



**BOUCHARD B120 RELEASE
SHORELINE SEGMENT SUMMARY**

5 Lan Drive, Suite 200
Westford, Massachusetts 01886
Tel. (978) 692-1114
Fax (978) 692-1115

GeoInsight Project Number 3871-002

SEGMENT IDENTIFICATION: **W1F-06**

SEGMENT NAME: **Mattapoissett Neck South**

SEGMENT LOCATION: **Mattapoissett, Massachusetts** (*Map attached*)

MAXIMUM DEGREE OF INITIAL OILING: Heavy (Oiling Score: 2.74)

SEGMENT INSPECTION STATUS: Did not pass IRAC criteria endpoints on 09/02/2003; further treatment was not considered to be feasible. Passed MCP IRA Inspection on 12/03/2003.

SITE-SPECIFIC INFORMATION

PHYSICAL CHARACTERISTICS:

Primary Shoreline Type/ Geology:

- 1C: Mixed sand and gravel (pebble to boulder) and rip rap groins (jetties).

Secondary Shoreline Type/ Geology:

- 1B: Less utilized semi-public and private sand beaches; and
- 1F: Salt marshes.

Hydrogeology:

- Brandt Island Cove is located to the west, Shaw Cove to the east, and Buzzards Bay to the south. The western edge of the segment is saltwater wetlands.

Bedrock Geology:

- Bedrock underlying this segment is identified as “Alaskite” bedrock formation. This bedrock consists of mafic-poor gneissic granite commonly containing muscovite (Zen, 1983).

ENVIRONMENTAL SENSITIVE RECEPTORS (Identified within 500 feet of segment):

Aquifer: None at segment.

Protected Open Space: None at segment.

Public Ground Water Supply Wells: None at segment.

Public Surface Water Supply Wells: None at segment.

Areas of Critical Environmental Concern (ACEC): None at segment.

Vernal Pools: None at segment.

Priority Habitats of Rare Species: Adjacent to segment: Buzzards Bay aquatic environment.

Estimated Habitats of Rare Wildlife: Adjacent to segment: Buzzards Bay aquatic environment.

Floodplains: At segment: 100-year floodplain.

HUMAN SENSITIVE RECEPTORS (Identified within 500 feet of segment):

Segment Use: Private and semi-public beaches. Residential dwellings are located within 500 feet of the segment. A portion of segment is accessible via roadway.

Frequency of Use: Presumably year round residential use.

SUMMARY OF INSPECTION ACTIVITIES

WRF INSPECTIONS

(Wildlife Field Reconnaissance- Shoreline or On-Water Observations; Bird Transect Study.)

WRF inspections pertaining to this segment were not conducted.

NRDA FIELD ACTIVITIES SUMMARY

(Natural Resource Damage Assessment)

Note: Includes Shoreline Cleanup Assessment Team (SCAT) inspections and activities. SCAT forms were completed by field inspection teams working under the direction of Unified Command.

DATE	SUMMARY OF INFORMATION RECORDED BY INSPECTION TEAM
05/07/2003	Shellfish tissue samples collected and analyzed. Additional information will be provided in the NRDA reports.
05/09/2003	Cleanup crew was on-site during the inspection.
05/19/2003	Tarballs, tar patties, and oiled debris were observed. The total surface oil coverage was approximately 1% to 10% in the middle intertidal zone near Seaconet Road. A boom had been removed from a stream between Seaconet Road and Daisy Way.
05/22/2003	Sporadic staining on rocks and small patches of marsh coated. Fish and jellyfish observed to be oiled. Surface oil distribution noted to be 40%. Subsurface oiling conditions were observed to be 4 inches deep and 1 inch thick in one trench.
05/23/2003	Oiled debris was observed. Cleanup crew was on-site during the inspection.
05/29/2003	Oiled rocks were observed in grassy area. The oil in the salt marsh was left untouched and natural attenuation was recommended for these areas to reduce potential damage to the salt marsh habitat due to cleanup activities.
07/08/2003	Shellfish tissue samples collected and analyzed.
08/27/2003	Shellfish tissue samples collected and analyzed.

IRAC INSPECTIONS

(Unified Command Immediate Response Action Completion inspections and activities.)

DATE	SUMMARY OF INFORMATION RECORDED BY INSPECTION TEAM
08/27/2003	Trace dried splatter was observed on rocks. Segment did not meet IRAC criteria endpoints and further treatment was not considered to be feasible.
09/02/2003	Segment did not meet IRAC criteria endpoints and further treatment was not considered to be feasible.

MCP FIELD ACTIVITIES SUMMARY

(Massachusetts Contingency Plan inspections and activities under the direction of the Licensed Site Professional-of-Record.)

DATE	SUMMARY OF INFORMATION RECORDED BY INSPECTION TEAM
12/03/2003	Site reconnaissance: Trace splatter was observed.
07/27/2004	Site reconnaissance, potential buried oil inspection, and shellfish bed evaluation: Eight trenches were excavated 8 to 18 inches deep and 5 to 35 feet long, and 7 areas were raked offshore. Oil was not observed in seven of the trenches. Small particles of oil were observed in one trench. Two additional trenches were excavated on either side. A slight sheen and small particles of oil were observed in these trenches. A 1 to 2 millimeter lens of sand with a rainbow sheen was observed along the east bank of the channel in the middle intertidal zone near N41°37.692' W70°49.507' on Howard Beach**. Surrounding trenches had very infrequent pinhead particles

of oil and minor sheening. Four to six patches of pin-head size splatters embedded in the marsh in the middle intertidal zone at N41°37.621' W70°49.564' were removed. A few granular tarballs along the banks of the Howard Beach channel (ranging 2 millimeters to 1 inch in diameter) were removed from the surface and in the trenches.

07/29/2004 Site reconnaissance, potential buried oil inspection, and shellfish bed evaluation: 8 trenches (approximately 5 to 8 feet long and 3 to 10 inches deep) were advanced and 8 areas were raked offshore. Trace splatter was observed on cobbles and boulders, primarily in the middle intertidal zone. Pieces of non-B120 road tar were observed on the rocky shoreline near the point.

08/26/2004 Site reconnaissance: West portion of the segment was inspected at the point. Two samples of weathered oil (W1F06-W01 and W1F06-W02) were collected at N41°37.474' W70°48.619' and N41°37.468' W70°48.597', respectively. Sporadic clusters of died splatter (approximately dime-size to 3 inches in diameter) were observed.

Note: GeoInsight did not receive IRA citizen calls pertaining to this segment.

TABLE 1
SAMPLE SUMMARY
BUZZARDS BAY, MASSACHUSETTS
SEGMENT: W1F-06
Mattapoissett Neck South, Mattapoissett

Sample ID	Date Collected	Matrix	Analysis	Laboratory	Sampling Program	Sample Location Coordinates		Sample Location Description	Comments
						Latitude	Longitude		
MONB-SP-1-A, B, and C	5/07/2003	Tissue	PAH	B&B	NRDA-Pre-Assessment	N41°37.548'	W71°11.758'	Mattapoissett Outer Nasketucket Bay, Middle of mouth of Bay	Shellfish-Scallop
MONB-SP-2-A, B, and C	7/08/2003								
MONB-SP-3-A, B, and C	8/27/2003								
W1F06-W01	8/26/2004	Oil	Finger Print Analysis	B&B	MCO	N41°37.474'	W70°48.619'	West portion of segment	Weathered oil
W1F06-W02	8/26/2004					N41°37.468'	W70°48.597'		

NOTES:

1. B&B: B&B Laboratories.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
BUZZARDS BAY, MASSACHUSETTS
SEGMENT: WIF-06
Mattapoisett South Neck, Mattapoisett

Analyte	MONB-SP-1-A and B	MONB-SP-2-A, B, and C	MONB-SP-3-A, B, and C
	Scallop	Scallop	Scallop
	5/7/2003	7/8/2003	8/27/2003
PAH by GC/MS-SIM by method 8270C			
Naphthalene	0.0016	0.0021	0.0051
2-Methylnaphthalene	0.0054	0.0011j	0.0061
Acenaphthylene	0.0003j	0.0003j	0.0004
Acenaphthene	0.0011	0.0003j	0.0019
Fluorene	0.0034	0.0007	0.0009
Phenanthrene	0.0378	0.0055	0.0027
Anthracene	0.0022	0.0026	0.0005
Fluoranthene	0.0229	0.0284	0.0023
Pyrene	0.0419	0.0224	0.0022
Benzo(a)anthracene	0.0090	0.0119	0.0014
Chrysene	0.0585	0.0341	0.0031
Benzo(b)fluoranthene	0.0062	0.0115	0.0034
Benzo(k)fluoranthene	0.0035	0.0036	0.0017
Benzo(a)pyrene	0.0055	0.0028	0.0012
Indeno(1,2,3-c,d)pyrene	0.0007	0.0010	0.0008
Dibenzo(a,h)anthracene	0.0006	0.0006	0.0002j
Benzo(g,h,i)perylene	0.0009	0.0009	0.0007
Total PAH	1.865	0.599	0.0767

NOTES:

1. Results in mg/Kg (milligrams per kilogram).
2. ND(x): Constituent not detected at practical quantitation limits (PQL) noted in parentheses.
3. PAH by GC/MS-SIM: Polynuclear Aromatic Hydrocarbon analysis by Gas Chromatography/Mass Spectrometry with Selected Ion Monitoring.
4. j: Estimated concentration/ detected below standard laboratory reporting limits.
5. Bold values exceed laboratory PQL.



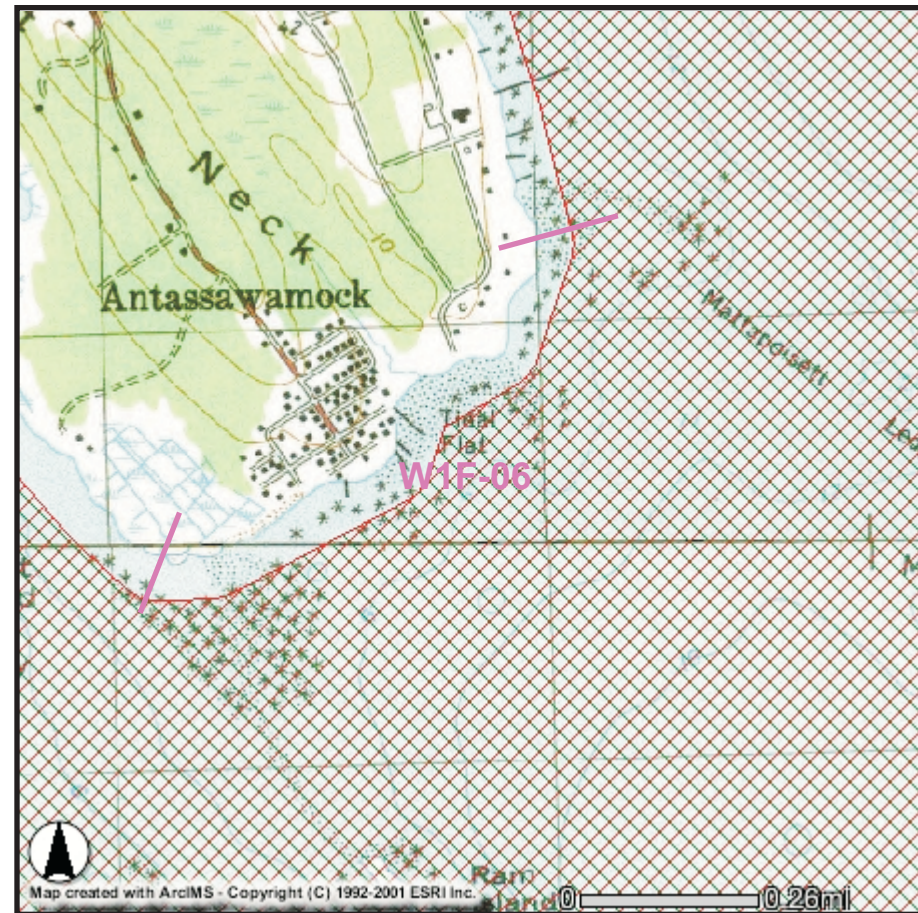
0 250 500 1,000 Feet



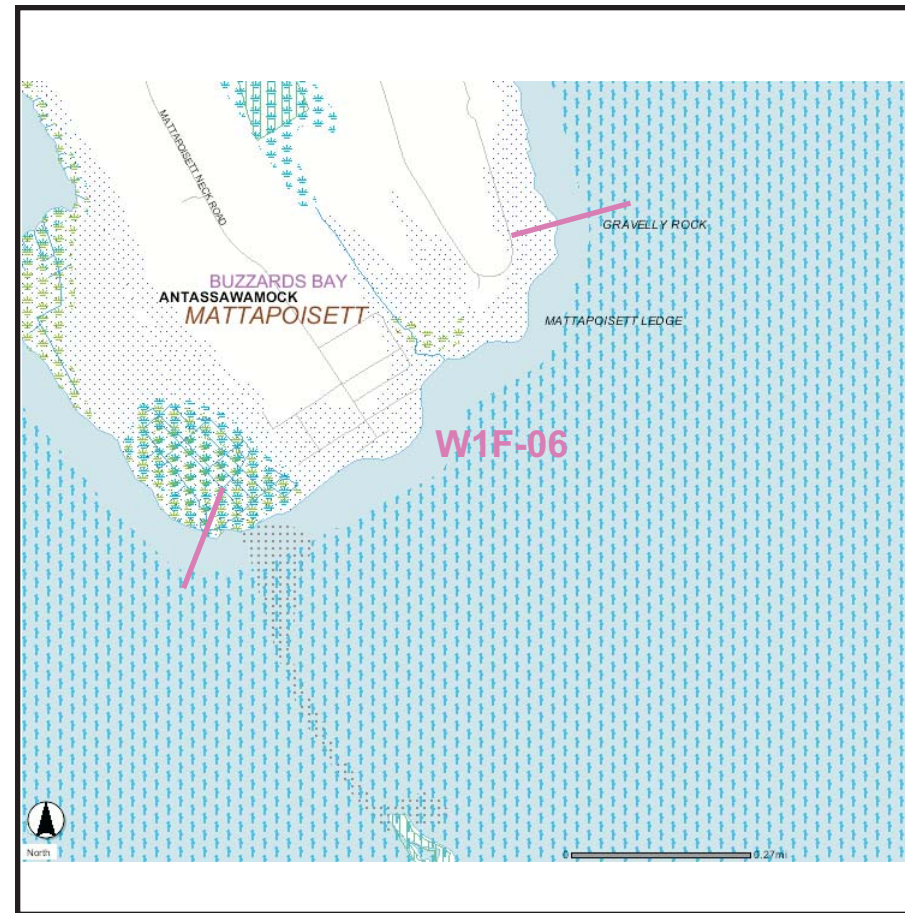
E N T R I X

W1F-06
Mattapoisett Neck South
Bouchard B No. 120 Oil Spill
Buzzards Bay, MA

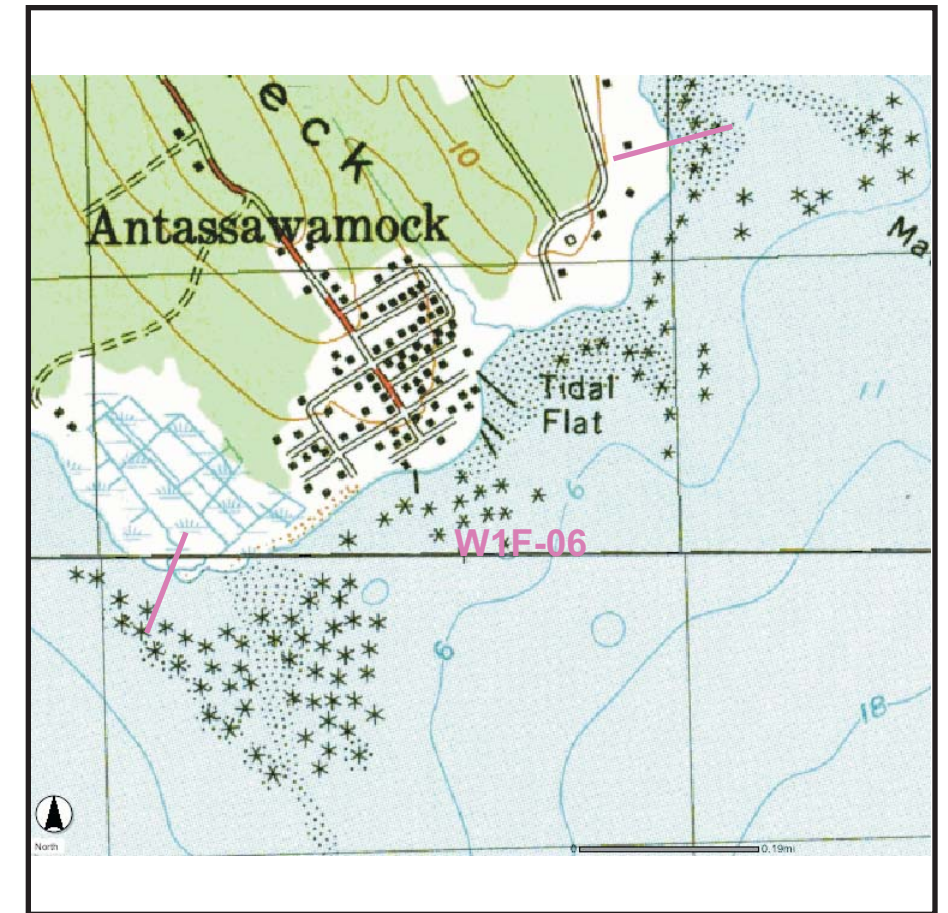
NATURAL HERITAGE AND ENDANGERED SPECIES MAP





2IE PRIORITY RESOURCE MAP
























TOPOGRAPHIC MAP




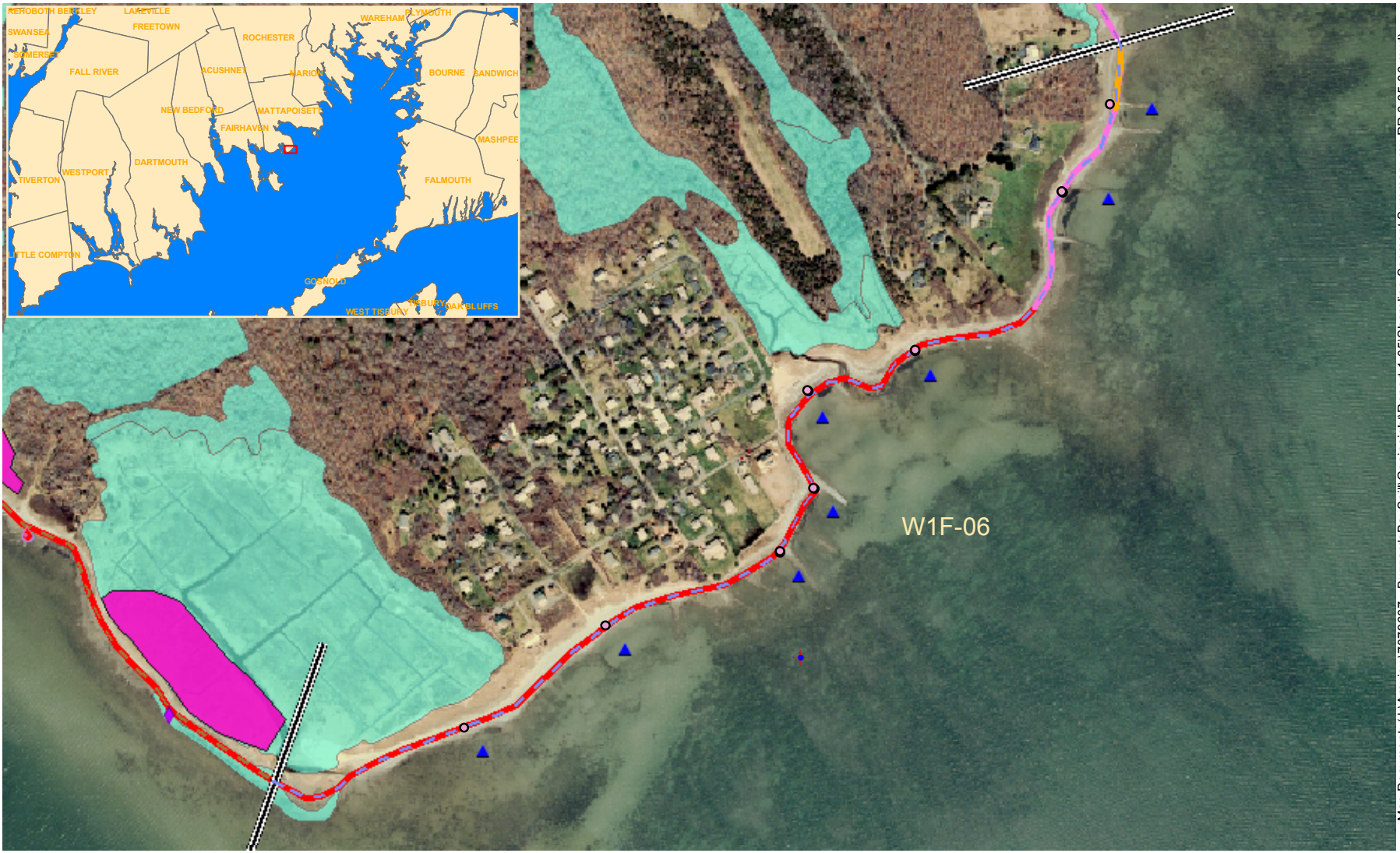
LEGEND

-  NHESP 2005 MA PRIORITY HABITATS FOR STATE-PROTECTED RARE SPECIES
-  NHESP 2005 MA ESTIMATED HABITATS OF RARE WILDLIFE

DEP MCP 21e Map Legend

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none">  Zone IIs  IWPA's  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 | <ul style="list-style-type: none">  HIGH YIELD  MEDIUM YIELD <p>Non Potential Drinking Water Source Area</p> <ul style="list-style-type: none">  HIGH YIELD  MEDIUM YIELD <p>FEMA Floodplains</p> <ul style="list-style-type: none">  100 YEAR FLOODPLAIN | <p>Hydrography</p> <ul style="list-style-type: none">  WATER  RESERVOIR  WETLANDS  SALT WATER WETLANDS  FLATS, SHOALS <p>Rivers and Streams</p> <ul style="list-style-type: none">  PERENNIAL  INTERMITTENT  SHORELINE  MAN MADE SHORE  DAM  AQUEDUCT | <p>EOT-OTP Roads</p> <ul style="list-style-type: none">  LIMITED ACCESS HIGHWAY  MULTILANE HWY, NOT LIMITED ACCESS  OTHER NUMBERED HWY  MAJOR ROAD - COLLECTOR  MINOR STREET OR ROAD, RAMP <p>Tracks and Trails MHD</p> <ul style="list-style-type: none">  TRACK  TRAIL <p>Transmission Lines</p> <ul style="list-style-type: none">  PIPELINE  POWERLINE  TRAIN |
|---|---|---|---|

		PROJECT:		
		B120 OIL SPILL		
TITLE:		LOCATION:		
		MATTAPOISETT NECK SOUTH BUZZARDS BAY, MA		
PHASE II SUPPORTING MAPS				
DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE #:
LAC	JKB	KDT	MJW	
SCALE:	DATE:	FILE:	PROJECT #:	WIF-06
AS SHOWN	01/25/06	3871WIF-06	3871-002	



Trench Location

- 11/2004
- 10/2004
- 09/2004
- 08/2004
- 07/2004
- 06/2004
- 04/2004
- 03/2004
- 01/2004
- 12/2003
- 11/2003
- 10/2003
- 09/2003

- ✿ Nearshore Subtidal Sediment Sampling Location 2004
- ✿ Deep Subtidal Sediment Sampling Location 2004
- ✿ Subtidal Sediment Sampling Location 2003
- ▲ Qualitative Shellfish Surveys 2004
- ◆ Marsh Sampling Location 2004
- ◆ Marsh Core Sampling Location 2004
- Water Sampling Location 2004
- Water Sampling Location 2003
- ★ Intertidal Sediment Sampling Location 2003
- ★ Intertidal Sediment Sampling Location 2004

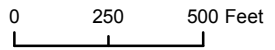
- ✦ Shellfish Sampling Location
- Chain Drag Location 2003
- Chain Drag Location 2004
- Lobster Pot Sampling Location 2003
- Absorbent Pad Sampling Location 2003
- ⚓ Dive Sites
- ⚓ Wetlands
- Nests
- ⊕ Vernal Pool
- ▨ NHESP 2003 Priority Habitats for State-Protected Rare Species

OILING

- NO DATA
- CLEAN
- VERY LIGHT
- LIGHT
- MEDIUM
- HEAVY

IRAC ESI

- Public-Private Sand Beach (1A/1B)
- Mixed Sand and Gravel (1C)
- Marsh (1F)
- Rocky Shoreline (1E)
- Riprap, Groin, Jetty (1D)
- Visual Inspection of Marsh Area



ENTRIX

W1F-06
Mattapoisett Neck South,
Mattapoisett
Comprehensive Activities
Bouchard B No. 120 Oil Spill
Buzzards Bay, MA