of additional impervious area on flooding would be conducted as part of the drainage study recommended for the entire airport as part of the preferred alternative.

### **5.11 Coastal Zone Management**

The Rhode Island Coastal Resources Management Council (CRMC) does not have jurisdiction over activities at Newport Airport since no coastal features are located within 200 feet of the Airport and none of the project elements appear to fall under CRMC review. The preferred alternative is not expected to have a significant effect on the coastal environment.

### **5.12 Coastal Barriers**

Since Newport Airport is not located within a coastal zone area, the preferred alternative is therefore exempt from review under the Coastal Barriers Resource Act of 1982 (PL. 97-348) which prohibits most federally financed projects from occurring within the Coastal Barriers Resource System along the Atlantic or Gulf coasts. The proposed projects are not expected to have a significant effect on coastal barriers.

### **5.13 Wild and Scenic Rivers**

Since there are no rivers, including rivers designated by The Wild and Scenic Rivers Act, in Rhode Island or the Airport vicinity, the preferred alternative will not have any significant effect on Wild and Scenic Rivers.

### **5.14 Farmland**

The Federal Farmland Protection Act is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assists in ensuring that Federal programs are administered to be compatible with state and local government, and private programs and policies to protect farmland.

Farmland is broken into the following categories by the Federal Farmland Protection Policy Act: prime farmland, unique farmland, and land of statewide or local importance. Prime farmland (Newport and Pittstown soils) exists within the Airport property and abuts boundaries of the runways. Stissing soils, present on the Airport, are classified as soils of state-wide importance. The locations of these soils with respect to the proposed project areas are shown on Figure 5.3.

If it is determined that the preferred alternative may affect soils protected under the Federal Farmland Protection Act, it may be necessary to contact the U.S. Natural Resources Conservation Service (NRCS) for completion of a Farmland Conversion Impact Rating Form. Based on the impact rating score developed by the NRCS based on this Form, the NRCS may recommend consideration of alternate project sites. The need for completing this form is contingent on the local zoning within the proposed project area since prime farmland does not include land already in or committed to urban development. Areas zoned for commercial, industrial, or high-density residential use may be exempt from this requirement.

### **5.15 Energy Supply and Natural Resources**

The use of energy to support the preferred alternative would largely involve the use of additional fuels in construction and demolition machinery. The proposed airport improvement program does not require use of unusual materials in short supply; therefore, energy supplies and natural resources are not affected by the proposed airport improvement program.

### **5.16 Light Emissions**

There are no significant changes to airport lighting associated with the preferred alternative. In the development of the preferred alternative, special care should be taken to ensure that light emissions do not impact adjacent properties. Overall, no significant impacts are anticipated.

### **5.17 Solid Waste Impact**

Waste disposal during project implementation will be managed separately from normal airport solid waste management operations. The preferred alternative will not significantly increase long term solid waste volumes; therefore, solid wastes are not expected to be affected by the proposed airport improvement program.

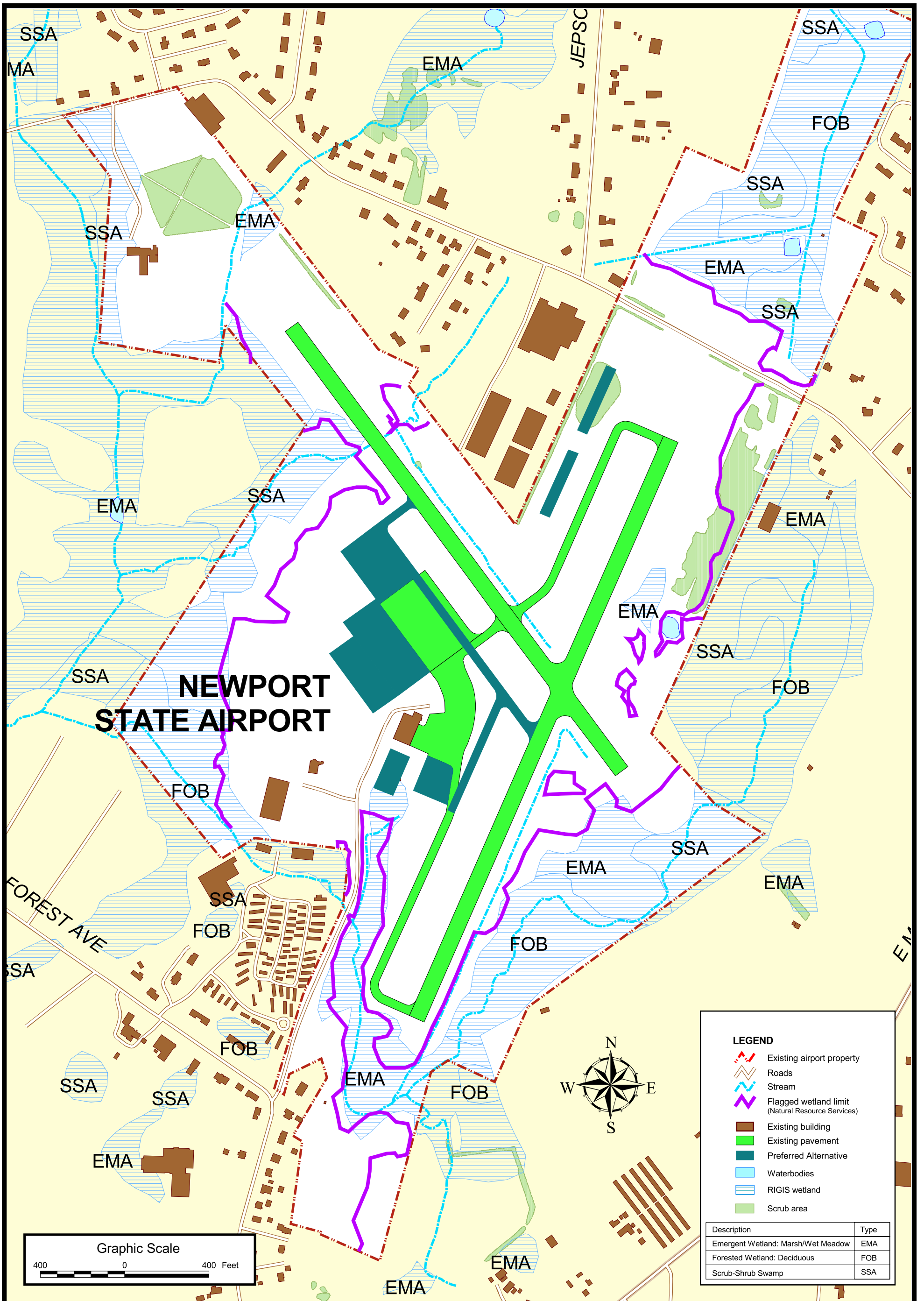
## 5.18 Environmental Justice

The development on the Airport has few if any off-airport impacts. In addition, there are no known areas of minority and low-income residents in the airport vicinity. Therefore, the principles of environmental justice are not triggered here.

## 5.19 Summary

The recommended projects for the five year planning period do not appear to have a significant impact on the surrounding community or environment. There will be a need, however, to complete coordination with federal, state, and local agencies when the recommended projects are initially designed. This coordination can be done as part of the follow-on Environmental Assessment that should address the following. A summary of the recommendations identified in this analysis are as follows:

- Activities in or adjacent to wetland areas will require a State Water Quality Certification (WQC) and DEM permit;
- A drainage study is recommended for the entire airport as part of the preferred alternative, especially the Runway 4 end, including an assessment of off-airport flooding impacts;
- Prior to construction activities, the UUU SWPPP should be modified to control sedimentation and erosion during construction;
- A field inspection and research at the RIHPHC and RIHS should be conducted to identify potential cultural resources sites within the project vicinity prior to implementation of the preferred alternative; and
- If it is determined that the preferred alternative may affect soils protected under the Federal Farmland Protection Act, it may be necessary to contact the NRCS for completion of a Farmland Conversion Impact Rating Form
- Potential noise impacts of the preferred t-hangar alternative should be evaluated as part of the EA process.



NEWPORT AIRPORT MASTER PLAN PREFERRED ALTERNATIVE

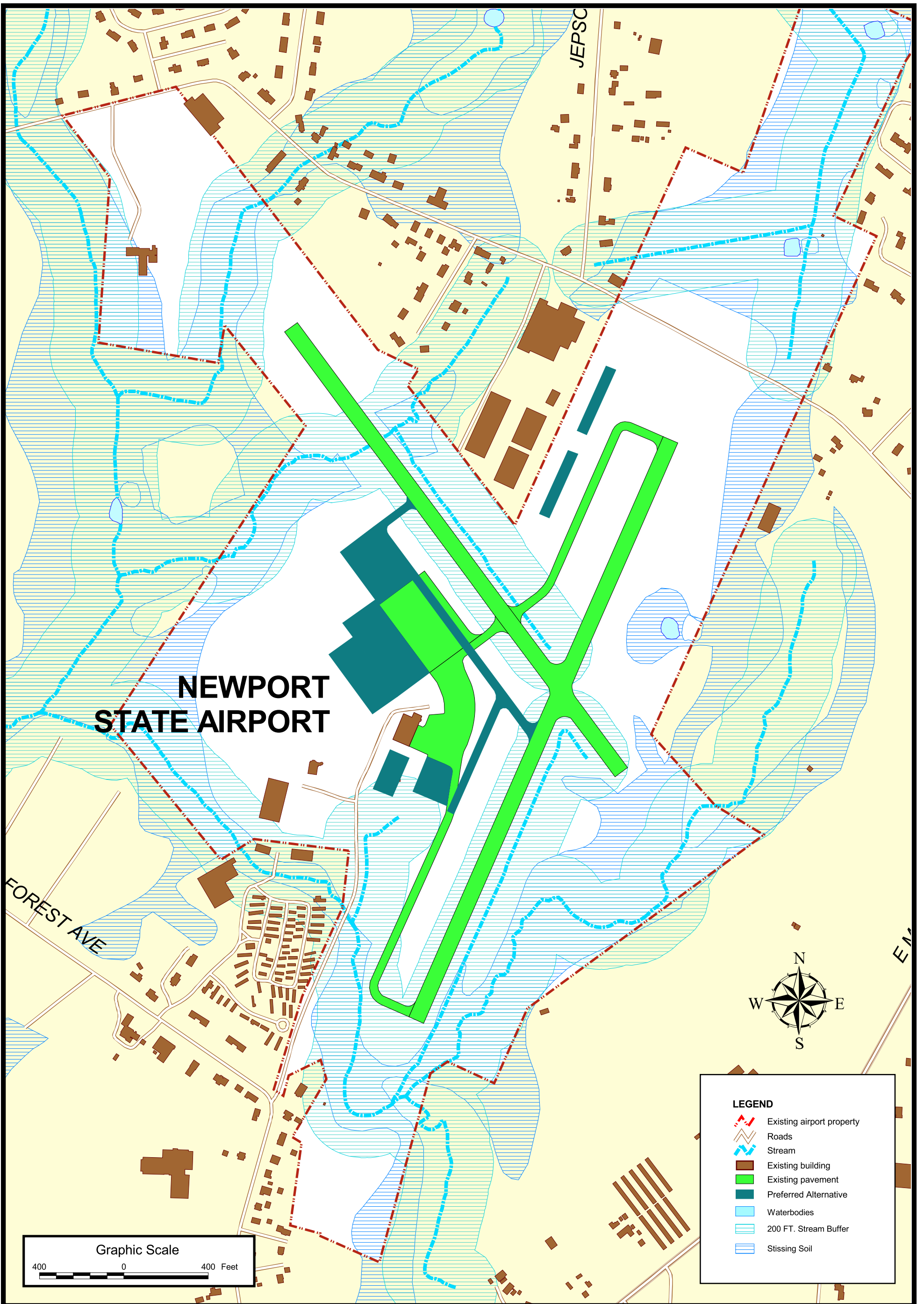


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**Figure 5.1:  
WETLAND LOCATION MAP**



Rhode Island Airport Corporation



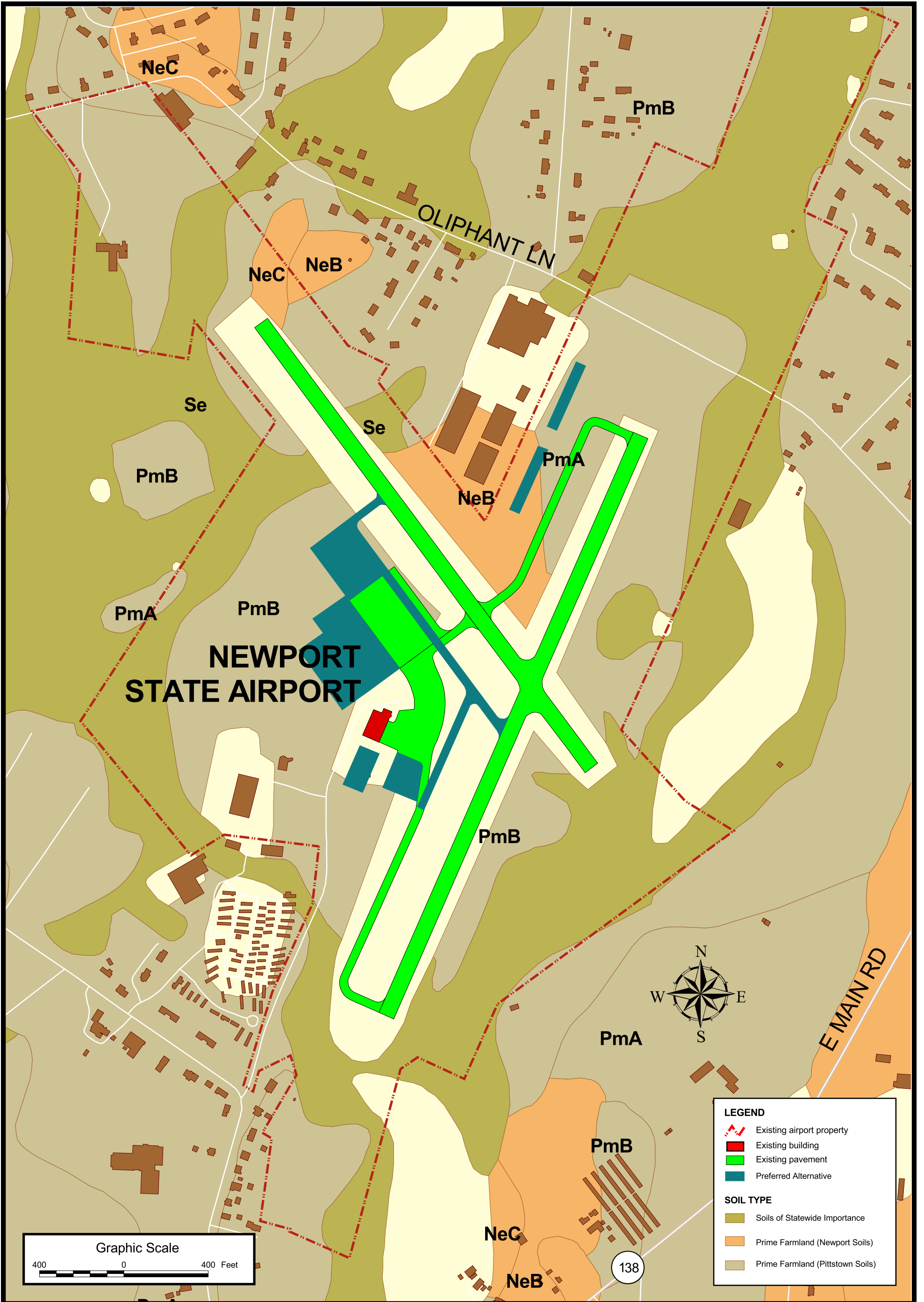
NEWPORT AIRPORT MASTER PLAN PREFERRED ALTERNATIVE



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**Figure 5.2:**  
**MIDDLETOWN WATERSHED PROTECTION DISTRICT, ZONE-1**





**Figure 5.3:  
FARMLAND PROTECTION POLICY ACT SOILS**



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