

## CHAPTER 3 – EXISTING ENVIRONMENTAL CONDITIONS AND SENSITIVE AREAS

This chapter documents environmentally-sensitive areas at the Airport as identified by previous studies and investigations at CQX.

FAA Orders 1050.1F *Environmental Impacts: Policies and Procedures* and 5050.4B *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions* provide policies and procedures for compliance with the NEPA, and requirements for airport actions pursuant to FAA authority. It is important to note that the environmental analysis included in this Master Plan Update is not a document intended to satisfy the need for formal NEPA analysis. Prior to the implementation of an action, the following list of applicable environmental impact categories outlined in FAA Order 1050.1F must be addressed:

- Air Quality
- Biological resources (including fish, wildlife, and plants)
- Climate
- Coastal resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous materials, solid waste, and pollution prevention
- Historical, architectural, archeological, and cultural resources
- Land use
- Natural resources and energy supply
- Noise and compatible land use
- Socioeconomic, environmental justice, and children’s environmental health and safety risks
- Visual effects (including light emissions)
- Water resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

### 3.1 ENVIRONMENTAL CONDITIONS

The Airport is located in a coastal community approximately two miles north of the Atlantic Ocean and is surrounded by several freshwater kettle ponds, which are fed from groundwater seepage and direct precipitation, rather than surface water flow<sup>1</sup>. In addition to these resources, a vernal pool is present on airport property, adjacent to the Runway 6 end, and a cranberry bog is located north of the Runway 24 end. This section will review prior investigations of these and other resources, which have the potential to be impacted by activities at the Airport.



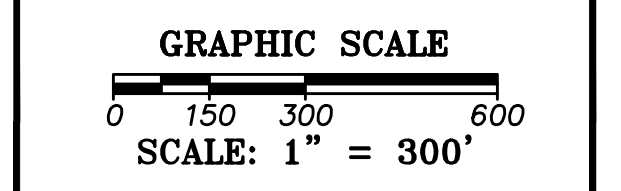
Figure 3-2: Terminal Area at CQX

<sup>1</sup> Action Plan for the Town of Chatham Ponds, November 2003

PREPARED FOR:

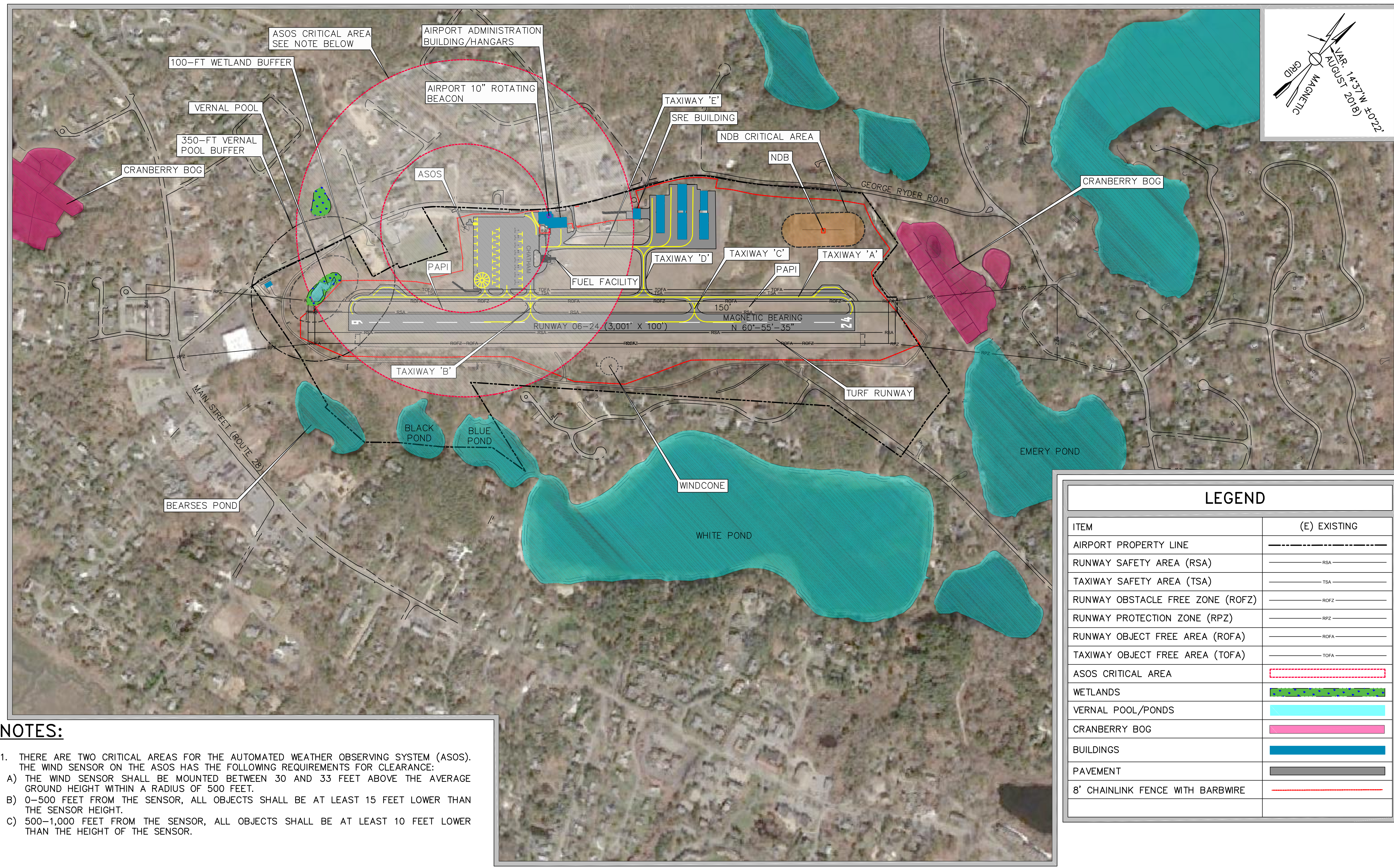
PROJECT: AIRPORT MASTER PLAN UPDATE  
 AIP NO. 3-25-0015-23-2018  
 OWNER: CHATHAM MUNICIPAL AIRPORT  
 TOWN OF CHATHAM, MASSACHUSETTS

NO.	DATE	DESCRIPTION	BY
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DATE		SEPT, 2018	



SHEET TITLE  
 EXISTING ENVIRONMENTAL CONDITIONS

DRAWING NO.  
 FIG 3-1



LEGEND	
ITEM	(E) EXISTING
AIRPORT PROPERTY LINE	-----
RUNWAY SAFETY AREA (RSA)	-----RSA-----
TAXIWAY SAFETY AREA (TSA)	-----TSA-----
RUNWAY OBSTACLE FREE ZONE (ROFZ)	-----ROFZ-----
RUNWAY PROTECTION ZONE (RPZ)	-----RPZ-----
RUNWAY OBJECT FREE AREA (ROFA)	-----ROFA-----
TAXIWAY OBJECT FREE AREA (TOFA)	-----TOFA-----
ASOS CRITICAL AREA	-----
WETLANDS	-----
VERNAL POOL/PONDS	-----
CRANBERRY BOG	-----
BUILDINGS	-----
PAVEMENT	-----
8' CHAINLINK FENCE WITH BARBWIRE	-----

**NOTES:**

- THERE ARE TWO CRITICAL AREAS FOR THE AUTOMATED WEATHER OBSERVING SYSTEM (ASOS). THE WIND SENSOR ON THE ASOS HAS THE FOLLOWING REQUIREMENTS FOR CLEARANCE:
  - THE WIND SENSOR SHALL BE MOUNTED BETWEEN 30 AND 33 FEET ABOVE THE AVERAGE GROUND HEIGHT WITHIN A RADIUS OF 500 FEET.
  - 0-500 FEET FROM THE SENSOR, ALL OBJECTS SHALL BE AT LEAST 15 FEET LOWER THAN THE SENSOR HEIGHT.
  - 500-1,000 FEET FROM THE SENSOR, ALL OBJECTS SHALL BE AT LEAST 10 FEET LOWER THAN THE HEIGHT OF THE SENSOR.

EXISTING ENVIRONMENTAL CONDITIONS  
 SCALE: 1" = 300'

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The most recent analysis of environmental impact categories occurred as a result of the 2005 Development of Regional Impact (DRI) Hardship Exemption Application submitted to the Cape Cod Commission for the purposes of upgrading airport facilities to comply with FAA design and safety



Figure 3-3: Chatham Bike Trail

standards. In particular, the DRI Application sought approval for the reconstruction of all airside facilities including runways, taxiways, RSAs, and aprons; and the construction of new hangar buildings, off-street parking, and a paved apron in place of an existing turf tie-down area. Environmental areas studied as part of the application process included wildlife and plant habitat (wildlife resources), water resources (including wetlands), and coastal resources. As a result, this section focuses solely on the environmental impact categories that were analyzed as a consequence of that project and

previous permitting projects occurring at the Airport. As the Airport plans for future improvements, the previously mentioned environmental impact categories may need to be evaluated.

### 3.1.1 WATER RESOURCES (INCLUDING WETLANDS, FLOODPLAINS, SURFACE WATERS, GROUNDWATER, AND WILD AND SCENIC RIVERS)

#### 3.1.1.1 Wetlands

In July of 2006, the Massachusetts Division of Fisheries and Wildlife (MDFW) confirmed the location of a certified vernal pool (No. 4202) on airport property. The vernal pool is located just southwest of the Runway 6 end and is shown on Figure 3-1, Existing Environmental Conditions. MDFW confirmed that the vernal pool is protected under the following regulations:

- MA Wetlands Protection Act Regulations (310 CMR 10.00) – “within wetland resource areas, protectable vernal pool habitat includes the pool itself and up to 100 feet beyond the pool’s margin.”
- Massachusetts Surface Water Quality of dredge or fill materials are strictly certified vernal pools.”
- Title 5 of the Massachusetts Environmental
- The Massachusetts Forest Cutting Practices



Figure 3-4: Vernal Pool at Runway 6 End

Standards (314 CMR 4.00) – “discharges prohibited within the boundaries of Code. Act Regulations.

### 3.1.2 BIOLOGICAL RESOURCES (INCLUDING FISH, WILDLIFE, AND PLANTS)

In preparation for the construction of the Chatham Bike Trail in 2002, a rare species information request was submitted to the Massachusetts Natural Heritage and Endangered Species Program (NHESP). The bike trail travels through Airport property, beginning at the Runway 6 end, and follows nearly the entire length of the runway. The reply to this request indicated that the following rare species are potentially present at or near the Airport: New England Bluet Damselfly (*Enallagma laterale*), Maryland Meadow Beauty (*Rhexia mariana*), Pondshore Knotweed (*Polygonum puritanorum*), and Plymouth Gentian (*Sabatia kennedyana*). It was confirmed by NHESP that the bike trail project would not adversely affect the actual habitat of these species, provided that all work within vegetated areas would be conducted greater than 25 feet from the bordering vegetated wetlands and banks of the ponds.



Figure 3-5: Plymouth Gentian

### 3.1.3 HISTORICAL, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

In 2010, the Massachusetts Department of Conservation and Recreation in partnership with the Cape Cod Commission and Boston University conducted a Heritage Landscape Inventory of Cape Cod with the goal of helping communities on Cape Cod identify unprotected significant landscape resources. The Chatham Reconnaissance Report examined the historical development of the town and summarizes existing “heritage landscapes” as identified by the inventory. The following heritage landscapes were identified in the vicinity of the Airport:



Figure 3-6: Cranberry Bog at Runway 24 End

- The Cranberry Bog located north of the Runway 24 end was identified as an agricultural resource.
- The Chatham Municipal Airport was identified as a transportation resource.

### 3.1.4 AIRPORT HANGAR BUILDING

According to the Massachusetts Cultural Resource Information System (MACRIS)<sup>2</sup>, the Massachusetts Historical Commission identifies the Chatham Municipal Airport hangar building as a significant architecture and transportation resource. The building is identified as MACRIS Inventory No. CHA.432 and was constructed in 1930. Currently, the building is being used for FBO and maintenance purposes.



Figure 3-7: Historical Photo of Chatham Hangar Building

<sup>2</sup> <http://mhc-macris.net/>