

*Wetland Strategies, Inc.*

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**TAUNTON COMPREHENSIVE WASTEWATER MANAGEMENT PLAN**

**WETLANDS ASSESSMENT**

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# **Taunton Comprehensive Waste Water Management Plan Wetlands Assessment**

## **Introduction**

BETA Group, Inc. of Lincoln RI retained Wetland Strategies, Inc. (WSI) to assist in the preparation of a Draft Environmental Impact Report (DEIR) for the City of Taunton's Comprehensive Waste Water Management Plan. As part of the DEIR, Wetland Strategies prepared an evaluation of the wetland resource areas in the City of Taunton. WSI identified the wetland resource areas in each of the Needs Areas and determined the significance of the resource areas to the interests of the MA Wetlands Protection Act. These interests include public and private water supply, ground water supply, storm damage prevention, prevention of pollution, flood control, protection of fisheries, shellfish and wildlife habitat. Each resource area was also evaluated to determine whether any impacts to the wetland could occur as a result of implementation of the waste water plan. If any impacts to the wetland resource areas were determined to be likely, WSI provided recommendations for mitigation.

## **Wetland Resource Areas**

For each of the study Needs Areas, WSI identified the various types of wetland resource areas. A description of each type of wetland resource area and their relative significance follows.

### Bordering Vegetated Wetlands

Bordering vegetated wetlands (BVW) are defined as freshwater wetlands that border on creeks, rivers, streams, ponds and lakes. Types of freshwater wetlands include wet meadows, marshes, swamps and bogs. Bordering vegetated wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of the BVW is the line within which 50% or more of the vegetative community consists of wetland indicator plants and saturated or inundated conditions exist. Bordering vegetated wetlands are presumed significant to the interests of the MA Wetlands Protection Act including public water supply, private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, protection of fisheries and wildlife habitat.

### Land Under Water Bodies and Waterways

Land Under Water Bodies and Waterways are defined as the land beneath any creek, river, stream, pond or lake. Said land is generally composed of organic muck or peat, fine sediments, rocks or bedrock. The boundary of land under water bodies and waterways is



the mean annual low water level. Land under water bodies and waterways are presumed significant to public and private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, fisheries and wildlife habitat. For work in areas that are significant to the protection of fisheries, the issuing authority may impose a time of year restriction to prevent adverse impacts to the fisheries habitat during spawning season. The time of year restriction is generally limited to the period from March 15th and June 15th in any one year. Imposing the time of year restriction would be likely if the proposed work will result in dredging, disposal of dredged fill material or filling in a fish run. Areas of the Taunton River, south of Route 140 have been designated as Living Waters Core Habitat by the Natural Heritage and Endangered Species Program. The purpose of the designation is to identify critical sites for maintaining freshwater biodiversity.

### Bordering Land Subject to Flooding

Bordering Land Subject to Flooding is an area which floods from a rise in a bordering waterway or water body. It is defined as an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these water bodies and waterways, where a bordering vegetated wetland occurs, it extends from said wetland. The boundary of bordering land subject to flooding is the estimated maximum lateral extent of flooding which will theoretically result from the statistical 100-year frequency event. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for Taunton under the National Flood Insurance Program (NFIP), currently administered by the Federal Emergency Management Agency (FEMA). Said boundary, so determined, shall be presumed accurate. The presumption may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters. This resource area is significant to the interests of flood control and storm damage prevention. Certain portions of bordering land subject to flooding are also significant to wildlife habitat including those areas within the ten year flood plain and areas within 100 feet of a bank or bordering vegetated wetland (whichever is further from the water body or waterway, so long as such area is contained within the 100 year flood plain, except for those areas so heavily altered by human activity that their important wildlife habitat functions have been effectively eliminated).

### Banks

A bank is defined as the portion of land surface which normally abuts and confines a water body. It occurs between a water body and bordering vegetated wetlands and adjacent flood plain, or in the absence of these, it occurs between a water body and an upland. A bank may be partially or totally vegetated or it may be comprised of exposed soil, gravel or stone. The upper boundary of a bank is the first observable break in slope or the mean annual flood level, whichever is lower. The lower boundary of a bank is the

mean annual low flow level. Banks are significant to public water supply, private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, fisheries and wildlife habitat.

#### Riverfront area

Riverfront areas are defined as an area of land between a river's mean annual high water line and a parallel line measured horizontally outward from the river and a parallel line measured 200 feet away. It may overlap other wetland resource areas or their buffer zones. Only perennial rivers, streams and creeks have an associated riverfront area. In Taunton, certain areas of the Taunton River have been designated as Densely Developed. Densely developed areas in Taunton include the Weir Village on West Water Street and areas within downtown Taunton. Neither of these densely developed areas are within any of the Needs Areas addressed within this evaluation. The riverfront area within these densely developed areas extends horizontally outward from the river for 25 feet. Riverfront areas are significant to public water supply, private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, fisheries and wildlife habitat.

MA Wetlands Protection Act regulations at 310 CMR 10.58 specifically address the riverfront area. In these regulations, there are activities that are grandfathered or exempted from the requirements for riverfront areas, including the "construction, expansion, repair, ...of public or private wastewater treatment plants and their related structures". As such, the work proposed within the Plan is exempt from the riverfront area requirements of the MA Wetlands Protection Act.

#### Rare and Endangered Species Habitat

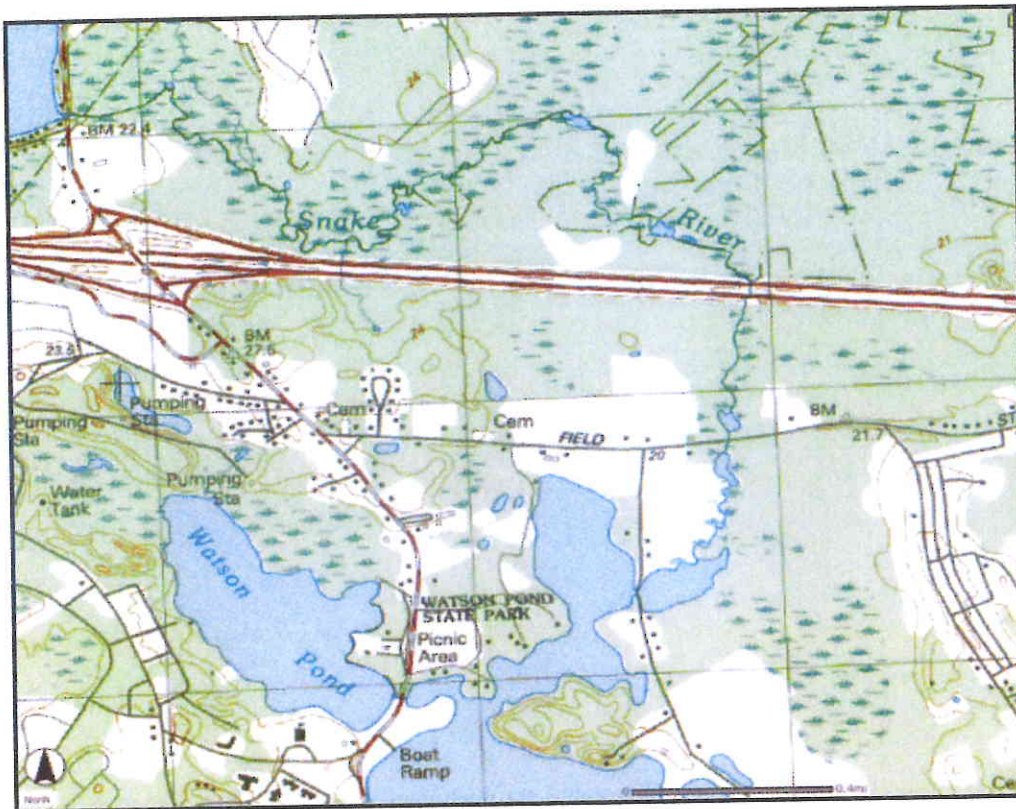
Designations of rare and endangered species habitats are determined by the Natural Heritage and Endangered Species Program of the MA Division of Fisheries and Wildlife. These habitats are protected under the MA Wetlands Protection Act and under the MA Endangered Species Act. Work within an Estimated Habitat triggers the requirement to submit a copy of the Notice of Intent to the Natural Heritage Program. Work in a Priority Habitat requires the proponent to provide site specific information to the Natural Heritage Program including site location and project plans. However, certain projects are exempt from review in priority habitats including the "construction, repair, replacement, or maintenance of septic systems, utility lines, sewer lines, wastewater treatment systems, or residential water supply wells within existing paved areas and lawfully developed and maintained lawns or landscaped areas." Therefore to the extent that implementation of the Plan will occur within paved areas, the work is exempt from the requirements for review in a priority habitat. Also, areas designated as priority habitats are co-terminus with areas designated as estimated habitats within the City of Taunton according to the Natural Heritage Program's maps.

A discussion of the wetland resource areas in each of the study Needs Areas follows.



## Need Area A Discussion

Study area A is located in the northern section of Taunton along Field Street and Bay Street. It is characterized as a residential area with average lot sizes between a half acre and an acre in size. Wetland resource areas observed by Wetland Strategies, Inc. (WSI) include parts of Watson Pond, the Snake River and, Lake Sabatia as shown on the USGS map below. MA DEP also provides information on the general extent of the wetland resource areas, and they are shown in Fig. A1.



During the course of the site evaluation, WSI observed the following additional wetland resource areas. On the south side of Field Street, bordering vegetated wetlands (BVW) are present within 100 feet of Field Street and are associated with Lake Sabatia. It appears the Taunton Conservation Commission has identified some of these wetland areas, as evidenced by the DEP file number posted for file number SE 73-1707 and SE 73-2269 along Field Street. On Leahy Drive, BVW was observed to the rear of the dwellings on the west side of Leahy Drive and appeared to be within 100 feet of Leahy

Drive. On the west side of Woodview Drive, there is an area of BVW associated with an un-named pond and is within 100 feet of Woodview Drive. BVW also exists on Jaclyn Rd. to the southwest and at the end of Rachel Drive adjacent to Interstate 495. BVW associated with Watson's Pond exists at the end of Erin Drive, at the end of Bayberry and at the end of Crane Avenue North. Along Bay Street, a small BVW exists opposite the entrance to Watson Pond State Park. Scadding Road crosses over an area of open water, bisecting Lake Sabatia. The photograph below (Wetland Strategies, Inc, Feb. 2008) shows Scadding Road as it crosses the open water of Lake Sabatia.



Work in Area A includes the installation of gravity sewer lines and force mains within portions of the above mentioned roadways. Work in the roadway will not result in any direct impacts to the wetland identified above, as the gravity sewer and force main will be installed within the roadway layouts. The proposed work will require the permission of the Conservation Commission, as the work is proposed to occur within the regulatory 100 foot buffer zone of the wetland areas identified above. To protect the wetland resource areas from any indirect impacts, WSI recommends the use of a row of hay bales, staked end to end at the edge of the roadway. Installing the hay bales will serve to trap any sediment prior to reaching the wetland. Any accumulated sediment should be removed



and disposed of in an upland area prior to the removal of the hay bale barrier. In any areas where the slope exceeds 3:1, WSI also recommends the use of silt curtain installed on the down-gradient side of the hay bale line to provide additional protection. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

Installation of a pump station is proposed west of the intersection of Field Street and Woodview Drive and is not expected to result in any direct impacts to wetland resource areas. Area A includes areas within an Interim Wellhead Protection Area (Zone II) as shown in Figure A2. Wellhead areas are particularly sensitive to any nutrient loading and installation of the sewer lines will serve to remove any nutrient input from any individual failing septic systems.

Construction of the project will not directly alter wetland resource areas and therefore the wellhead area will not be adversely affected by the project. Area A is also within the Hobomock Swamp Area of Critical Environmental Concern (ACEC). Altering wetlands within an ACEC requires a filing with the Secretary of the Executive Office of Environmental and Energy Affairs (EOEEA). WSI understands that the filing with EOEEA has already been completed.



**Figure A1: Needs Area A, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



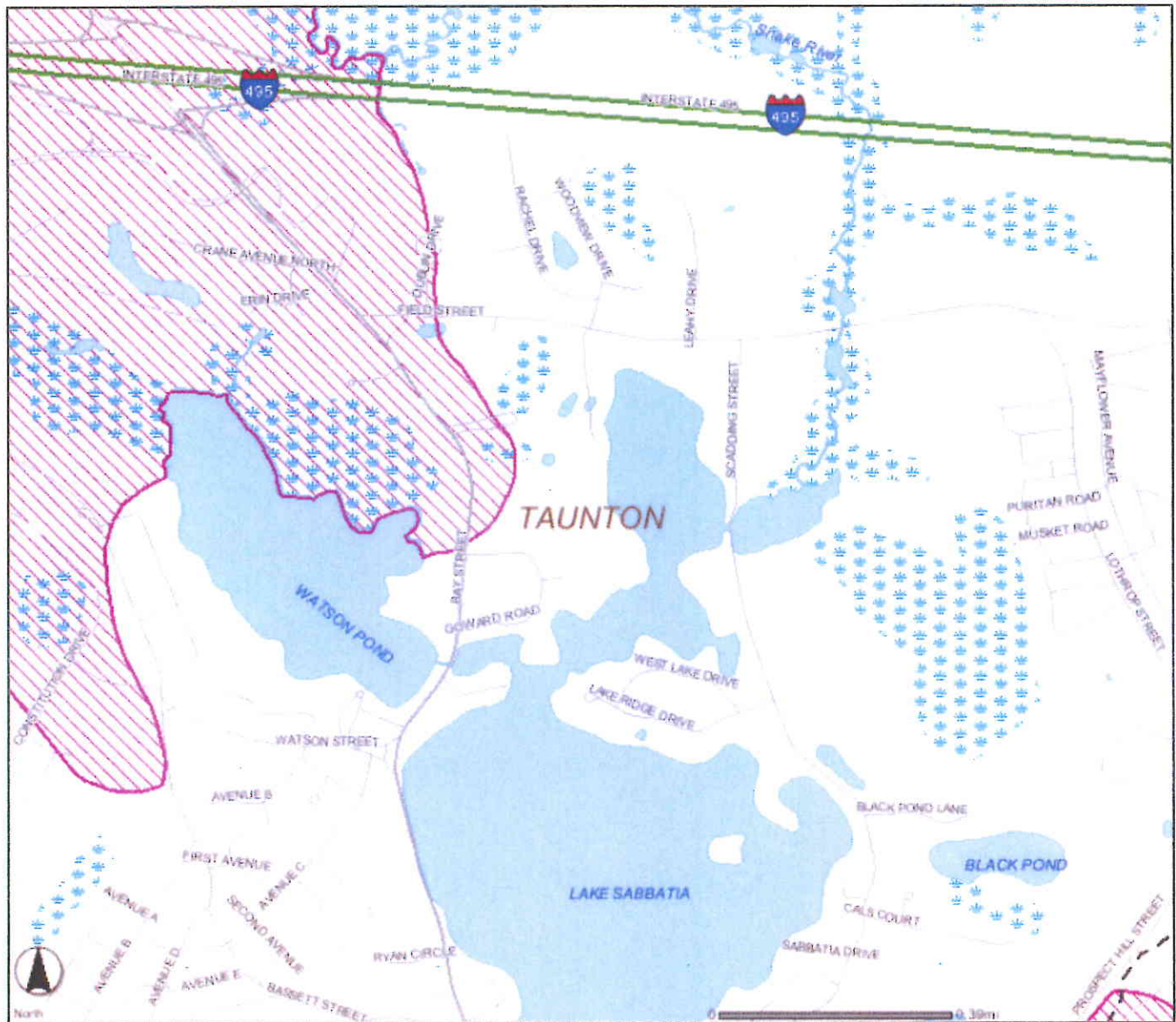
**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed					
	Barrier Beach System		Coastal Beach		Wooded Swamp Conferous
	Barrier Beach-Deep Marsh		Coastal Dune		Wooded Swamp Deciduous
	Barrier Beach-Wooded Swamp Mixed Tree		Cranberry Bog		Wooded Swamp Mixed Trees
	Barrier Beach-Coastal Beach		Deep Marsh		Wetland Connection
	Barrier Beach-Coastal Dune		Barrier Beach-Open Water		EOT-OTP Roads
	Barrier Beach-Marsh		Open Water		Limited Access Highway
	Barrier Beach- Salt Marsh		Rocky Intertidal Shore		Multilane Hwy. Not Limited Access
	Barrier Beach-Wooded Swamp Conferous		Salt Marsh		Other Numbered Hwy
	Barrier Beach-Wooded Swamp Deciduous		Shallow Marsh Meadow or Fen		Municipal Boundary
	Bog		Shrub Swamp		
	Coastal Bank Bluff or Sea Cliff		Tidal Flat		





**Figure A2: Needs Area A, Priority Resource Areas**  
**Wetland Strategies, Inc.**



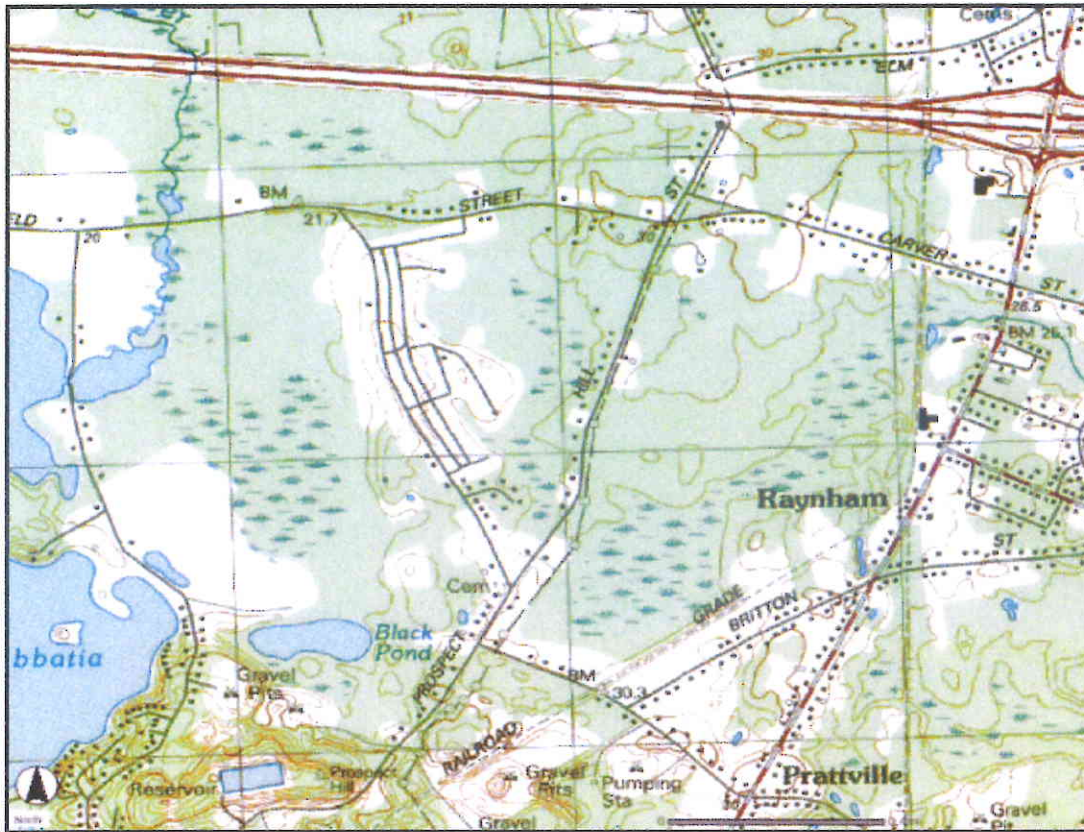
**DEP MCP 21e Map Legend**

- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPA's</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Area</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTF Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MND</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|---|---|---|--|



## Needs Area C Discussion

Needs area C includes Field Street, Lothrop Street, and Prospect Hill Street along the northwest boundary of Taunton. It is characterized as residential with most lot sizes between one half and one acre. The general extent of area C is shown on the USGS map.



Wetland resource areas in area C include small un-named ponds and streams and associated bordering vegetated wetlands as further defined herein. WSI observed the following resource areas within Area C. On Field Street, BVW exists east and west of Lothrop Street. At the intersection of Field Street and Terrienne Drive, a BVW extends north and continues to the rear of the dwellings on Diniz Street. These wetlands are associated with an intermittent stream that crosses Field St. at Terrienne Drive. Wetlands associated with the stream continue to the south as well.



A multi-unit mobile home park exists on Lothrop Street and includes mobile homes on accessory, dead end roads. BVW observed in the mobile home park include an area to the west of Meetinghouse Road, and at the end of Hemlock Road, Acorn Drive and Daisy Ave. On Prospect Hill Street, BVW exists near house number 122, 174 and 201. More BVW exists at the intersection of Prospect Hill Street and Cody Street and is associated with an intermittent stream. Figure C1 shows the general extent of wetlands in area C as determined by MA DEP.

Work in area C includes installation of both gravity sewer lines and force mains. A pump station is also proposed on Prospect Hill Street. Installation of the mains will not result in any direct alteration to any wetland resource areas as work will occur with the roadway layouts. WSI recommends the use of a hay bale barrier, with bales staked to end, along the edge of the roadway in areas noted above. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas. Installation of the pump station on Prospect Hill Street is to occur within close proximity to the BVW. To protect the wetland, WSI recommends the use of the hay bale barrier between the wetland and the location of the pump station. Should de-watering be necessary, WSI recommends the use of a temporary settling basin in an adjacent upland area to reduce the introduction of suspended solids into the wetland. Alternatively, any discharge waters should be allowed to flow over upland areas prior to reaching any wetland areas. Work should be scheduled to occur during the late summer and early autumn to the extent practical to minimize the need for de-watering and prevent excess run-off.

Area C is also within the Hobomock Swamp Area of Critical Environmental Concern (ACEC). Altering wetlands within an ACEC requires a filing with the Secretary of the Executive Office of Environmental and Energy Affairs (EOEEA). WSI understands that the filing with EOEEA has already been completed. The Natural Heritage and Endangered Species Program has identified an area in the western portion of Area C as within a Priority Habitat for rare and endangered species. As a result of this designation, the Natural Heritage Program must receive a copy of any filings made with the Taunton Conservation Commission. The findings of the Program will be incorporated into the permits issued by the Conservation Commission. Figure C2 shows the extent of the ACEC and the Program's area of jurisdiction.



**Figure C1: Needs Area C, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed					
	Barrier Beach System		Coastal Beach		Wooded Swamp Coniferous
	Barrier Beach-Deep Marsh		Coastal Dune		Wooded Swamp Deciduous
	Barrier Beach-Wooded Swamp Mixed Tree		Cranberry Bog		Wooded Swamp Mixed Trees
	Barrier Beach-Coastal Beach		Deep Marsh		Wetland Connection
	Barrier Beach-Coastal Dune		Barrier Beach-Open Water		EOT-OTP Roads
	Barrier Beach-Marsh		Open Water		Limited Access Highway
	Barrier Beach- Salt Marsh		Rocky Intertidal Shore		Multi-Lane Hwy. Not Limited Access
	Barrier Beach-Wooded Swamp Coniferous		Salt Marsh		Other Numbered Hwy
	Barrier Beach-Wooded Swamp Deciduous		Shallow Marsh Meadow or Fen		Municipal Boundary
	Bog		Shrub Swamp		
	Coastal Bank Bluff or Sea Cliff		Tidal Flat		





**Figure C2 Needs Area C, Priority Resource Areas**  
**Wetland Strategies, Inc.**



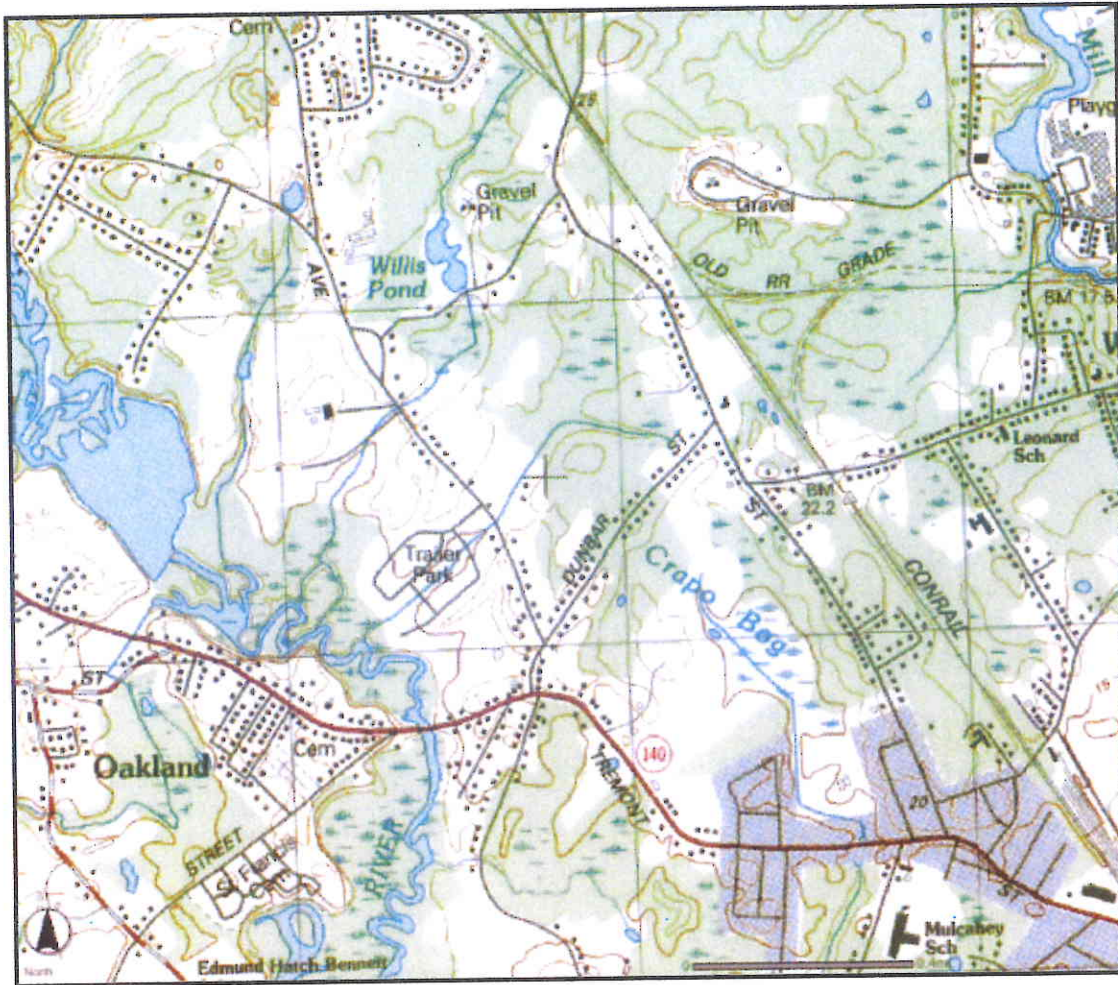
### LEGEND

- |  |   |
|--|---|
|  MHD Roads                        |  ACECs                                     |
|  LIMITED ACCESS HIGHWAY           |  NHESP MA Priority                         |
|  MULTILANE HWY NOT LIMITED ACCESS |  Habitats for State-Protected Rare Species |
|  OTHER NUMBERED HWY               |   |
|  MAJOR ROAD - COLLECTOR           |   |
|  MINOR STREET OR ROAD, RAMP       |   |



## Needs Area E Discussion

Study area E includes portions of Fremont Street, Dunbar Street, Norton Avenue and various cul-de-sacs off these major roads. It is residential in nature, with lots varying from small half acre to more rural lots over an acre in size. Area E is shown on the USGS map below.



MA DEP has mapped the general extent of the wetlands in area E and they are shown in Figure E1. In addition, Wetlands Strategies, Inc. (WSI) observed the following wetland resource areas in area E. Davis Street crosses an intermittent stream that includes a bordering vegetated wetland (BVW) on the east side. Further south on Davis Street, more wetlands (BVW) exist and these wetlands were contiguous with those at the end of Tremont Avenue associated with the Three Mile River. At the end of Wilde Ave., WSI noted a small BVW. Along Dunbar Street, bordering vegetated wetland exists on the south side at numbers 116 and 194 Dunbar Street. At the end of W. Britannia Street,



there is a small area of BVW adjacent to the railroad tracks. At 85 Fremont Street, a drainage ditch and BVW were observed.

Within the areas of Lori Lane, Robin Drive, Nickerson Way, and Gurnsey Way, WSI noted an intermittent stream that runs north/south with each of these roadways crossing over the stream. The stream includes an area of associated BVW along its entire length. WSI photographed the headwall and stream on Lori Lane as shown here.



Devon Street also includes an area of BVW at its terminus. At the northern end of Area E, Norton Avenue crosses over a perennial stream which includes an associated BVW. Radante Estates is an area of permanent trailer homes off to the west of Norton Street. BVW areas were observed at the south west end of the development, at the end of Thayer Drive, Northway Drive and Southway Drive. These wetlands are contiguous with the Three Mile River.



A perennial stream flows from a larger wetland at the northeast end of Radante Estates to the Three Mile River to of the development. WSI photographed the stream on Westwind Drive as shown here.



Work in Area E includes the installation of a sewer main within the layout of the roadways identified above. Since the work will occur within the buffer zone (100 feet) of the wetland areas identified above, the wetland will need to be protected against any erosion or siltation during construction. WSI recommends the use of a hay bale barrier, staked end to end and installed between the wetland and the edge of the roadways identified above. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas. Two pump stations are also proposed in Area E; one to the west of Tremont Ave and the other at the end of Northway Drive. WSI does not expect that either of the pump stations will be located within the wetland, but each will be within the 100 buffer zone. As such, adequate erosion control measures including the use of a siltation barrier will need to be installed prior to construction of each pump station.

The Natural Heritage and Endangered Species Program has identified as area significant to the protection of rare and/or endangered species, as shown in Figure E2. As a result of this designation, the Program must receive a copy of any filings made with the Taunton Conservation Commission for review. The findings of the Program will be incorporated into the permits issued by the Conservation Commission.

Area E includes the flood zone associated with the Three Mile River. None of the work associated with this project is expected to result in any fill in the flood zone, thus the proposed work will comply with the performance standards for work in the Bordering Land Subject to Flooding.



**Figure E1: Needs Area E, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

**Wetlands 12k Detailed**

- Barrier Beach System
- Barrier Beach-Deep Marsh
- Barrier Beach-Wooded Swamp Mixed Tree
- Barrier Beach-Coastal Beach
- Barrier Beach-Coastal Dune
- Barrier Beach-Marsh
- Barrier Beach-Salt Marsh
- Barrier Beach-Wooded Swamp Conferous
- Barrier Beach-Wooded Swamp Deciduous
- Bog
- Coastal Bank Bluff or Sea Cliff

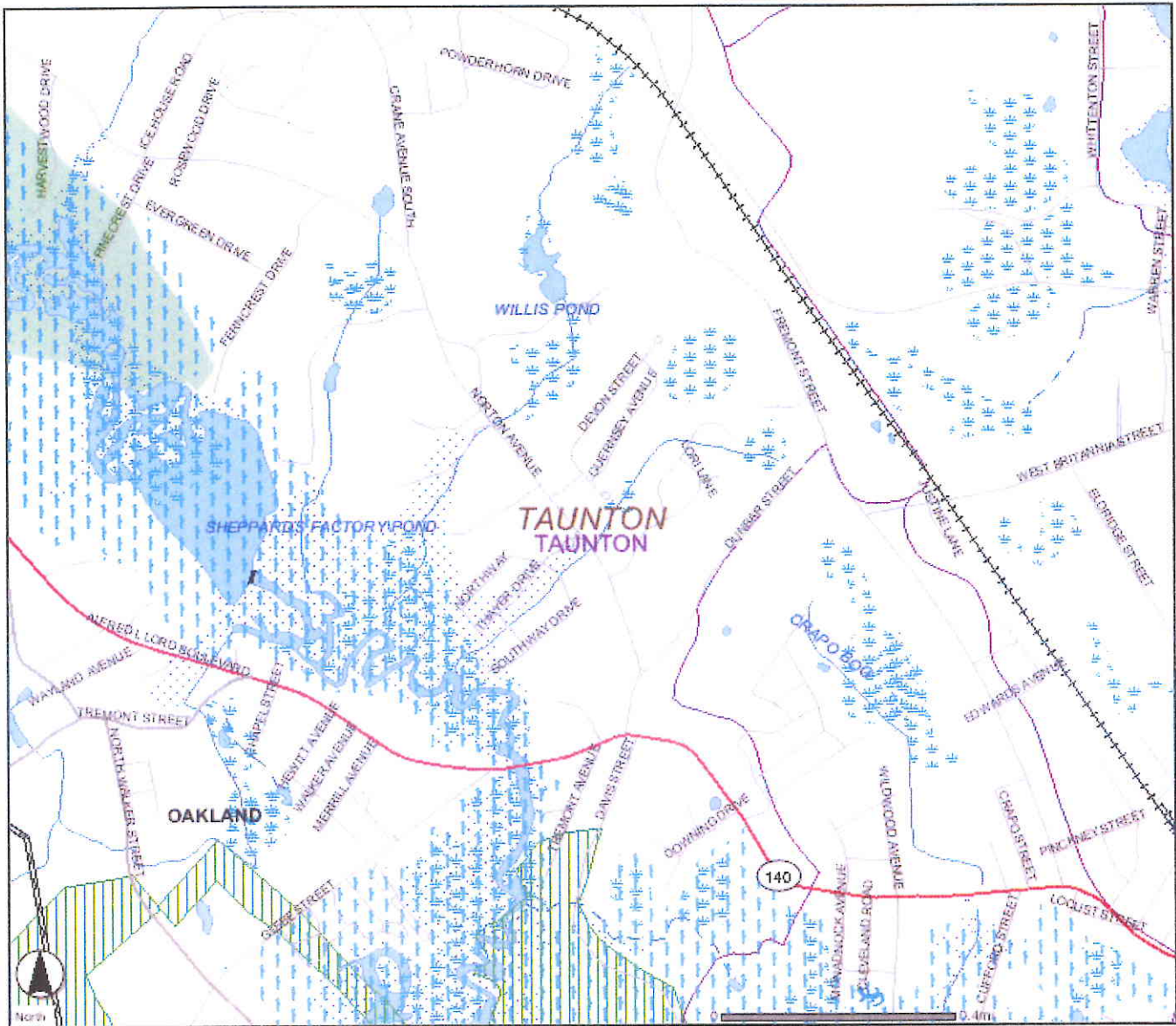
- Coastal Beach
- Coastal Dune
- Cranberry Bog
- Deep Marsh
- Barrier Beach-Open Water
- Open Water
- Rocky Intertidal Shore
- Salt Marsh
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Tidal Flat

- Wooded Swamp Conferous
- Wooded Swamp Deciduous
- Wooded Swamp Mixed Trees
- Wetland Connection
- EOT-OTP Roads
- Limited Access Highway
- MultiLane Hwy. Not Limited Access
- Other Numbered Hwy
- Municipal Boundary





**Figure E2: Needs Area E, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

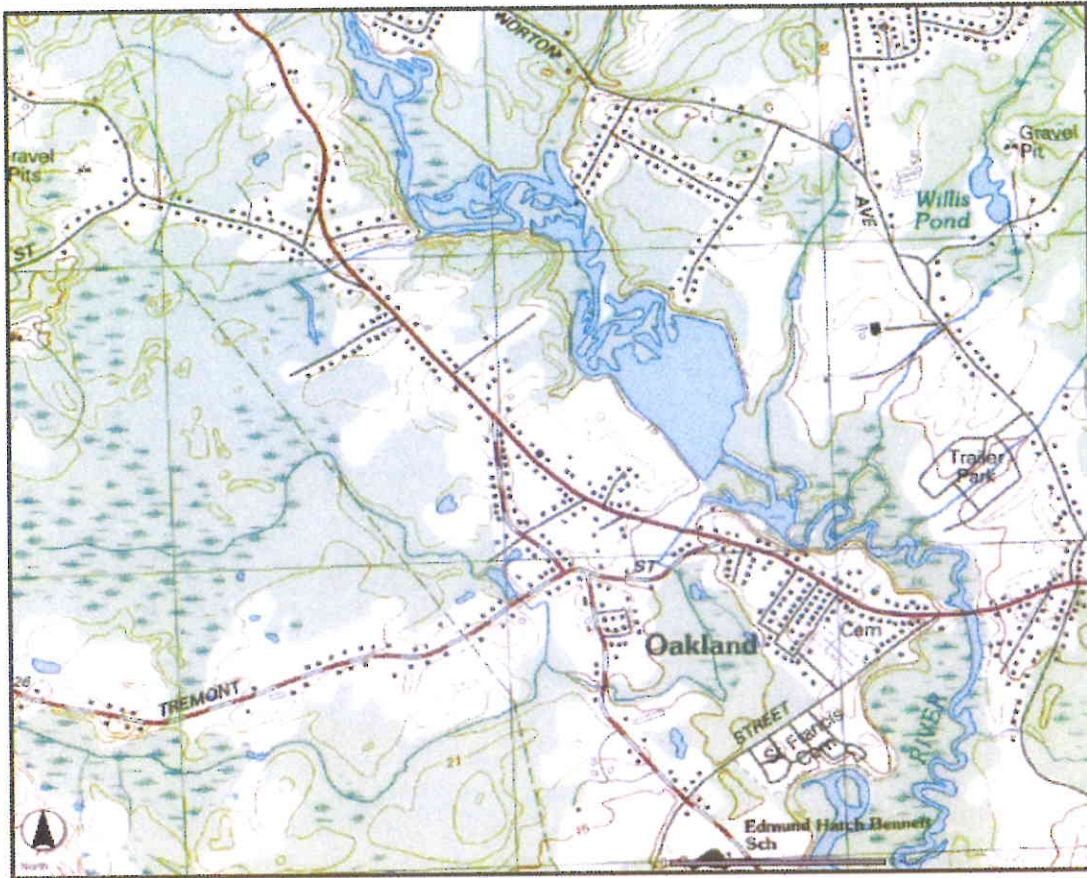
- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li> Zone IIs</li> <li> IWPA</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arcs</li> <li> County Boundaries</li> </ul> | <ul style="list-style-type: none"> <li><b>Aquifers, By Yield</b></li> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> <li><b>Non Potential Drinking Water Source Area</b></li> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> <li><b>FEMA Floodplains</b></li> <li> 100 YEAR FLOODPLAIN</li> </ul> | <ul style="list-style-type: none"> <li><b>Hydrography</b></li> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALTWATER WETLANDS</li> <li> FLATS SHOALS</li> <li><b>Rivers and Streams</b></li> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <ul style="list-style-type: none"> <li><b>EOT-OTP Roads</b></li> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY, NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD, RAMP</li> <li><b>Tracks and Trails MHD</b></li> <li> TRACK</li> <li> TRAIL</li> <li><b>Transmission Lines</b></li> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|---|---|---|--|





## Needs Area H Discussion

Study area H includes portions of Route 140 from Glebe Street at the south end to White Pine Drive to the north. Several secondary roads off to the west of route 140 including N. Walker Street are also included in area H. Area H is characterized as rural residential with lot sizes generally greater than one acre. The general extent of area H is shown below on the USGS topographic map.



Wetland Strategies, Inc. observed the following wetland resource areas in area H. The Three Mile River and Shepards Factory Pond are located to the east of the study area. At the intersection of Glebe Street and route 140, a large wetland system associated with the Three Mile River was observed with steep banks rising up to Glebe Street. Tremont Street (Route 140) crosses over a tributary to the Three Mile River, just north of Mill Lane and the area includes an associated BVW. Along N. Walker Street, WSI observed another wetland and perennial stream crossing adjacent to numbers 17 and 19 N. Walker Street. Additional wetlands were observed at the intersection of Glebe Street and N. Walker Street. On White Pine Drive, an intermittent stream and associated bordering vegetated wetlands were observed at house number 84. Contiguous wetlands were observed at #144 White Pine Drive and from 143 to 175 Shagbark Rd.



Shagbark Road crosses a wetland adjacent to house number 241 and a limited area of bordering vegetated wetland was observed at the far southern end of Shagbark Rd. The wetland areas observed by WSI are generally consistent with the wetlands identified by MA DEP as shown in Figure H1.

The proposed work in area H includes the installation of a force main along Tremont Street and Alfred Lloyd Blvd. A gravity sewer main is to be installed along portions of N. Walker Street. In addition, a pump station is proposed at the intersection of Worcester and Tremont Street. There were no wetland areas in the vicinity of the proposed pump station. Work on Tremont Street, Alfred Lloyd Blvd and N. Walker Street will include activities within the buffer zones of the wetland areas identified above. To protect these wetlands, WSI recommends the use of a hay bale barrier, staked end to end, and installed between the edge of the roadway and the wetlands. The barrier should remain in place until all work is complete and any accumulated debris has been removed. In areas along Glebe Street where the steep banks occur, WSI recommends the use of a siltation fence in addition to the hay bale barrier. The silt fence is to be installed down-gradient of the hay bale barrier and should be toed into the slope. Providing an additional erosion control barrier along the steep slopes is recommended because to ensure that the wetlands are not impacted by siltation or sedimentation. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

Area H includes an area identified by the Natural Heritage and Endangered Species Program as Estimated Habitat and Priority Habitat. The habitats are associated with the Three Mile River, which runs along the east side of Tremont Street (Route 140) as shown in Figure H2. Installation of the sewer main on Glebe Street and Mill Lane may occur within these habitat boundaries. If so, the proponent will need to submit a copy of the Notice of Intent to the Program. The findings of the Program will be incorporated into the permits issued by the Conservation Commission.

A flood zone is also associated with the Three Mile River. Whereas the work is not likely to result in any fill in the flood zone, the project is expected to meet the performance standards for work in Bordering Land Subject to Flooding as set forth in the Wetlands Protection Act.



**Figure H1: Needs Area H, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



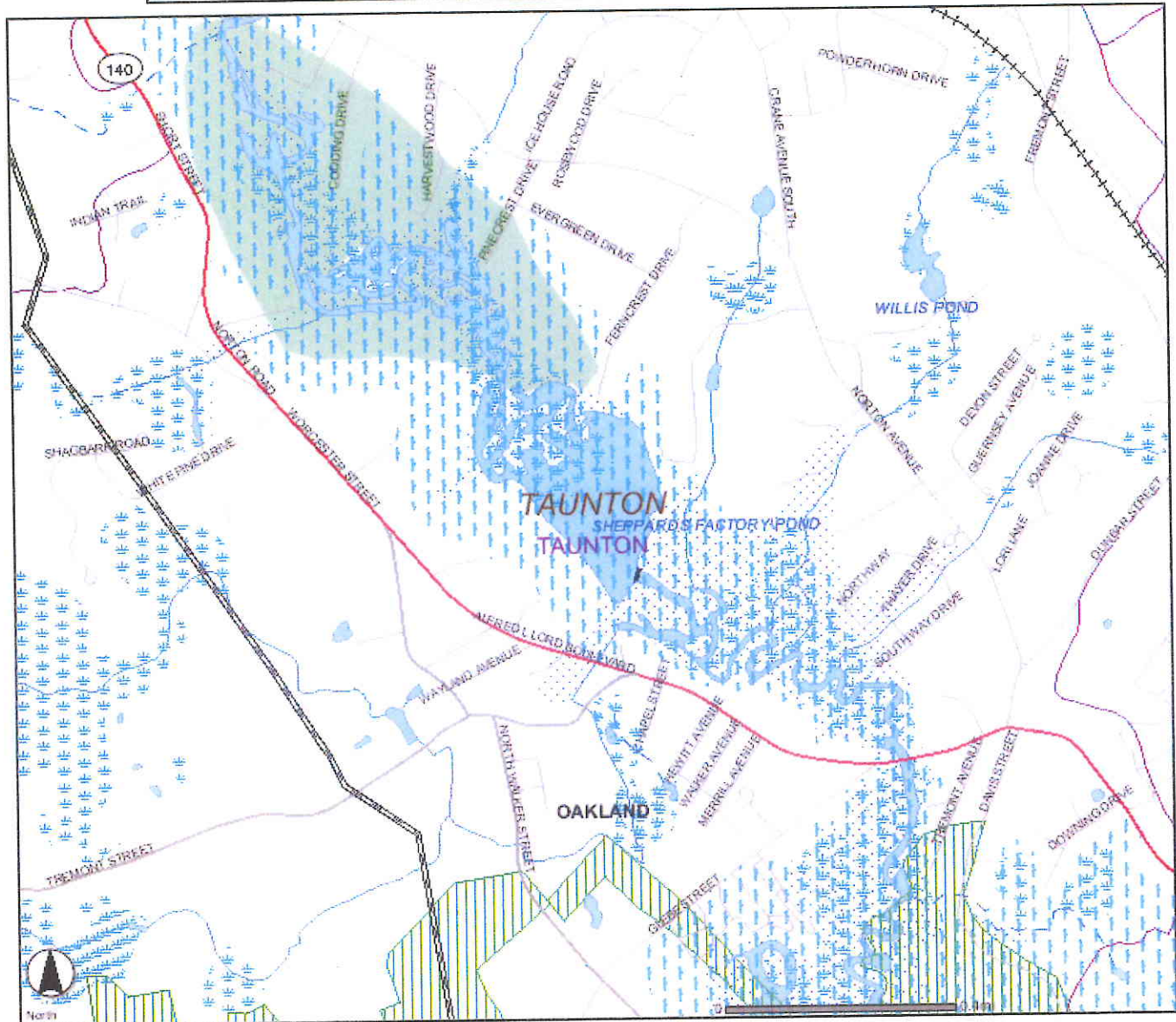
**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed	Coastal Beach	Wooded Swamp Coniferous
Barrier Beach System	Coastal Dune	Wooded Swamp Deciduous
Barrier Beach-Deep Marsh	Cranberry Bog	Wooded Swamp Mixed Trees
Barrier Beach-Wooded Swamp Mixed Tree	Deep Marsh	Wetland Connection
Barrier Beach-Coastal Beach	Barrier Beach-Open Water	EOT-OTP Roads
Barrier Beach-Coastal Dune	Open Water	Limited Access Highway
Barrier Beach-Marsh	Rocky Intertidal Shore	MultiLane Hwy, Not Limited Access
Barrier Beach- Salt Marsh	Salt Marsh	Other Numbered Hwy
Barrier Beach-Wooded Swamp Coniferous	Shallow Marsh Meadow or Fen	Municipal Boundary
Barrier Beach-Wooded Swamp Deciduous	Shrub Swamp	
Bog	Tidal Flat	
Coastal Bank Bluff or Sea Cliff		





**Figure H2 Needs Area H, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

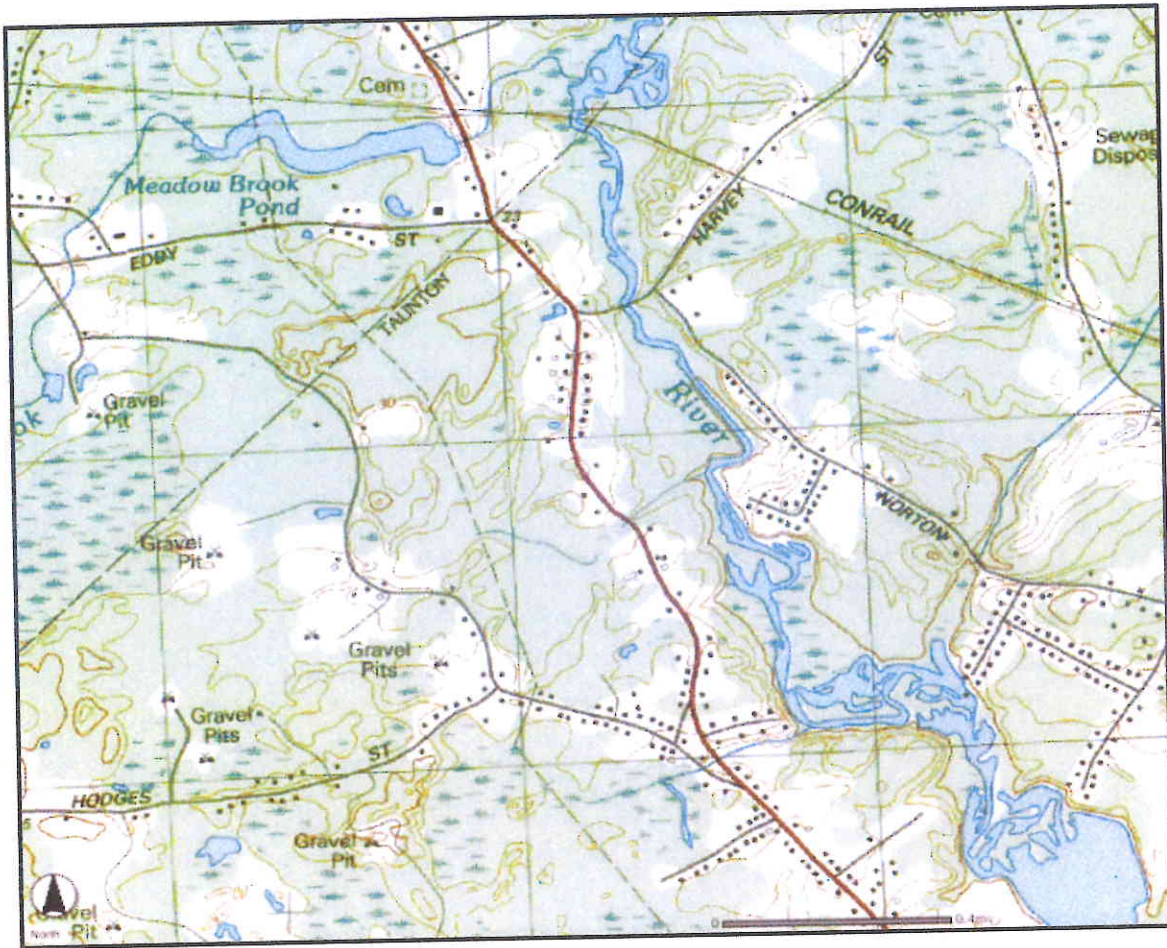
- |  |   |   |   |
|--|---|---|---|
| <ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPAs</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arce</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD /COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|--|---|---|---|





## Needs area I Discussion

Study Area I includes an area along the Taunton/Norton border, along portions of Route 140 and Worcester Street. Cul-de-sac secondary roadways off route 140 are also included in the study area. The area is residential, with lot sizes generally an acre or more. The following USGS topographic map shows the general extent of study area I.



Wetland resource areas include the Three Mile River along the eastern edge of the study area. In addition, WSI observed bordering vegetated wetlands at the end of Warrior Road and along Tremont Street from the north of Indian Trail to Woodward Estates. Tremont Street crosses over a small intermittent stream and wetland area to the north of Brookview Circle. Bordering vegetated wetlands were also observed at the intersection of Juniper Lane and route 140 and along Juniper Lane as it continues to the south. Tremont Street crosses over another intermittent stream and BVW just south of Rankin



Road. Along Worcester Street, there is an intermittent stream crossing south of the Short Street intersection and another stream and wetland system at its intersection with Kendra Lane. Kendra Lane has wetlands on the east side and at the end of the Lane.

Meadowbrook Lane is adjacent to an intermittent stream and wetlands at house number 46 and the wetland continues along the north side of Meadowbrook to its end. At the end of Foxhill Drive, WSI observed an area of bordering vegetated wetlands. Further north on Worcester Street, WSI observed bordering vegetated wetlands north of Meadowbrook Lane, on both the east and west sides of Worcester Street and on the east side at the town line. A MA GIS map of the wetlands in area I is shown in Figure I1.

A pump station is proposed on Tremont Street, north of the intersection with Rankin Road. There were no wetlands observed in the vicinity of the proposed pump station. Sewer force mains are also proposed within the layout of the streets within Area I. Work on the sewer lines will occur with the buffer zones of the wetland areas identified above. To protect these wetlands, WSI recommends the use of a hay bale barrier, staked end to end, and installed between the edge of the roadway and the wetlands. The barrier should remain in place until all work is complete and any accumulated debris has been removed. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

Area I includes a flood zone associated with the Three Mile River and rare and endangered species habitat area as identified by the Natural Heritage and Endangered Species Program. Both of these areas as shown on Figure H2. Work to install the force mains and pump station is not expected to result in any fill in the flood zone, thus the work will not require any compensatory flood storage. Installation of the force main on Rankin Road may occur within the rare species habitat. If so, the project proponent will need to submit a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program. The findings of the Program will be incorporated into the permits issued by the Conservation Commission.



**Figure I1: Needs Area I, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



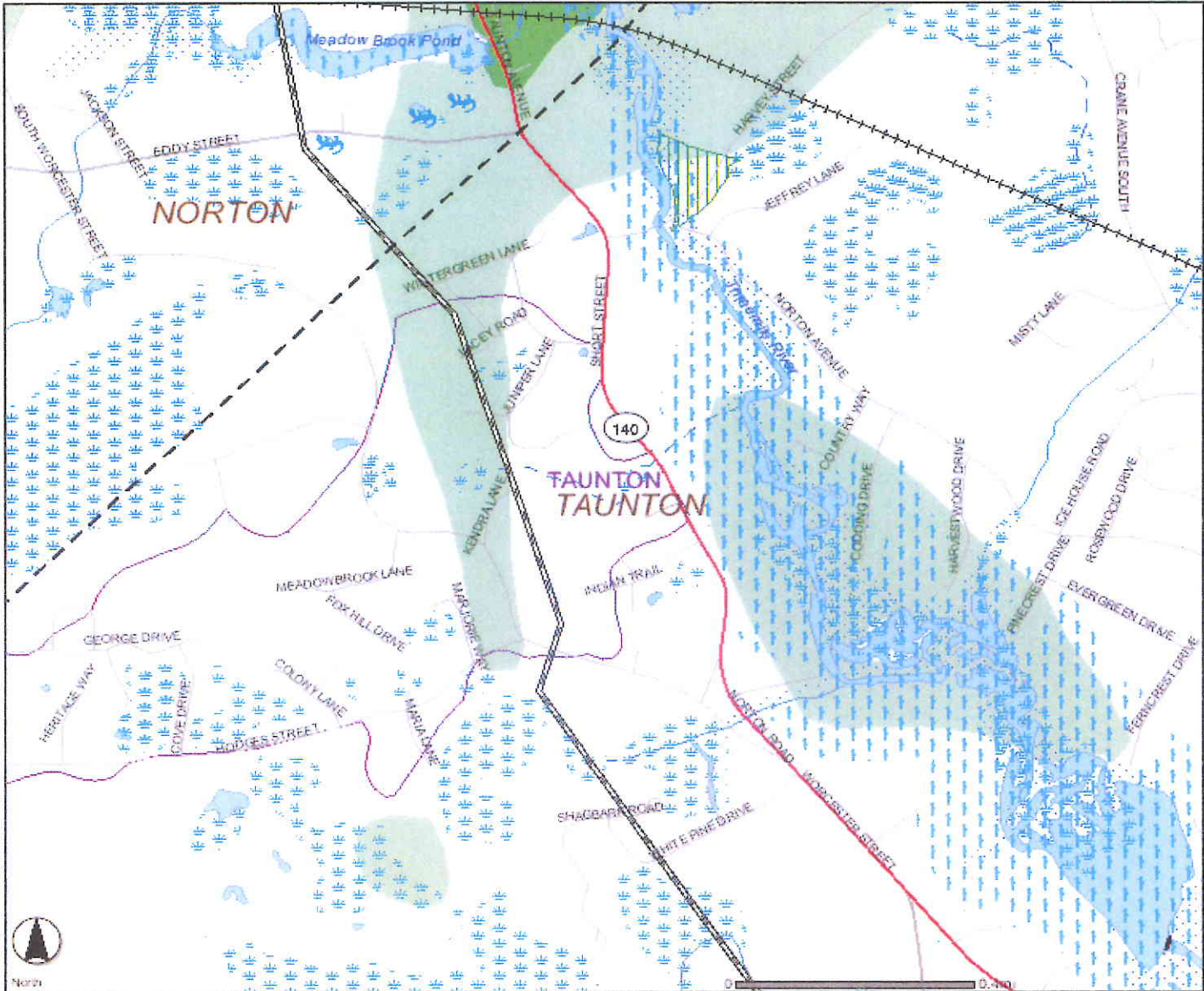
**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed		
	Barrier Beach System	
	Barrier Beach-Deep Marsh	
	Barrier Beach-Wooded Swamp Mixed Tree	
	Barrier Beach-Coastal Beach	
	Barrier Beach-Coastal Dune	
	Barrier Beach-Marsh	
	Barrier Beach- Salt Marsh	
	Barrier Beach-Wooded Swamp Conferous	
	Barrier Beach-Wooded Swamp Deciduous	
	Bog	
	Coastal Bank Bluff or Sea Cliff	
	Coastal Beach	
	Coastal Dune	
	Cranberry Bog	
	Deep Marsh	
	Barrier Beach-Open Water	
	Open Water	
	Rocky Intertidal Shore	
	Salt Marsh	
	Shallow Marsh Meadow or Fen	
	Shrub Swamp	
	Tidal Flat	
	Wooded Swamp Conferous	
	Wooded Swamp Deciduous	
	Wooded Swamp Mixed Trees	
	Wetland Connection	
	EOT-OTP Roads	
	Limited Access Highway	
	MultiLane Hwy. Not Limited Access	
	Other Numbered Hwy	
	Municipal Boundary	





**Figure I2 Needs Area I, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

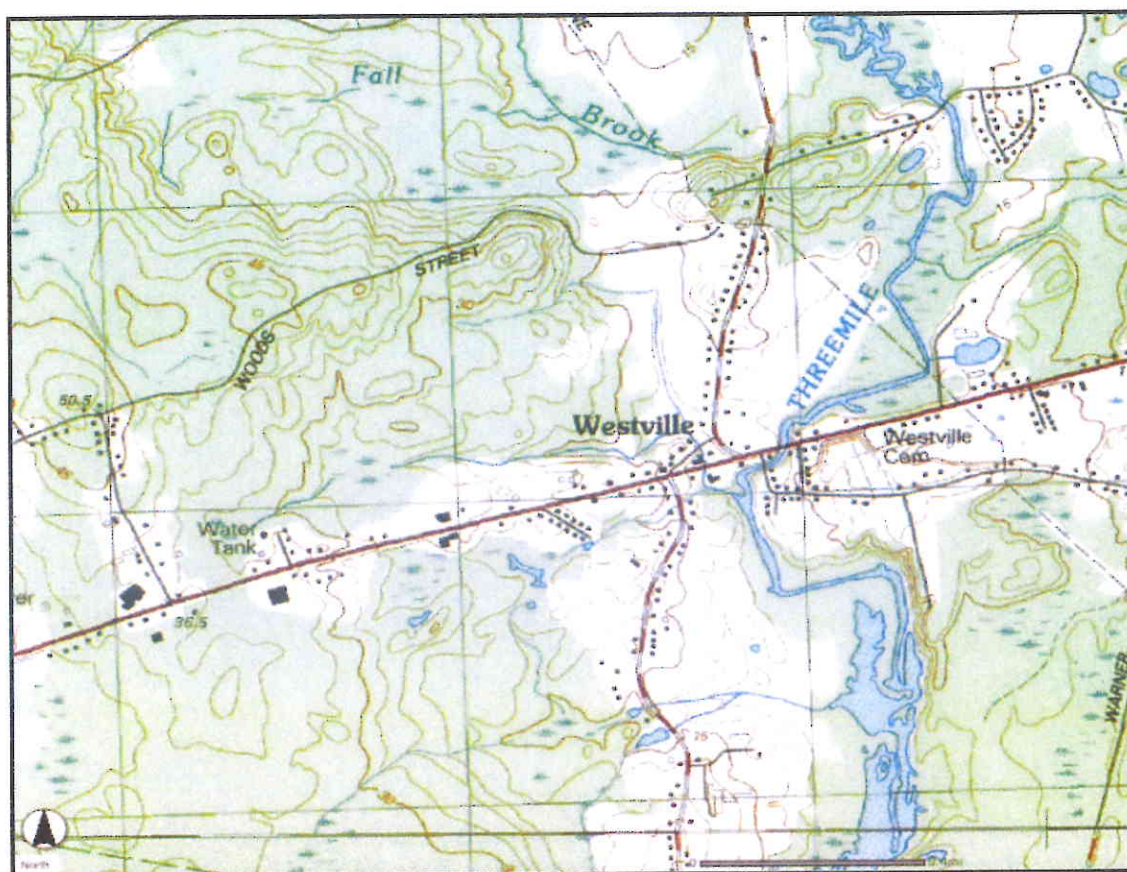
- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li> Zone IIs</li> <li> IWPA's</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arce</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
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## Needs area K Discussion

Study Area K includes portions of Route 44 (Winthrop Street) in the southwestern side of Taunton. Route 44 crosses over the Three Mile River and its associated flood plain and bordering vegetated wetlands (BVW). The area is characterized as rural residential, with individual house lots ranging from one half acre to an acre in size. A USGS map of the general extent of area K is shown below.



As noted above, Route 44 crosses over the Three Mile River at Cohannet Street. The Three Mile River includes a flood zone as determined by the Federal Emergency Management Agency. A bordering vegetated wetland (BVW) is present along both sides of the river. BVW was observed on the north side of Route 44, from Cohannet Street to Dexter Farm Road. The BVW continues along the west side of Dexter Farm Road to its intersection with Marcia Bliss Rd. Additional areas of BVW were observed along the north and south sides of Route 44 to the far western end of Area K. At the intersection of Route 44 and N. Walker Street extension, WSI observed a culvert with BVW on each side of the crossing. The culvert passes a perennial stream which eventually joins the Three Mile River. The general extent of the wetlands is shown in Figure K1.



Work proposed to occur in area K includes the installation of a gravity sewer line within the Route 44 layout and several secondary roads. A force main is also proposed, running parallel to Route 44 to the south. A pump station is to be installed at the intersection of Route 44 and N. Walker Street. Installation of the gravity sewer line will not impact any BVW as the work will occur within the layout of Route 44. WSI does not expect any impacts to the flood zone because the work will not result in any filling within the flood plain. Installation of the force main will temporarily disturb the BVW associated with the Three Mile River at the intersection of Route 44 and Cohannet Street. The impacts will be temporary in nature and any wetland altered as a result of the work will be restored to its pre-construction elevation and contours. The area will be re-vegetated with native wetland species including herbaceous grasses and forbs. Installation of the pump station is not expected to result in any alteration to the wetland. Any fill in the flood zone as a result of the pump station will be negligible.

To protect the wetlands along Route 44 and adjacent roadways during installation of the gravity sewer line, WSI recommends the use of a hay bale barrier. The hay bales are to be installed between the wetland and the edge of the road prior to any activity. WSI also recommends the use of a siltation fence in areas where the slope exceeds 3:1. The silt fence is to be installed on the down-gradient side of the hay bale barrier with the toe trenched in along its entire length. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

The Natural Heritage and Endangered Species Program has designated the Three Mile River and lands adjacent to it as rare and/or endangered species. The extent of the habitat is shown in Figure K2. As a result of the habitat designation, the proponent will need to submit a copy of the Notice of Intent to the Program. The findings of the Program will be incorporated into the permits issued by the Conservation Commission.



**Figure K1: Needs Area K, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



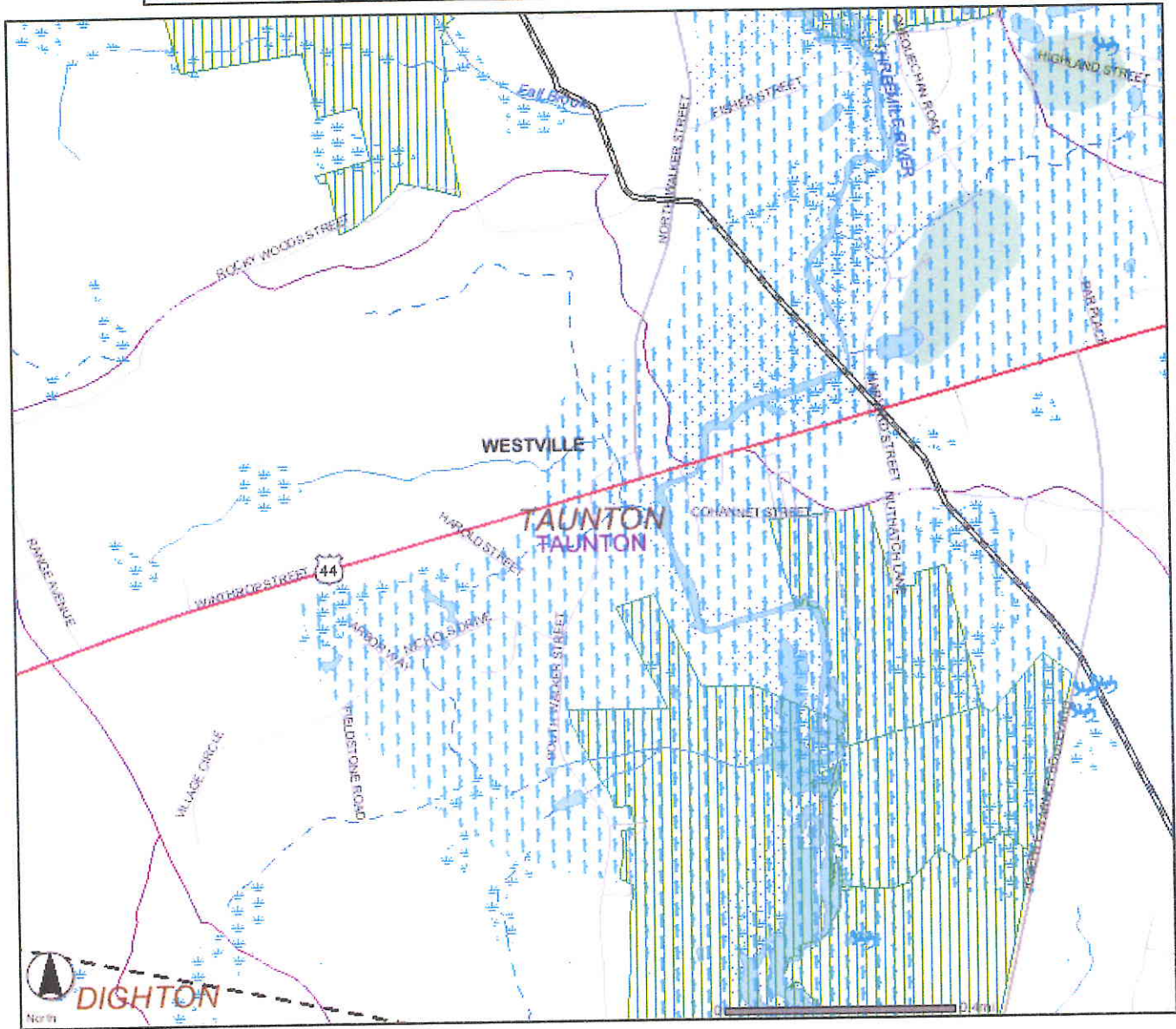
**DEP Wetland 12K Map Legend**

Wetlands 12K Detailed		
	Barrier Beach System	
	Barrier Beach-Deep Marsh	
	Barrier Beach-Wooded Swamp Mixed Tree	
	Barrier Beach-Coastal Beach	
	Barrier Beach-Coastal Dune	
	Barrier Beach-Marsh	
	Barrier Beach- Salt Marsh	
	Barrier Beach-Wooded Swamp Conferous	
	Barrier Beach-Wooded Swamp Deciduous	
	Bog	
	Coastal Bank Bluff or Sea Cliff	
	Coastal Beach	
	Coastal Dune	
	Cranberry Bog	
	Deep Marsh	
	Barrier Beach-Open Water	
	Open Water	
	Rocky Intertidal Shore	
	Salt Marsh	
	Shallow Marsh Meadow or Fen	
	Shrub Swamp	
	Tidal Flat	
	Wooded Swamp Conferous	
	Wooded Swamp Deciduous	
	Wooded Swamp Mixed Trees	
	Wetland Connection	
	EOT-OTP Roads	
	Limited Access Highway	
	MultiLane Hwy, Not Limited Access	
	Other Numbered Hwy	
	Municipal Boundary	





**Figure K2 Needs Area K, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

- |  |   |  |  |
|--|---|--|--|
| <ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPAs</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Area</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALTWATER WETLANDS</li> <li> FLATS/SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
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## Needs Area L Discussion

Study area L includes an area in the south west portion of Taunton, from Route 44 north along Burt Street. Smaller side roads and cul-de-sacs off of Burt Street are also included. The area is zoned rural residential with some commercial business along Winthrop Street (Route 44). A USGS map of area L follows.



Wetland Strategies observed numerous wetland areas throughout area L. The Segreganset River is located on the west side of the study area. Burt Street crosses an area of bordering vegetated wetlands (BVW) just to the north of its intersection with Route 44 and at 1059 Burt Street. BVW exists along Rocky Woods Street at 1002 Rocky Woods and from 865 to 916 Rocky Woods Street. Further north on Burt Street, wetlands were observed at house number 892. At the intersection of Burt Street and Chris Drive, an area of BVW was previously flagged by Wetland Strategies for drainage improvements on Chris Drive. Laneway Street is a dead end off Burt Street that crosses over the Segreganset River. A narrow band of BVW was observed at the crossing, as shown in the attached photographs.



On Caroline Drive, WSI observed an area of BVW at house number 135 and at the intersection with Anne Drive. Glebe Street E. includes wetlands along most of its entire length on both the north and south sides. Glebe Street W. crosses over the Segreganset River and there is a BVW associated with the crossing. Morgan Street off of Glebe Street W. includes an area of BVW at its terminus. Continuing north on Burt Street, WSI observed other areas of BVW at house number 1391, number 920 and from 367 to 463 Burt Street. At 1260 Burt Street, the BVW is associated with an intermittent stream. DEP File number SE 73-2271 was posted at a wetland area just south of the Burt Street and Tremont Street intersection indicating that the wetlands have been identified and that the Taunton Conservation Commission has reviewed the wetland boundary. The general extent of the wetlands is shown on Figure L1.

The work proposed in area L includes installing a gravity sewer on Burt Street, Rocky Woods Street, Laneway Street, and Glebe Street E. and W. Force mains are to be installed within some of the secondary side roads and cul-de-sacs off Burt Street. Since work will occur within the layout of the roadways, WSI does not expect any direct impacts to the wetland resource areas along the roadways. To protect the wetland from any indirect impacts, WSI recommends the proponent install a hay bale barrier between the wetland and the edge of the roadway. A pump station is to be installed on Glebe Street W. in close proximity to the Segreganset River. The pump station will not be constructed within the wetland but because of its close proximity, an erosion control barrier is needed to prevent any indirect impacts to the wetland during construction. WSI recommends a hay bale barrier, staked end to end, be installed prior to any construction. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

The Natural Heritage and Endangered Species Program has identified an area of rare/endangered species at the Burt Street/Route 44 intersection. It is shown on Figure L2. To satisfy the Program, the project proponent will need to submit a copy of the Notice of Intent to the Program. The findings of the Program will be incorporated into the permits issued by the Conservation Commission. Several certified vernal pools are located within the wetland areas of Area L. These pools will not be disturbed by the proposed activity as they are embedded into the wetland areas far to the west of Burt Street. WSI also notes that a flood zone associated with the Segreganset River has been identified by FEMA at the north end of Burt Street. Work on Burt Street to install the gravity sewer is not expected to result in any fill in the flood zone and the work therefore meets the performance standards in the Wetlands Protection Act.



**Figure L1: Needs Area L, DEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

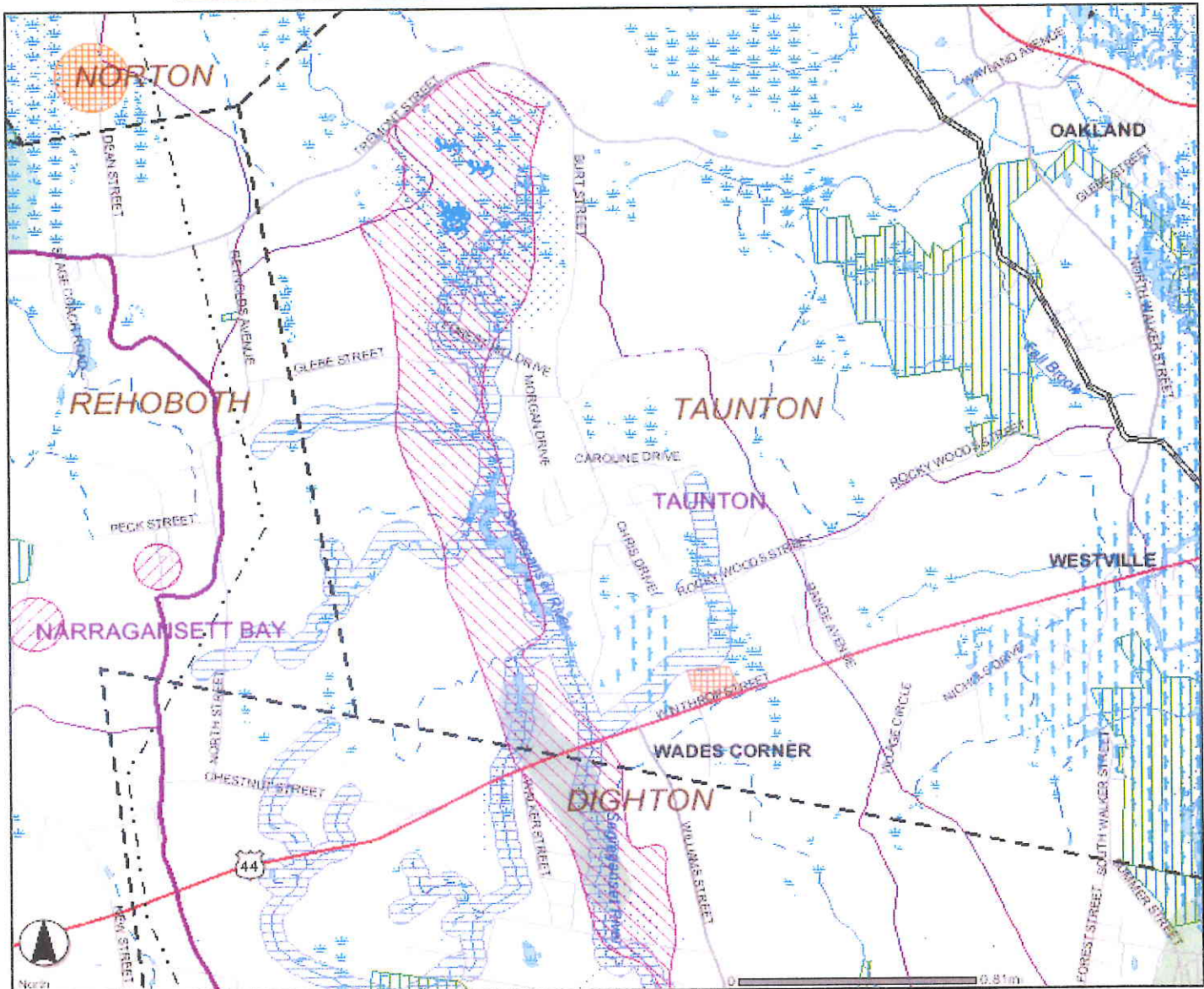
**Wetlands 12k Detailed**

- |                                       |                             |                                   |
|---------------------------------------|-----------------------------|-----------------------------------|
| Barrier Beach System                  | Coastal Beach               | Wooded Swamp Conferous            |
| Barrier Beach-Deep Marsh              | Coastal Dune                | Wooded Swamp Deciduous            |
| Barrier Beach-Wooded Swamp Mixed Tree | Cranberry Bog               | Wooded Swamp Mixed Trees          |
| Barrier Beach-Coastal Beach           | Deep Marsh                  | Wetland Connection                |
| Barrier Beach-Coastal Dune            | Barrier Beach-Open Water    | EOT-OTP Roads                     |
| Barrier Beach-Marsh                   | Open Water                  | Limited Access Highway            |
| Barrier Beach- Salt Marsh             | Rocky Intertidal Shore      | MultiLane Hwy. Not Limited Access |
| Barrier Beach-Wooded Swamp Conferous  | Salt Marsh                  | Other Numbered Hwy                |
| Barrier Beach-Wooded Swamp Deciduous  | Shallow Marsh Meadow or Fen | Municipal Boundary                |
| Bog                                   | Shrub Swamp                 |                                   |
| Coastal Bank Bluff or Sea Cliff       | Tidal Flat                  |                                   |





**Figure L2 Needs Area L, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

- |   |   |   |   |
|---|---|---|---|
| <ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPA</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected OpenSpace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arcs</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECT OR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|---|---|---|---|





**Photos of Laneway Street at river**



**PHOTOGRAPHIC DOCUMENTATION**

Laneway Street

Taunton, Massachusetts

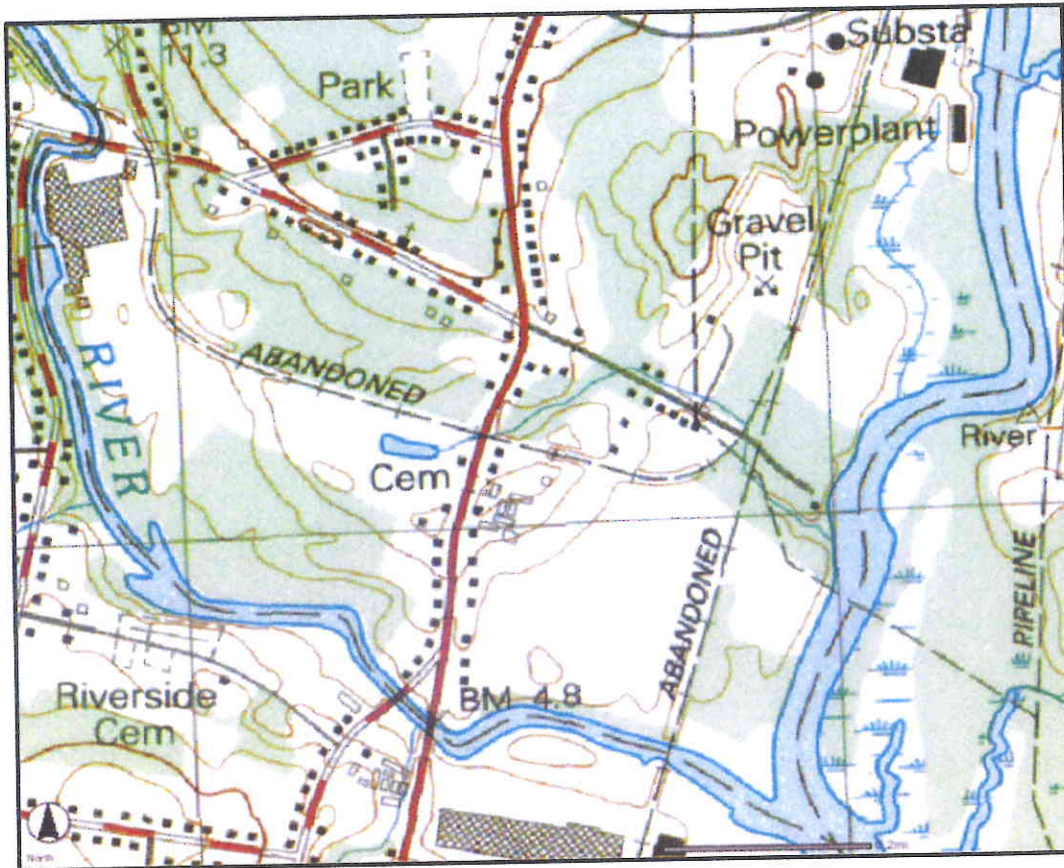
Photographs Documented February 2008

Wetland Strategies, Inc.



## Needs Area Q Discussion

Needs Area Q includes a small area at the southern end of Taunton, at the confluence of the Taunton River and the Three Mile River. It includes areas of Somerset Ave. (Route 138) and Railroad Ave. It is characterized by small, single family home sites. The extent of area Q is shown below.



Wetland Strategies observed wetland resource areas in the study area as follows. Bordering vegetated wetlands were observed at the end of Riverfield Street and Oakridge Lane, within 100 feet of the roadway. Additional wetlands were observed on Route 138 between Railroad Ave and Oakridge Lane. On the east side of Railroad Ave, significant areas of BVW were observed on both sides of the road and continued to the eastern end of Railroad Ave. These wetlands are associated with an intermittent stream that flows east into the Taunton River. DEP File No SE 73- 2242 was posted at the end of Railroad Ave and it is therefore likely that the Taunton Conservation Commission has identified



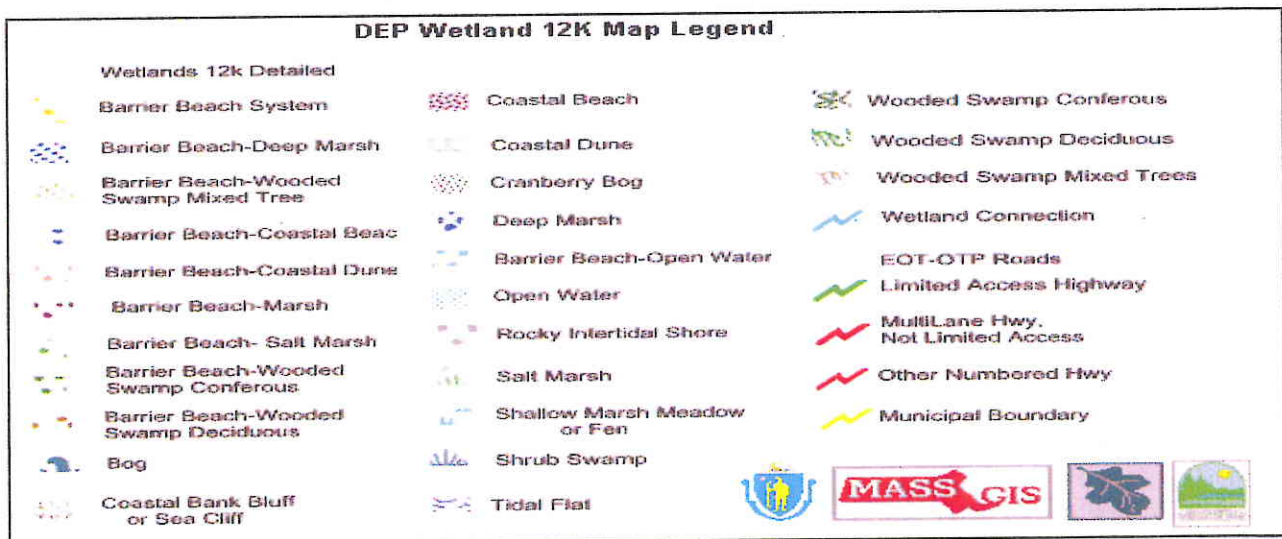
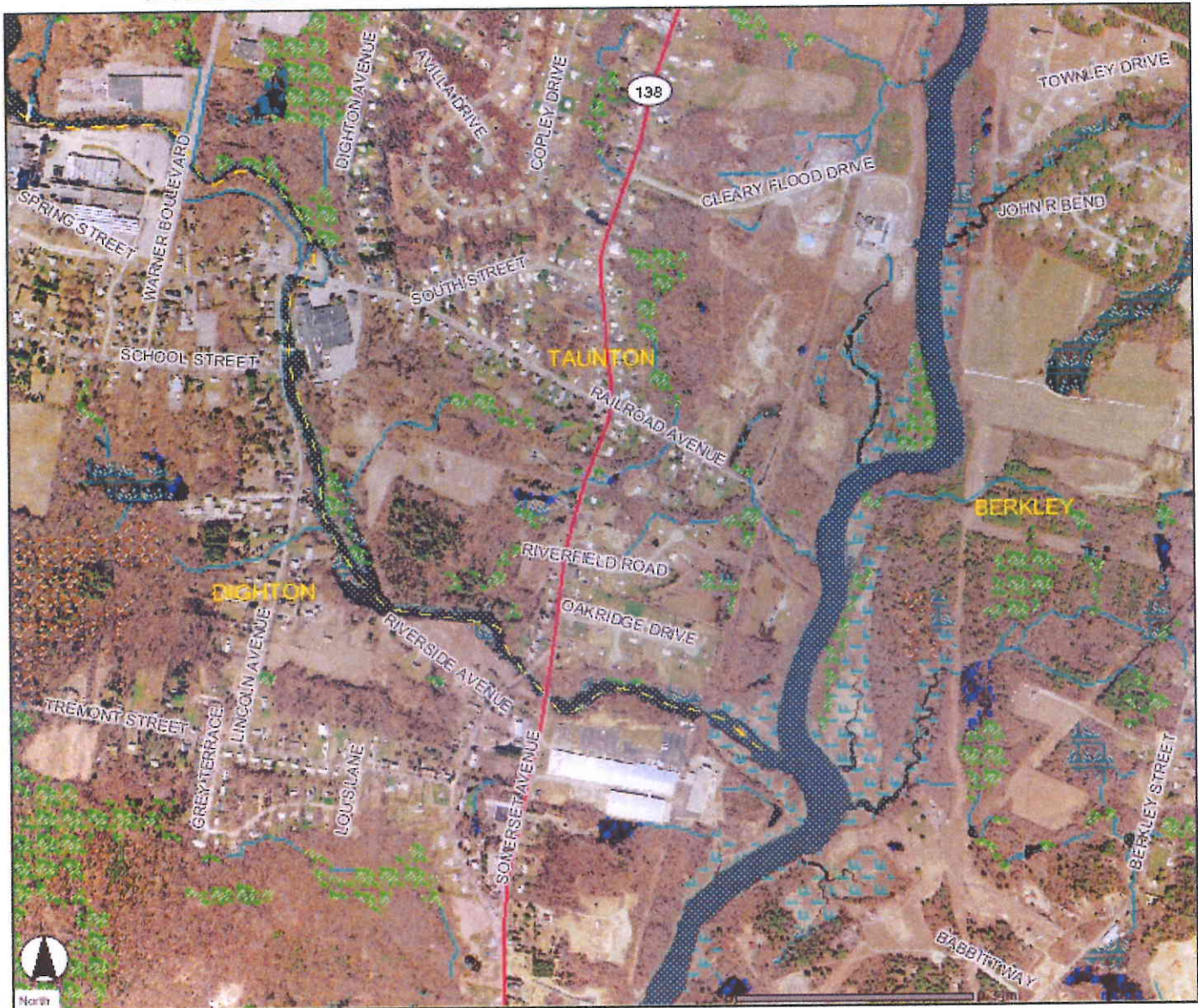
the extent of the wetland in this area. A pump station is proposed at the far southern end of the needs area, at the municipal boundary. A bordering vegetated wetland associated with the Taunton River is adjacent to the location of the pump station. These wetland resource areas are shown on Figure Q1, from the MA GIS system of information.

To protect the above noted wetland resource areas, WSI recommends the use of a siltation barrier. Staking a row of hay bales, end to end, along the edge of the wetland should provide adequate protection from silt and sediment. WSI recommends that the barrier remain in place until all construction activities have ended and any accumulated sediment is removed and disposed of in an upland location. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

Study Area Q includes an area of flooding, associated with both the Taunton River and the Three Mile River. It is shown on Figure Q2. In addition, area Q includes areas of rare and endangered species habitat as shown on Figure Q2. As a result of this designation, the Program must receive a copy of any filings made with the Taunton Conservation Commission for review. The findings of the Program will be incorporated into the permits issued by the Conservation Commission.

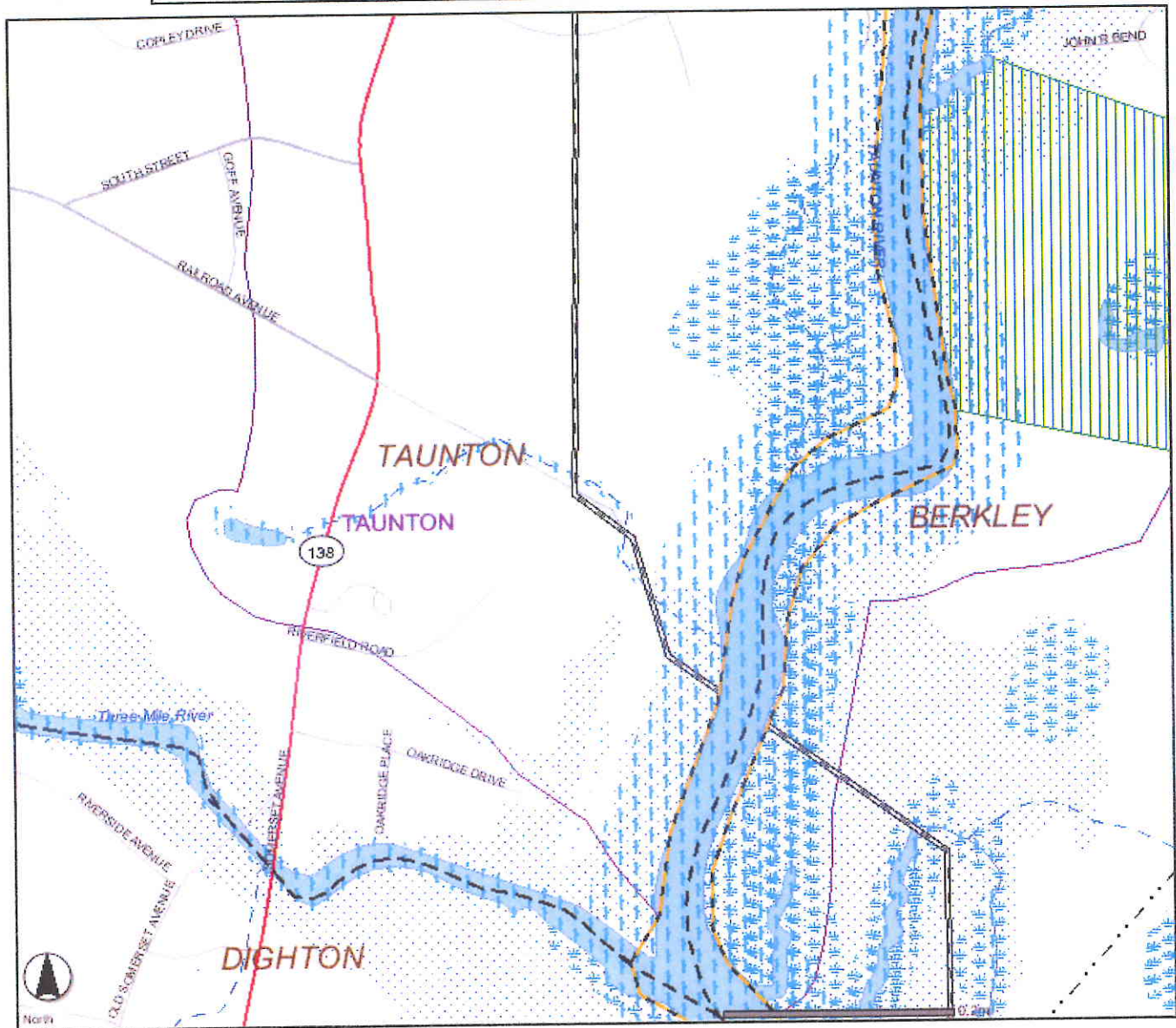


**Figure Q1: Needs Area Q, MA DEP Wetlands**  
**Wetland Strategies, Inc.**





**Figure Q2 Needs Area Q, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

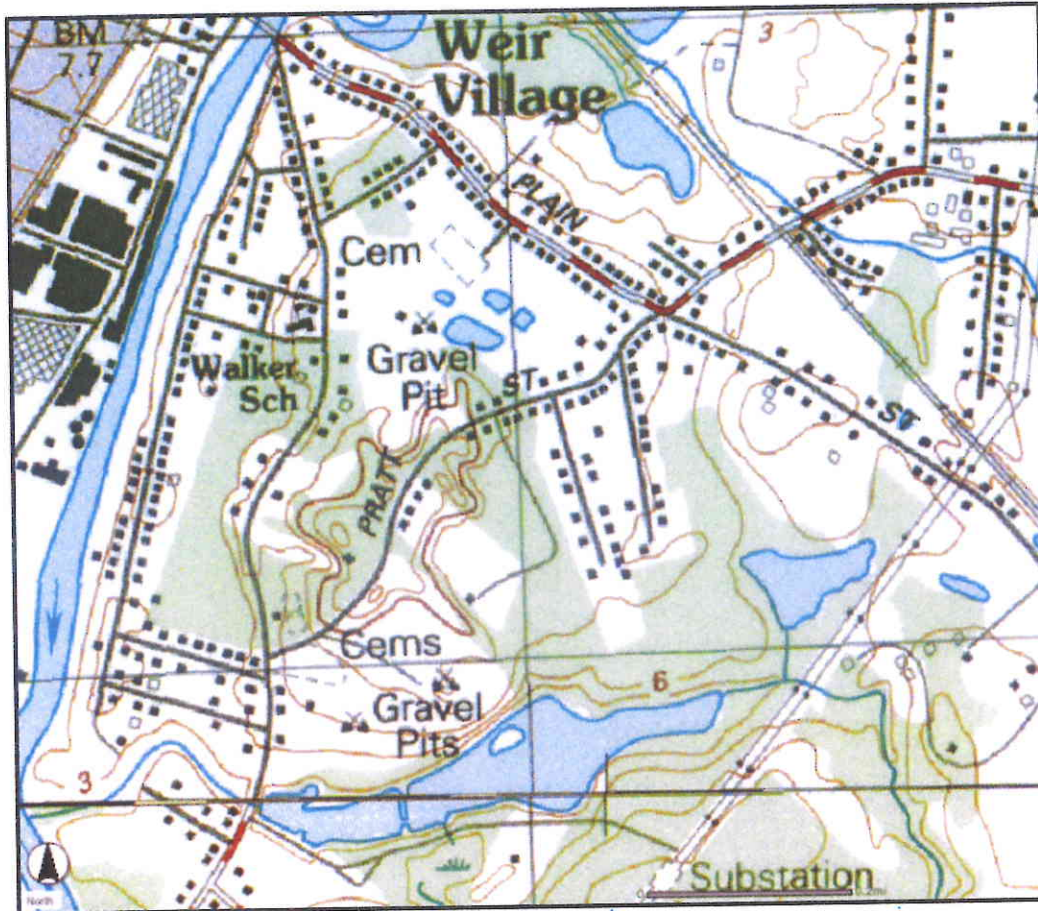
- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li> Zone IIs</li> <li> IWPA</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arcs</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>E0T-0TP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|---|---|---|--|





## Needs Area R Discussion

Needs area R is located along the Taunton/Berkley boundary and includes Berkley Street, Beacon Street, Pratt Street, and Jerome Street to the municipal boundary. Small, residential lots characterize the area. The Taunton River flows along the western portion of this area as shown in the USGS map below.



Wetland Strategies reviewed area Q for the presence of any other wetland resource areas. Proceeding south from Plain Street on Berkley Street, WSI observed bordering vegetated wetlands at the end of Landing Road, and on the south side of O'Keefe Street. Berkley Street crosses the outflow of Silva's Pond between O'Keefe and Mechanic Street and wetlands associated with this perennial stream are within 100 feet of Berkley Street.



Mechanic Street includes a limited area of bordering vegetated wetlands at its terminus. The general extent of the wetlands is shown in Figure R1.

The Natural Heritage and Endangered Species Program identified a Priority Habitat for rare and/or endangered species along the Taunton River. It is shown on Figure R2. Accordingly, the project proponent will need to send a copy of the Notice of Intent to the Program. The findings of the Program will be incorporated into the permits issued by the Conservation Commission.

Prior to commencing any work on the installation of the sewer lines, WSI recommends that all wetland areas identified above be protected by a siltation barrier. A row of hay bales, staked end to end, is to be installed along the up-gradient side of the wetland resource areas. Any silt or sediment that accumulates on the up-gradient side of the barrier will need to be removed and disposed of prior to removal of the barrier. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

Any rare or endangered species habitat will be protected by incorporating the comments of the Natural Heritage Program into the Order of Conditions.



**Figure R1: Needs Area R, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

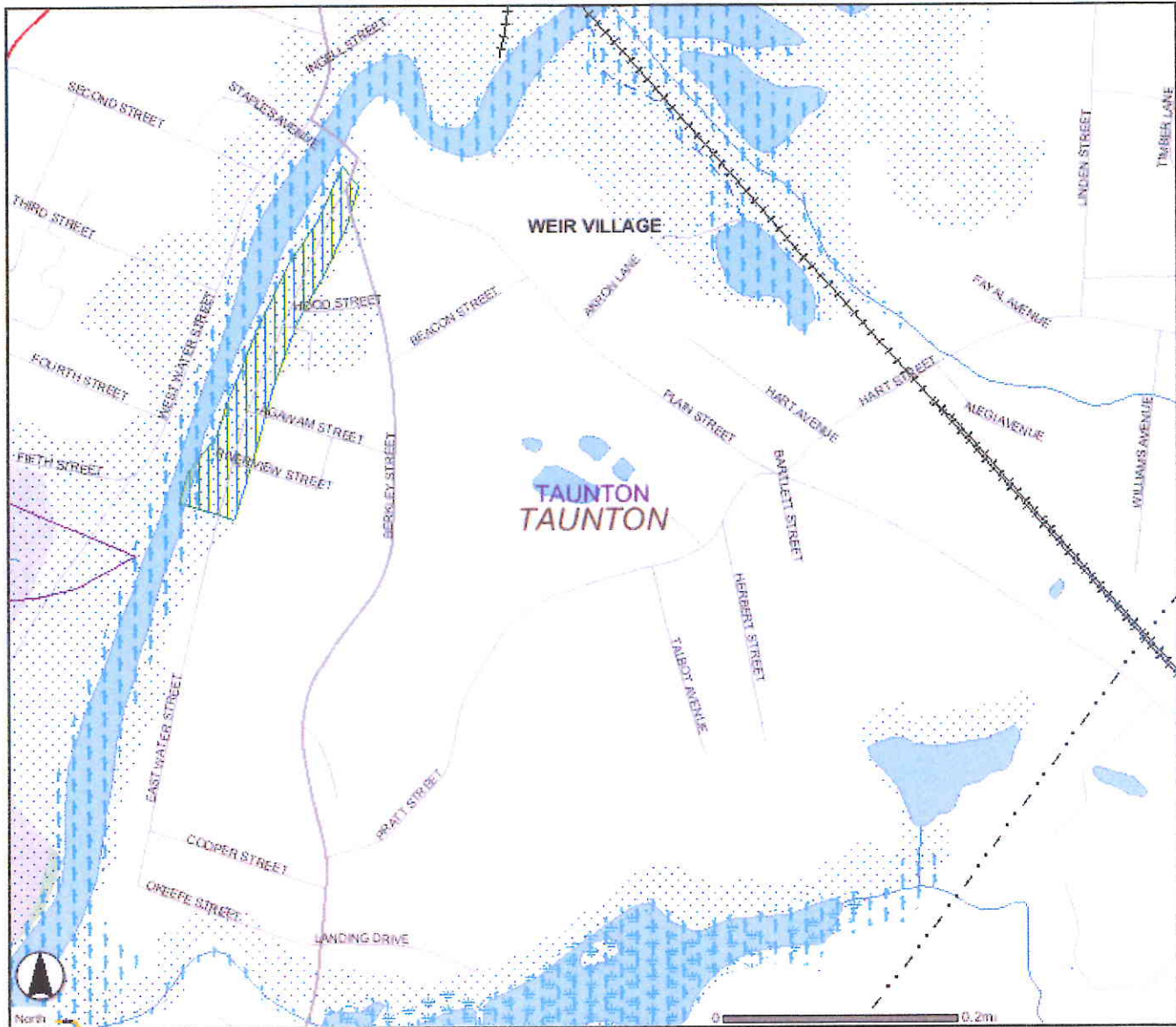
**Wetlands 12k Detailed**

- |                                       |                             |                                    |
|---------------------------------------|-----------------------------|------------------------------------|
| Barrier Beach System                  | Coastal Beach               | Wooded Swamp Coniferous            |
| Barrier Beach-Deep Marsh              | Coastal Dune                | Wooded Swamp Deciduous             |
| Barrier Beach-Wooded Swamp Mixed Tree | Cranberry Bog               | Wooded Swamp Mixed Trees           |
| Barrier Beach-Coastal Beach           | Deep Marsh                  | Wetland Connection                 |
| Barrier Beach-Coastal Dune            | Barrier Beach-Open Water    | EOT-OTP Roads                      |
| Barrier Beach-Marsh                   | Open Water                  | Limited Access Highway             |
| Barrier Beach- Salt Marsh             | Rocky Intertidal Shore      | Multi-Lane Hwy. Not Limited Access |
| Barrier Beach-Wooded Swamp Coniferous | Salt Marsh                  | Other Numbered Hwy                 |
| Barrier Beach-Wooded Swamp Deciduous  | Shallow Marsh Meadow or Fen | Municipal Boundary                 |
| Bog                                   | Shrub Swamp                 |                                    |
| Coastal Bank Bluff or Sea Cliff       | Tidal Flat                  |                                    |





**Figure R2 Needs Area R, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

- Zone IIa
- IWPAs
- Zone A
- Sole Source Aquifers
- Solid Waste Sites
- Protected Openspace
- ACECs
- NHESP Estimated Habitat of Rare Wildlife in Wetland Areas
- Certified Vernal Pools 2003 NHESP
- Subbasins
- Mass Major Basins
- DEP Region
- Town Arcs
- County Boundaries

- Aquifers, By Yield**
- HIGH YIELD
  - MEDIUM YIELD
- Non Potential Drinking Water Source Area**
- HIGH YIELD
  - MEDIUM YIELD
- FEMA Floodplains**
- 100 YEAR FLOODPLAIN

- Hydrography**
- WATER
  - RESERVOIR
  - WETLANDS
  - SALTWATER WETLANDS
  - FLATS SHOALS
- Rivers and Streams**
- PERENNIAL
  - INTERMITTENT
  - SHORELINE
  - MAN MADE SHORE
  - DAM
  - AQUEDUCT

- EOT-OTP Roads**
- LIMITED ACCESS HIGHWAY
  - MULTILANE HWY. NO T. LIMITED ACCESS
  - OTHER NUMBERED HWY
  - MAJOR ROAD - COLLECTOR
  - MINOR STREET OR ROAD RAMP
- Tracks and Trails MHD**
- TRACK
  - TRAIL
- Transmission Lines**
- PIPELINE
  - POWERLINE
  - TRAIN





## Needs Area U Discussion

Needs Area U includes an area in east Taunton along Williams Street from Hart Street to the Taunton High School. Also included are public, secondary roads off Williams Street to the east and west. The Taunton River flows along the northern portion of area U and Route 24 forms the western boundary. Most of area is residential with both single and multiple family dwellings. The area is shown on the following USGS topographic map.



Wetland Strategies observed an area of bordering vegetated wetland (BVW) along Williams Street adjacent to dwelling numbers 158 through 167, ending just to the north of the intersection of Williams Street and Pine Tree Lane. On the west side of Duffy Drive, an area of BVW is associated with a small pond. Additional wetlands are located along the power lines to the east of Duffy Drive. Williams Street also includes additional wetlands on the west side, north of Harris Street. At the end of Harris Street is the town DPW building. WSI observed and photographed an area of activity within 100 feet of the



river (Photos U1 and U2). Although there was no DEP file number visible at the site, it is probable that the Taunton Conservation Commission has reviewed and approved the wetland delineation at the end of Harris Street.

The Village of Moorlands is an existing condominium project, with some of units to the rear still under construction. WSI observed a DEP file number posted at the site, identifying the site as file number SE-73- 1619. Wetlands in the vicinity of this project on Williams Street have most likely been reviewed and approved by the Taunton Conservation Commission. A small area of BVW exists at the far southern end of King James Blvd. The general extent of wetlands in area U is shown in Figure U1.

Work that is proposed to occur in Area U includes the installation of a gravity sewer line on Williams Street and some of the accessory roadways. A pump station is also proposed to the north of Duffy Street, between it and the Taunton River. None of the activity will occur within a wetland resource area. Gravity lines will be installed within the roadway layouts. To prevent any sediment or silt from reaching the wetland areas adjacent to the roadways, WSI recommends the use of a hay bale barrier. The barrier should be installed along the edge of the roadway, at the locations identified above to prevent any silt or sediment from reaching the wetland during construction. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas. Construction of the pump station is not expected to impact wetlands or the regulatory 100 buffer zone.

The Taunton River has an associated 100-year flood plain as shown in Figure U2. The activities in area U are not expected to result in any loss of flood plain storage however, and the performance standards for work within the Bordering Land Subject to Flooding will be met.



**Figure U1: Needs Area U, MADEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

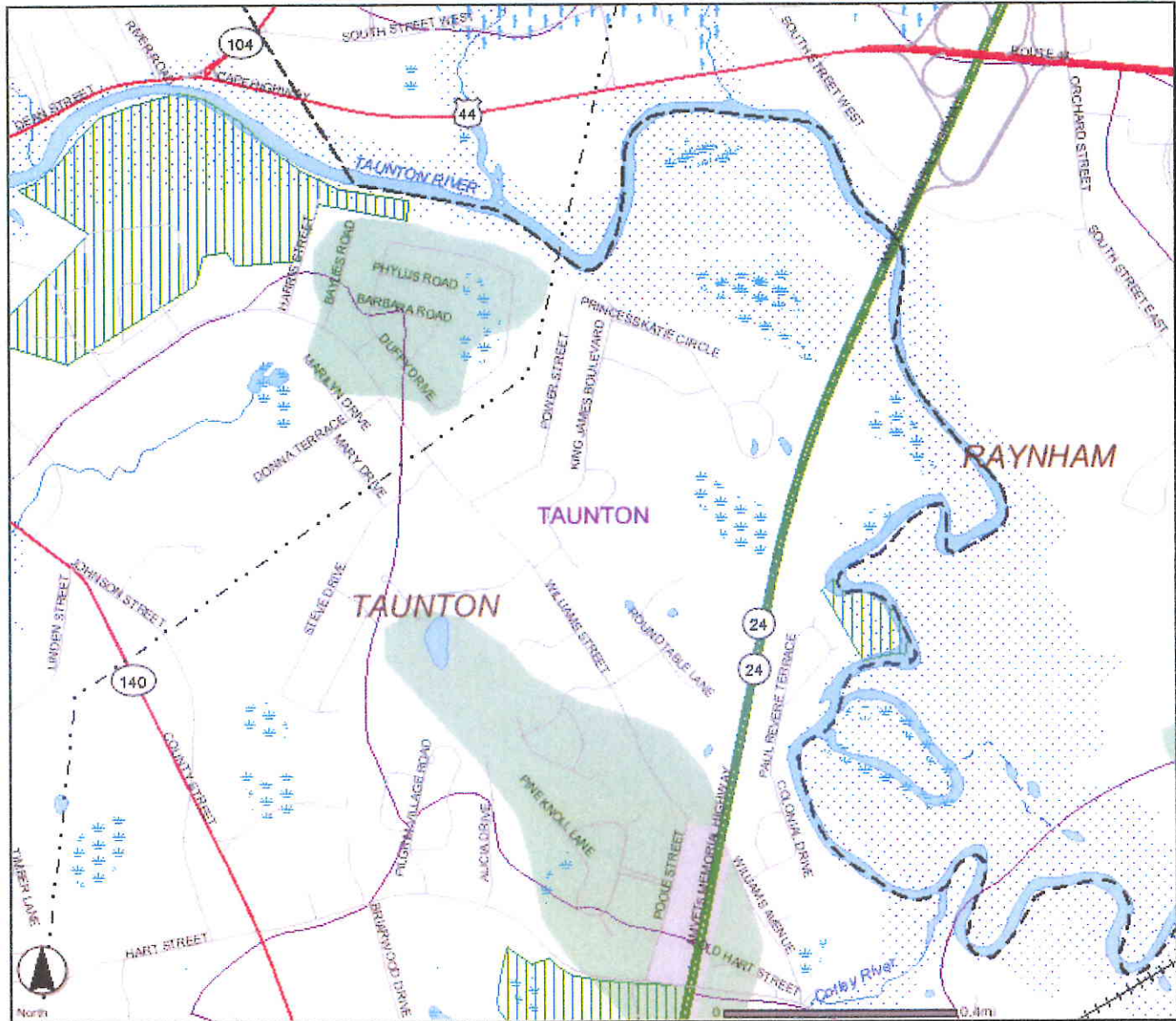
**Wetlands 12k Detailed**

- |                                       |                             |                                    |
|---------------------------------------|-----------------------------|------------------------------------|
| Barrier Beach System                  | Coastal Beach               | Wooded Swamp Coniferous            |
| Barrier Beach-Deep Marsh              | Coastal Dune                | Wooded Swamp Deciduous             |
| Barrier Beach-Wooded Swamp Mixed Tree | Cranberry Bog               | Wooded Swamp Mixed Trees           |
| Barrier Beach-Coastal Beach           | Deep Marsh                  | Wetland Connection                 |
| Barrier Beach-Coastal Dune            | Barrier Beach-Open Water    | EOF-OTP Roads                      |
| Barrier Beach-Marsh                   | Open Water                  | Limited Access Highway             |
| Barrier Beach- Salt Marsh             | Rocky Intertidal Shore      | Multi Lane Hwy. Not Limited Access |
| Barrier Beach-Wooded Swamp Coniferous | Salt Marsh                  | Other Numbered Hwy                 |
| Barrier Beach-Wooded Swamp Deciduous  | Shallow Marsh Meadow or Fen | Municipal Boundary                 |
| Bog                                   | Shrub Swamp                 |                                    |
| Coastal Bank Bluff or Sea Cliff       | Tidal Flat                  |                                    |





**Figure U2 Needs Area U, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

- Zone IIa
- IWPAs
- Zone A
- Sole Source Aquifers
- Solid Waste Sites
- Protected Openspace
- ACECs
- NHESP Estimated Habitat of Rare Wildlife in Wetland Areas
- Certified Vernal Pools 2003 NHESP
- Subbasins
- Mass Major Basins
- DEP Region
- Town Area
- County Boundaries

- Aquifers, By Yield**
- HIGH YIELD
  - MEDIUM YIELD
- Non Potential Drinking Water Source Area**
- HIGH YIELD
  - MEDIUM YIELD
- FEMA Floodplains**
- 100 YEAR FLOODPLAIN

- Hydrography**
- WATER
  - RESERVOIR
  - WETLANDS
  - SALT WATER WETLANDS
  - FLATS SHOALS
- Rivers and Streams**
- PERENNIAL
  - INTERMITTENT
  - SHORELINE
  - MAN MADE SHORE
  - DAM
  - AQUEDUCT

- EOT-OTP Roads**
- LIMITED ACCESS HIGHWAY
  - MULTILANE HWY NOT LIMITED ACCESS
  - OTHER NUMBERED HWY
  - MAJOR ROAD COLLECTOR
  - MINOR STREET OR ROAD RAMP
- Tracks and Trails MHD**
- TRACK
  - TRAIL
- Transmission Lines**
- PIPELINE
  - POWERLINE
  - TRAIN





**Photo U1 and U2 of DPW yard on Taunton River**



**PHOTOGRAPHIC DOCUMENTATION**

Harris Street

Taunton, Massachusetts

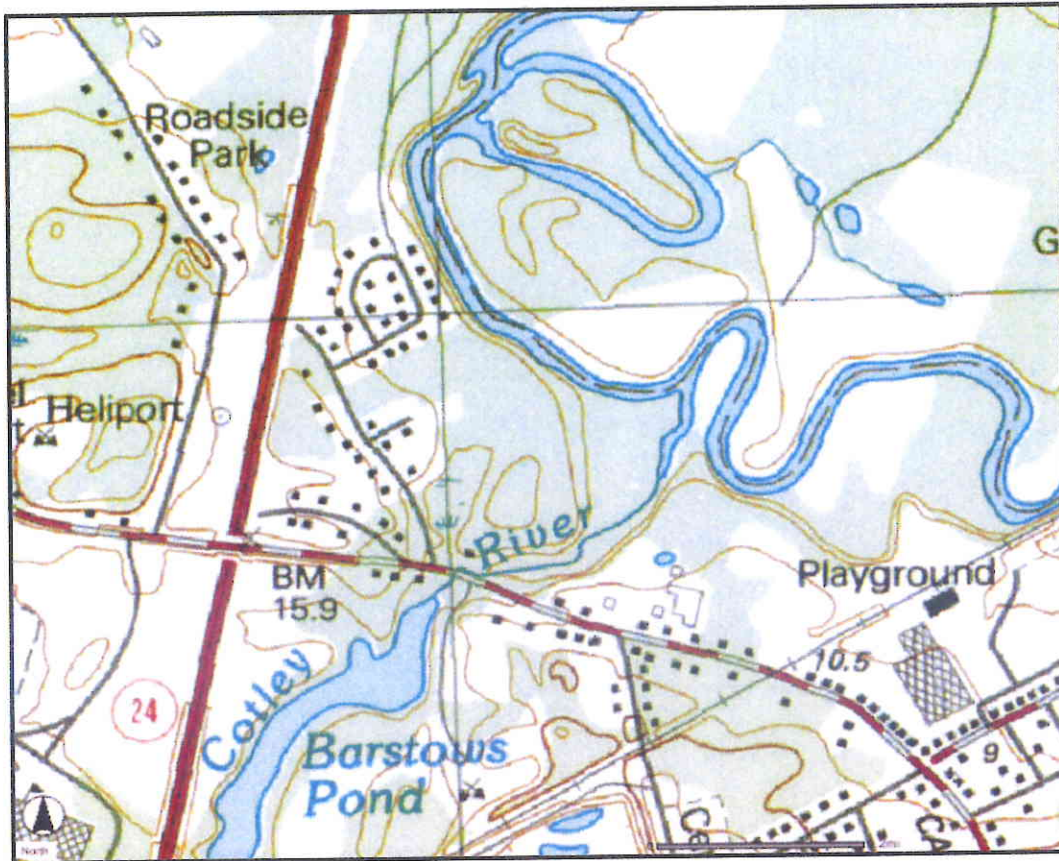
Photographs Documented February 2008

Wetland Strategies, Inc.



## Needs Area V Discussion

Study Area V is located in east Taunton along Paul Revere Terrace and Williams Ave., just east of Route 24. Residential dwellings occur throughout the area with lots sizes generally less than one acre. A USGS topographic map of area V is shown below.



WSI observed a bordering vegetated wetland associated with a small pond area at the south end of Williams Ave. Photographs of the area are enclosed. Additional wetland areas associated with the Taunton River were observed to the west of Paul Revere Terrace but appear to be further than 100 feet from the roadway. The Cotley River flows under Hart Street from Barstow's Pond north to its confluence with the Taunton River. Wetland areas in area V are shown in Figure V1 and the flat shoals of the Taunton River are shown on Figure V2.

Work in Area V includes the installation of a gravity sewer and force main along Williams Ave. and Paul Revere Terrace. A pump station is to be installed at the northern end of Paul Revere Terrace. None of the activity in this area is expected to directly alter any wetland resource areas. To protect the small wetland area on Williams Ave, WSI recommends the installation of a hay bale barrier at the edge of the roadway to prevent silt or sediment from entering the wetlands.



**Figure V1: Needs Area V, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

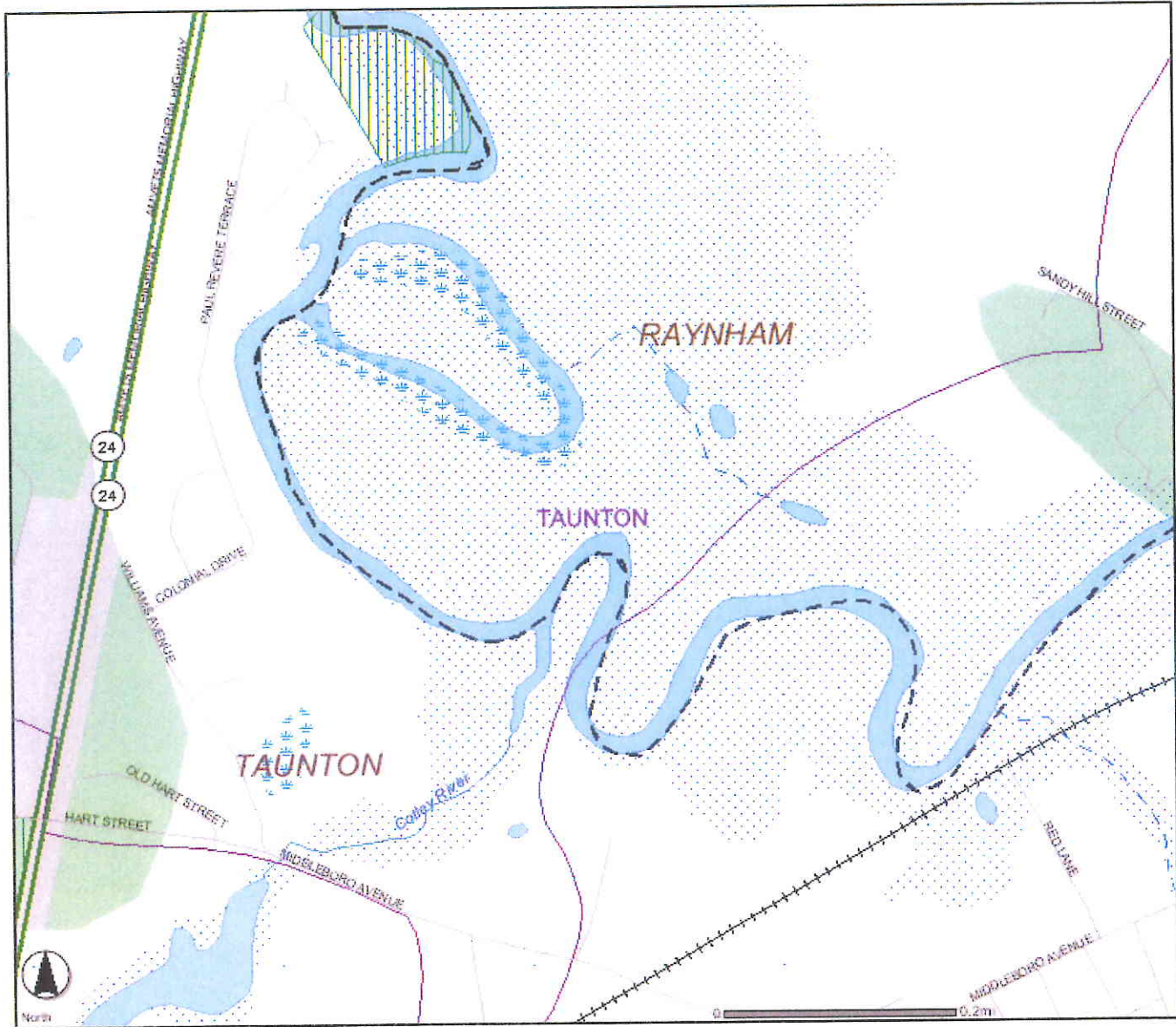
**Wetlands 12k Detailed**

- |                                       |                             |                                   |
|---------------------------------------|-----------------------------|-----------------------------------|
| Barrier Beach System                  | Coastal Beach               | Wooded Swamp Coniferous           |
| Barrier Beach-Deep Marsh              | Coastal Dune                | Wooded Swamp Deciduous            |
| Barrier Beach-Wooded Swamp Mixed Tree | Cranberry Bog               | Wooded Swamp Mixed Trees          |
| Barrier Beach-Coastal Beach           | Deep Marsh                  | Wetland Connection                |
| Barrier Beach-Coastal Dune            | Barrier Beach-Open Water    | EOT-OTP Roads                     |
| Barrier Beach-Marsh                   | Open Water                  | Limited Access Highway            |
| Barrier Beach- Salt Marsh             | Rocky Intertidal Shore      | MultiLane Hwy, Not Limited Access |
| Barrier Beach-Wooded Swamp Coniferous | Salt Marsh                  | Other Numbered Hwy                |
| Barrier Beach-Wooded Swamp Deciduous  | Shallow Marsh Meadow or Fen | Municipal Boundary                |
| Bog                                   | Shrub Swamp                 |                                   |
| Coastal Bank Bluff or Sea Cliff       | Tidal Flat                  |                                   |





**Figure V2 Needs Area V, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

- |  |   |  |   |
|--|---|--|---|
| <ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPAs</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arcs</li> <li> County Boundaries</li> </ul> | <ul style="list-style-type: none"> <li><b>Aquifers, By Yield</b></li> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> <li><b>Non Potential Drinking Water Source Area</b></li> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> <li><b>FEMA Floodplains</b></li> <li> 100 YEAR FLOODPLAIN</li> </ul> | <ul style="list-style-type: none"> <li><b>Hydrography</b></li> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> FLATS SHOALS</li> <li><b>Rivers and Streams</b></li> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <ul style="list-style-type: none"> <li><b>EOT-OTF Roads</b></li> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD (COLLECTOR)</li> <li> MINOR STREET OR ROAD, RAMP</li> <li><b>Tracks and Trails MHD</b></li> <li> TRACK</li> <li> TRAIL</li> <li><b>Transmission Lines</b></li> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|--|---|--|---|





## Photos of wetland on Williams Avenue



### PHOTOGRAPHIC DOCUMENTATION

Williams Ave

Taunton, Massachusetts

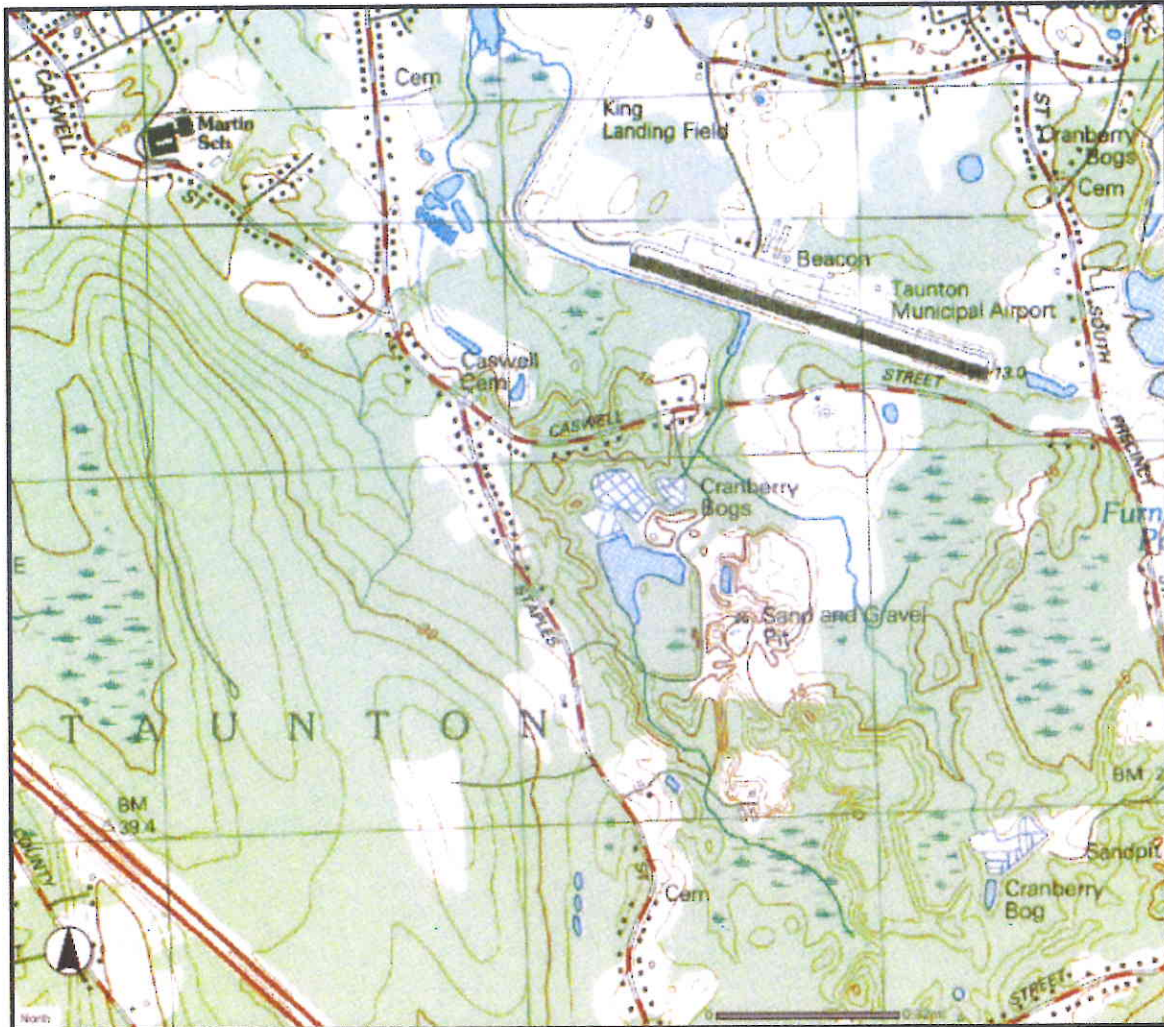
Photographs Documented February 2008

Wetland Strategies, Inc.



## Needs Area X Discussion

Study Area X includes areas of Caswell Street and Staples Street in eastern Taunton. It is a relatively rural area of Taunton and includes lot sizes varying between one-half acre and an acre. The area of study area X is shown below.



The Taunton municipal airport is located to the north of Caswell Street and an area of bordering vegetated wetlands was observed between the airport and Caswell Street. At the intersection of Caswell Street and Liberty Street, wetland resource areas include an



intermittent stream and associated bordering vegetated wetlands. There was no wetland resource areas observed along Staple Street until the cemetery which is beyond the boundary of Study area X. MA DEP has mapped the wetland resource areas and they are shown on Fig. X1.

To protect the above identified wetland resource areas during installation of the gravity sewer main, WSI recommends the use of a siltation barrier. The barrier is to consist of a row of hay bales, staked end to end. It is to be installed between the roadways and wetland resource areas noted above. By installing the barrier, the wetland resource areas will be protected against any silt or sediment generated during the installation of the sewer main. The stream crossing at the intersection of Caswell Street and Liberty should have additional sediment controls installed. WSI recommends the use of a silt fence in addition to the row of hay bales. The silt fence is to be installed on the down gradient side of the hay bale row with the base of the fence toed into the slope. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.



**Figure X1: Needs Area X, DEP Wetlands**  
**Wetland Strategies, Inc.**



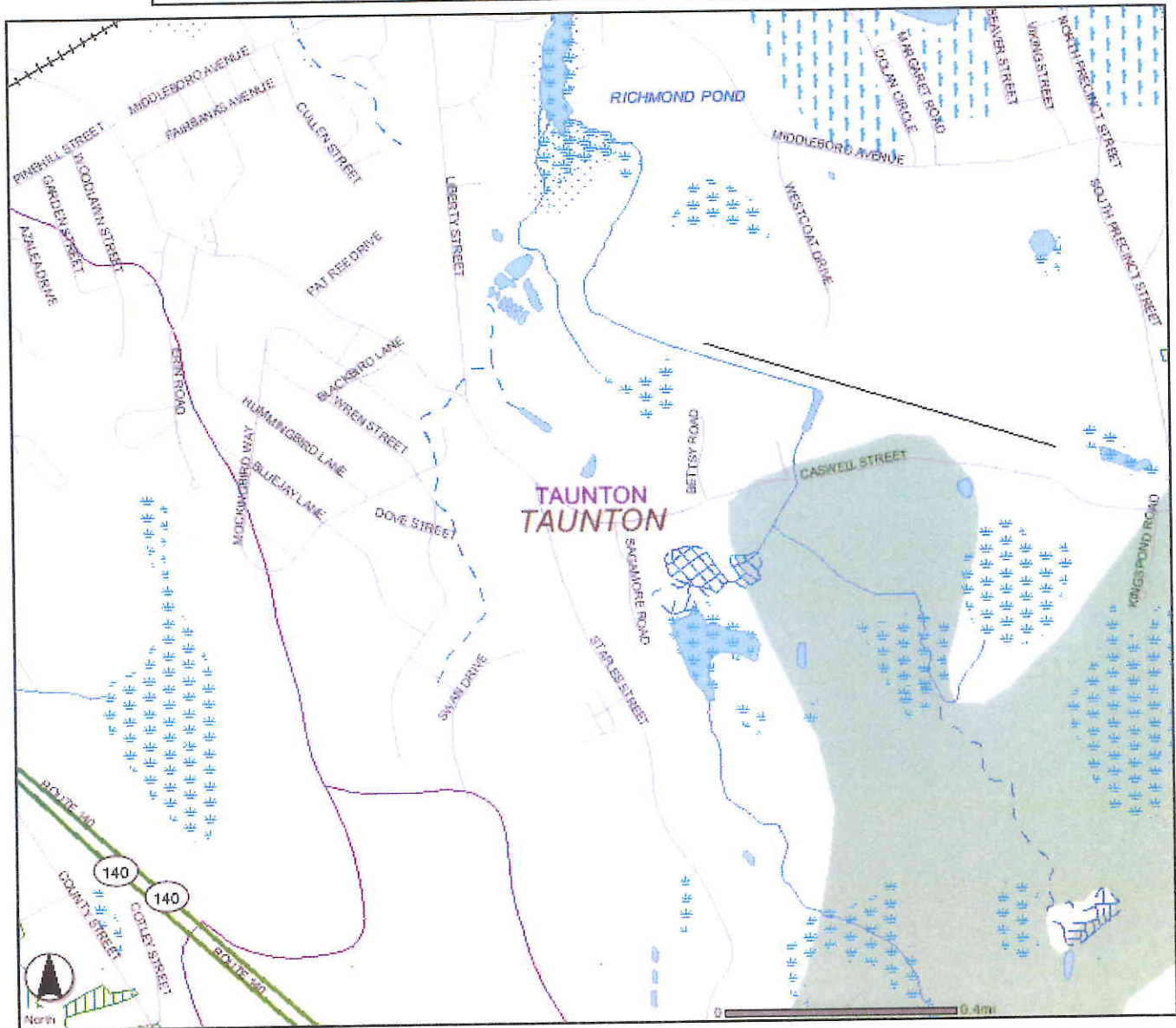
**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed					
	Barrier Beach System		Coastal Beach		Wooded Swamp Coniferous
	Barrier Beach-Deep Marsh		Coastal Dune		Wooded Swamp Deciduous
	Barrier Beach-Wooded Swamp Mixed Tree		Cranberry Bog		Wooded Swamp Mixed Trees
	Barrier Beach-Coastal Beach		Deep Marsh		Wetland Connection
	Barrier Beach-Coastal Dune		Barrier Beach-Open Water		EOT-OTP Roads
	Barrier Beach-Marsh		Open Water		Limited Access Highway
	Barrier Beach-Salt Marsh		Rocky Intertidal Shore		MultiLane Hwy. Not Limited Access
	Barrier Beach-Wooded Swamp Coniferous		Salt Marsh		Other Numbered Hwy
	Barrier Beach-Wooded Swamp Deciduous		Shallow Marsh Meadow or Fen		Municipal Boundary
	Bog		Shrub Swamp		
	Coastal Bank Bluff or Sea Cliff		Tidal Flat		





**Figure X2 Needs Area X, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

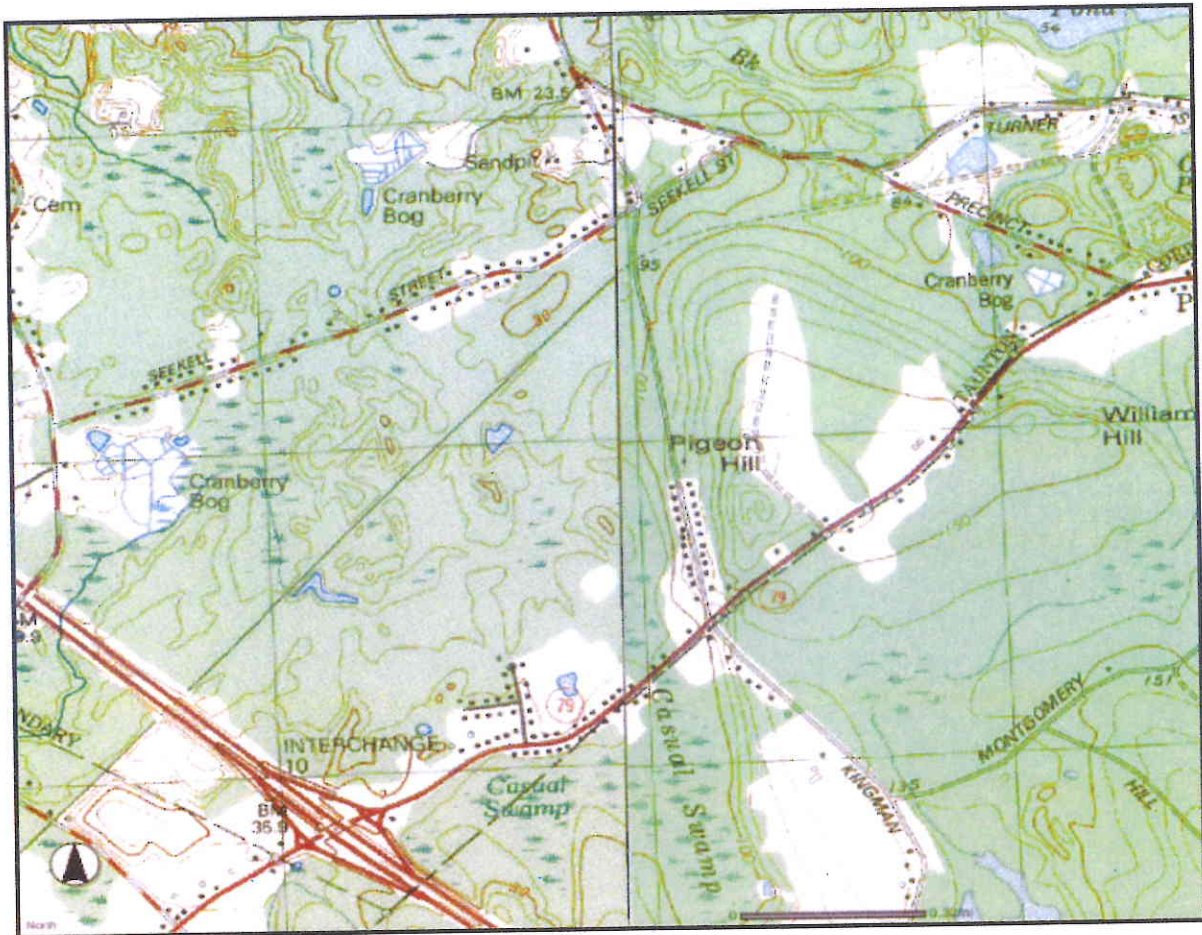
- |   |   |   |  |
|---|---|---|--|
| <ul style="list-style-type: none"> <li> Zone IIs</li> <li> IWPA's</li> <li> Zone A</li> <li> Sole Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Area</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WET LANDS</li> <li> SALT WATER WET LANDS</li> <li> FLATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|---|---|---|--|





## Needs area Z Discussion

Study area Z is located at the municipal boundary of Taunton and Lakeville, along Route 79. It includes the southern end of Kingman Street, parts of Myricks Street (Route 79) and cul-de-sacs at Matthew Drive to the north and Clare Terrace to the south. Area Z is zoned rural residential with lot sizes varying from half an acre to an acre. It is shown on below on the USGS topographic map.



Bordering vegetated wetlands were observed along the north and south side of Myricks Street. These wetlands are part of the Casual Swamp system of wetlands. Additional wetlands were observed at the intersection of Myricks Street and Joshua Lane. A DEP File No is posted at the intersection and is identified as SE 73- 2049. Construction of



Joshua Lane appears very recent, thus the Taunton Conservation Commission has likely identified the extent of the wetland in this area. Both Clare Terrace and Birch Ave have bordering vegetated wetlands at their respective terminuses. The general distribution of wetlands is shown on the MA GIS map, Figure Z1.

Work in area Z will include the installation of gravity sewers and force mains within the layout of the roadways identified above. Wetland resource areas adjacent to the roadways, as identified above, will need to be protected during installation. A row of hay bales staked end to end will provide adequate protection to the wetland resource areas. WSI recommends that the hay bale barrier be installed between the wetland and edge of the roadway prior to commencing construction. The hay bales are to remain in place until all construction activities have ceased. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas. A pump station is proposed to be located at the southwest end of the needs area and there were no wetlands observed in the vicinity of its proposed location.

Area Z includes an area of Estimated and Priority Habitat as identified by the Natural Heritage and Endangered Species Program as shown on Figure Z2. The designation is located at the southwest end of Area Z and includes Clare Terrace and Birch Ave cul-de-sacs. Once a Notice of Intent is filed for the installation of the sewer lines, a copy of the Notice must be sent to the Program. The findings of the Program will be incorporated into the permits issued by the Conservation Commission. Two Interim Wellhead Protection Areas, as shown on Figure Z2 are also within the needs area. Wellhead areas are particularly sensitive to any nutrient loading and installation of the sewer lines will serve to remove any nutrient input from any individual failing septic systems.



**Figure Z1: Needs Area Z, MA DEP Wetlands**  
**Wetland Strategies, Inc.**



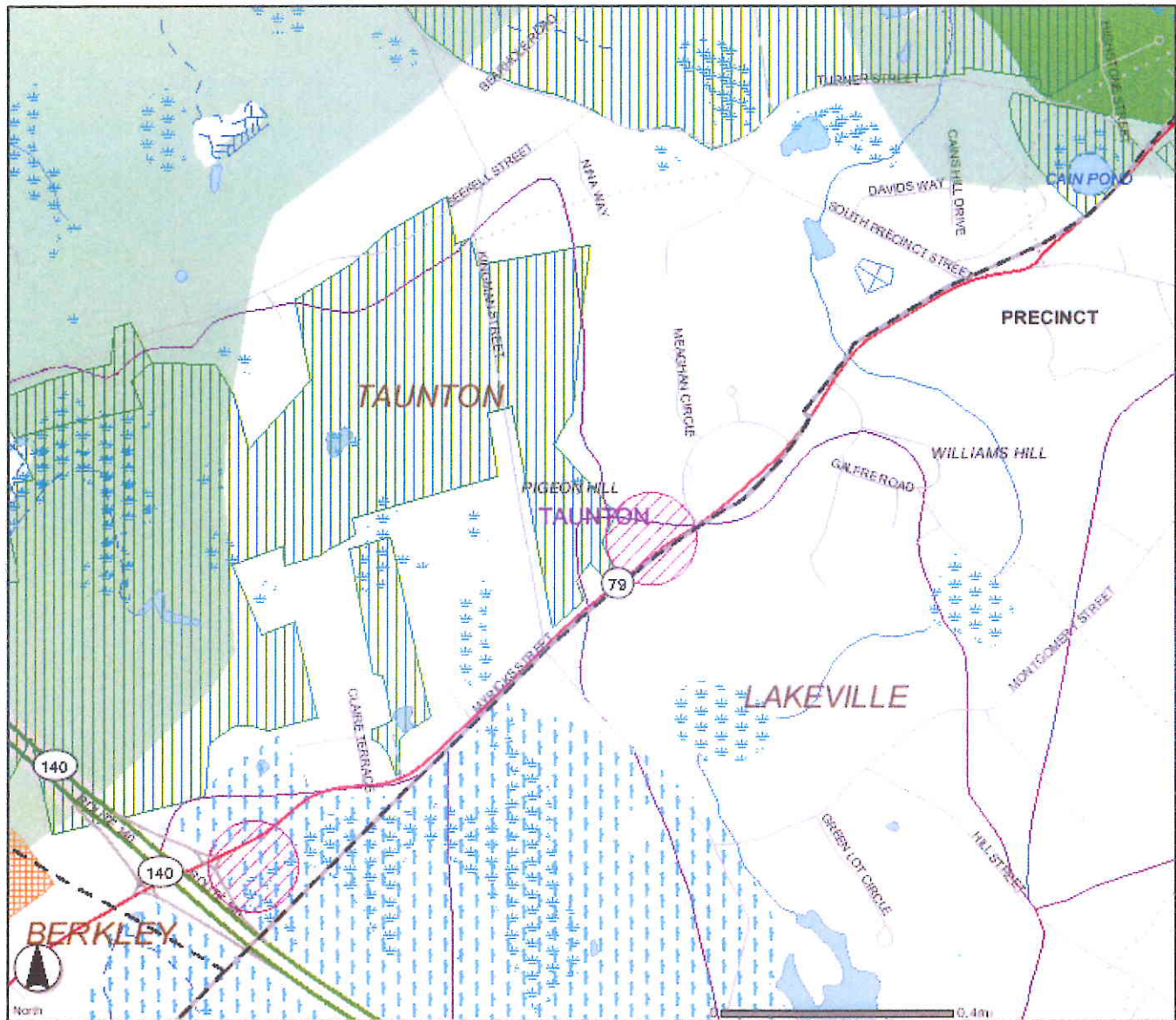
**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed		
	Barrier Beach System	
	Barrier Beach-Deep Marsh	
	Barrier Beach-Wooded Swamp Mixed Tree	
	Barrier Beach-Coastal Beach	
	Barrier Beach-Coastal Dune	
	Barrier Beach-Marsh	
	Barrier Beach-Soft Marsh	
	Barrier Beach-Wooded Swamp Conferous	
	Barrier Beach-Wooded Swamp Deciduous	
	Bog	
	Coastal Bank Bluff or Sea Cliff	
	Wooded Swamp Conferous	
	Wooded Swamp Deciduous	
	Wooded Swamp Mixed Trees	
	EOT-OTP Roads	
	Limited Access Highway	
	MultiLane Hwy. Not Limited Access	
	Other Numbered Hwy	
	Municipal Boundary	





**Figure Z2 Needs Area Z, Priority Resource Areas**  
**Wetland Strategies, Inc.**



**DEP MCP 21e Map Legend**

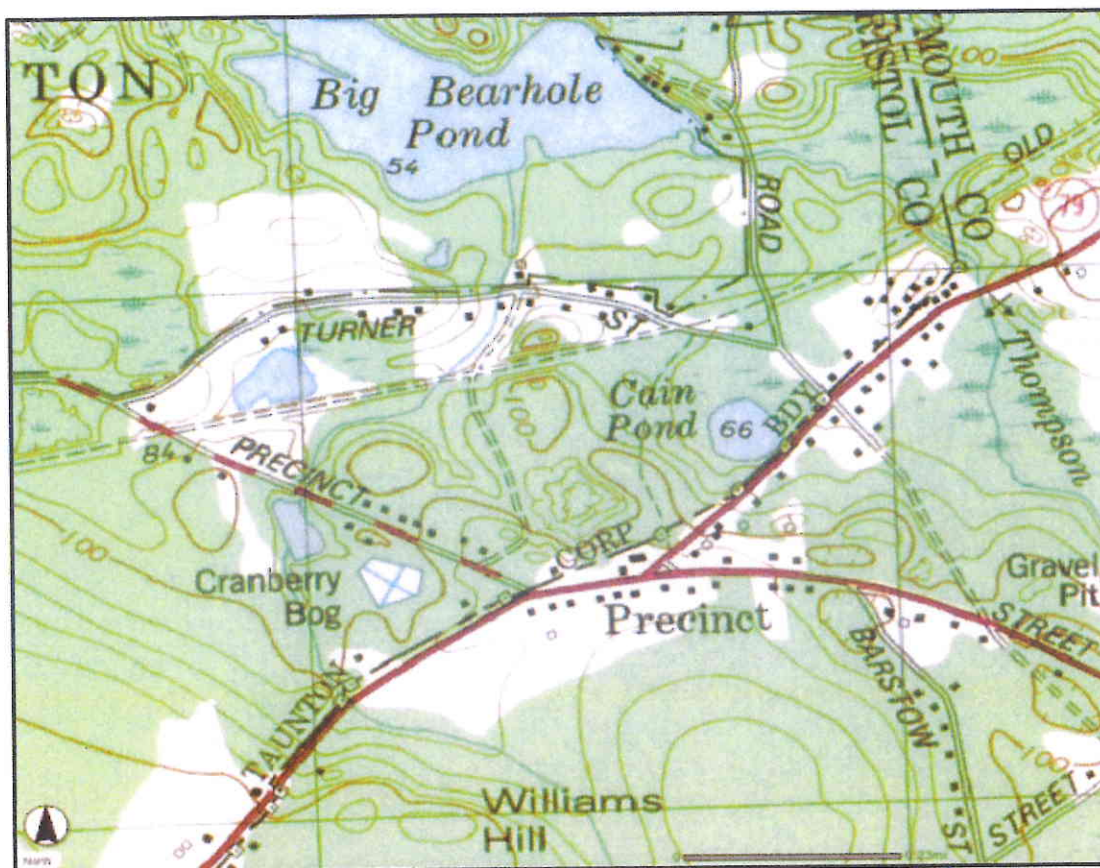
- |   |   |  |   |
|---|---|--|---|
| <ul style="list-style-type: none"> <li> Zone IIa</li> <li> IWPAs</li> <li> Zone A</li> <li> Solid Source Aquifers</li> <li> Solid Waste Sites</li> <li> Protected Openspace</li> <li> ACECs</li> <li> NHESP Estimated Habitat of Rare Wildlife in Wetland Areas</li> <li> Certified Vernal Pools 2003 NHESP</li> <li> Subbasins</li> <li> Mass Major Basins</li> <li> DEP Region</li> <li> Town Arcs</li> <li> County Boundaries</li> </ul> | <p><b>Aquifers, By Yield</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>Non Potential Drinking Water Source Area</b></p> <ul style="list-style-type: none"> <li> HIGH YIELD</li> <li> MEDIUM YIELD</li> </ul> <p><b>FEMA Floodplains</b></p> <ul style="list-style-type: none"> <li> 100 YEAR FLOODPLAIN</li> </ul> | <p><b>Hydrography</b></p> <ul style="list-style-type: none"> <li> WATER</li> <li> RESERVOIR</li> <li> WETLANDS</li> <li> SALT WATER WETLANDS</li> <li> RATS SHOALS</li> </ul> <p><b>Rivers and Streams</b></p> <ul style="list-style-type: none"> <li> PERENNIAL</li> <li> INTERMITTENT</li> <li> SHORELINE</li> <li> MAN MADE SHORE</li> <li> DAM</li> <li> AQUEDUCT</li> </ul> | <p><b>EOT-OTP Roads</b></p> <ul style="list-style-type: none"> <li> LIMITED ACCESS HIGHWAY</li> <li> MULTILANE HWY, NOT LIMITED ACCESS</li> <li> OTHER NUMBERED HWY</li> <li> MAJOR ROAD - COLLECTOR</li> <li> MINOR STREET OR ROAD RAMP</li> </ul> <p><b>Tracks and Trails MHD</b></p> <ul style="list-style-type: none"> <li> TRACK</li> <li> TRAIL</li> </ul> <p><b>Transmission Lines</b></p> <ul style="list-style-type: none"> <li> PIPELINE</li> <li> POWERLINE</li> <li> TRAIN</li> </ul> |
|---|---|--|---|





## Needs Area AA Discussion

Study Area AA is located in west Taunton and includes South Precinct Street, Turner Road, Woodlawn Trail and Rhode Island Road. It is characterized by its rural nature with house lots generally greater than one acre. The USGS map below shows the general extent of area AA.



Wetland Strategies, Inc. (WSI) observed the following wetland resource areas in Needs Area AA. Woodlawn Trail crosses an intermittent stream and associated bordering vegetated wetlands. On Turner Street, WSI observed a culvert and bordering vegetated wetlands at 48 Turner Street crossing over an intermittent stream. An area of isolated vegetated wetland was observed adjacent to 51 Turner Street. On South Precinct Street, an open body of water was observed across from 1350 South Precinct Street and an intermittent stream. This is the same stream that crosses Turner Street, prior to entering Big Bearhole Pond. The water elevation of the pond was within 100 feet of South Precinct Street. An intermittent stream and associated bordering vegetated wetlands



were observed at 1288 South Precinct Street within 100 feet of the roadway. Highstone Street is an unpaved roadway which ends at the Massasoit State Park border. The outlet to Big Bearhole Pond (Thompson Brook) crosses under Highstone Street and meets the definition of a perennial stream. Wetland areas associated with the crossing include land under water, inland banks and a bordering vegetated wetland. Photographs taken by WSI (Feb., 2008) show the outlet from Big Bearhole Pond as it crosses under Highstone Street.



Wilderness Way also includes additional bordering vegetated wetland at the end of the street. Figure AA1 shows the general extent of wetland resource areas in area AA, as determined by MA DEP. These areas are consistent with those observed by WSI.

Proposed work in Area AA includes the installed of gravity lines, force mains and two pump stations. Installation of the pump stations will occur beyond any wetland resource areas and the respective 100 foot buffer zones. Installation of the sewer lines along the roadways in area AA will occur within 100 feet of the wetland resource areas identified above. On Woodlawn Trail, South Precinct Street, Turner Road and Wilderness Way,



the wetland resource areas adjacent to these roadways will be protected if adequate erosion control measures are in place. Adequate measures include the installation of a row of staked hay bales between the wetland and the edge of the roadway prior to any construction activities. Any excavate or stockpiled materials should be kept away from the resource areas to the extent practical. Stock piled soil should be protected against erosion by establishing an erosion control barrier between the stockpile and any wetland areas.

Crossing over the outlet to Big Bearhole Pond is more complex, due to the narrow, unpaved roadway and steep slopes. To protect the water quality of the stream, WSI recommends the use of in-stream siltation curtains. Siltation curtains can be installed on both the up-gradient and down-gradient side of the river, at a distance of 10-15 feet from the crossing. The curtain should be weighted at the bottom to provide filtration of silt and sediment throughout the water column. The curtain will help to slow down the flow, so that any sediment is allowed to settle and not travel further down stream. Once construction is complete and the river shows no obvious siltation, the curtain may be removed. Once WSI is provided with further construction details, a more detailed erosion control mechanism will be suggested.



**Figure AA1: Needs Area AA, DEP Wetlands**  
**Wetland Strategies, Inc.**



**DEP Wetland 12K Map Legend**

Wetlands 12k Detailed					
	Barrier Beach System		Coastal Beach		Wooded Swamp Coniferous
	Barrier Beach-Deep Marsh		Coastal Dune		Wooded Swamp Deciduous
	Barrier Beach-Wooded Swamp Mixed Tree		Cranberry Bog		Wooded Swamp Mixed Trees
	Barrier Beach-Coastal Beach		Deep Marsh		Wetland Connection
	Barrier Beach-Coastal Dune		Barrier Beach-Open Water		EOT-OTP Roads
	Barrier Beach-Marsh		Open Water		Limited Access Highway
	Barrier Beach- Salt Marsh		Rocky Intertidal Shore		MultiLane Hwy. Not Limited Access
	Barrier Beach-Wooded Swamp Coniferous		Salt Marsh		Other Numbered Hwy
	Barrier Beach-Wooded Swamp Deciduous		Shallow Marsh Meadow or Fen		Municipal Boundary
	Bog		Shrub Swamp		
	Coastal Bank Bluff or Sea Cliff		Tidal Flat		

