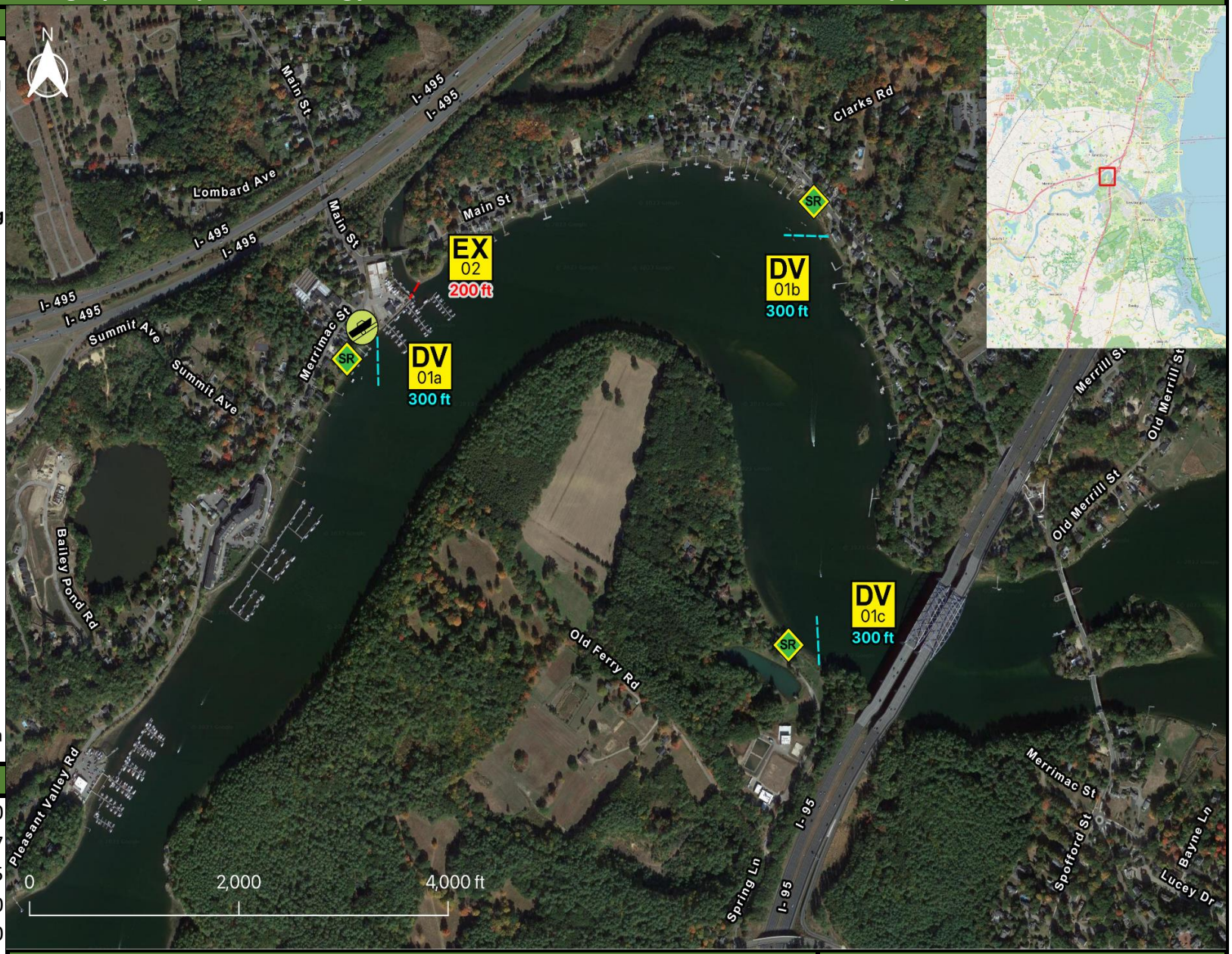
MassDEP North Shore Geographic Response Strategy

Upper Merrimack River NS01A

Tactics Legend

- DF — Deflection Booming
- DV — Diversion Booming
- EX — Exclusion Booming
- FO — Free Oil Recovery
- PR — Passive Recovery
- SR — Shoreside Recovery
- S — Staging Area
- Boat Ramp
- BB — Beach Berm
- TG — Tide Gate
- Protected-Water Boom
- Open-Water Boom
- Snare/ Sorbent Boom



Equipment - All Tactics

Boom(ft)	1100
Marine anchors	7
Shore anchors	5
Sorbent Boom(ft)	0
FO Recovery Sys	0
Shore Responders	2
Boat Responders	3
Boats	2

Version

12/31/25

Response Trailer, Tactics Deployment, and Responder Safety Information

A total of **2** state response trailers are required to implement all the tactics in this GRS.

Responders should always consider on-scene conditions before deploying GRP tactics.

Tactics may not be safe or effective under certain conditions.

Responder safety should always be the first priority.

Location

Latitude:	42°50’15” N
Longitude:	70°55’9” W
NOAA Chart #	13282

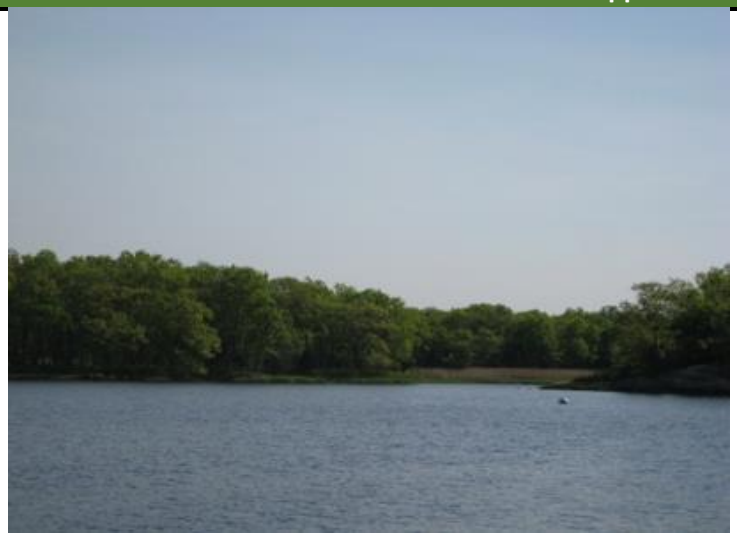
Geographic Response Strategy				Upper Merrimack River NS01A
Tactic #	**Purpose**	**Response Equipment**	**Deployment Resources**	**Deployment Notes**
DV-01a DV	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system 10/21/14 **Testing Date**	2 shore responders 1 response boats 3 boat responders Y **Tested**	Tend through tidal changes. Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust angle as necessary to reduce entrainment. Set up shoreside recovery and tend throughout tide. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
DV-01b DV	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust angle as necessary to reduce entrainment. Set up shoreside recovery and tend throughout tide. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
DV-01c DV	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust angle as necessary to reduce entrainment. Set up shoreside recovery and tend throughout tide. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
EX-02 EX	Prohibit oil slicks from entering a sensitive area	200 ft protected water boom 1 marine anchor system 2 shoreline anchor system 10/21/14 **Testing Date**	2 shore responders 1 response boats 3 boat responders Y **Tested**	Tend through tidal changes. Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Not tide dependent. Deploy shoreside anchor first. Readjust boom angle as needed to reduce entrainment
SR-03 SR	Remove spilled oil that has been diverted to a designated recovery site accessible from shore	3 skimming system 3 storage tank or bladder 3 hoses, pumps, fittings N/A **Testing Date**	2 shore responders **Tested**	Set up shoreside recovery tactic at general location depicted on map. Some access points located at private residences. Access may be difficult.

Local contacts

Newburyport Fire Department	978-465-4427
Newburyport Harbormaster	978-462-3746
Salisbury Fire Department	978-465-3631
Salisbury Harbormaster	978-499-0740
Mass Bays Estuary Assn	978-374-0519
USCG Station Merrimack	978-462-3428
Mass Division of Marine Fisheries	617-626-1520
Environmental Police	800-632-8075

Resources Protected

Marine Mammals	**None identified**
Fish	Anadromous, finfish
Invertebrates	**None identified**
Birds	Bald Eagle, Seabirds
Threat/End. Species	**None identified**
Cultural	**None identified**
Subsistence	**None identified**
Human Use	Boat Ramps, Marinas
Commercial Fishing	**None identified**
Land Management	**None identified**
Coastal Habitiat	Fresh Water River, Muddy Banks, Marsh/Swamp, Riprap



Carr Island Channel looking north at high tide on 20 May 2009. Site of DF-03b

Collection site west of Newburyport Boat Basin at high tide on 20 May 2009. Site of DV-01e

Special Considerations & Navigational Hazards

Tidal range of 6-8 ft. Tidal current max speed 4-5 kts in constricted areas 1.5 - 2 kts elsewhere. Vessel operators should have local knowledge and experience in operating in strong currents.

MassDEP North Shore Geographic Response Strategy

Upper Merrimack River NS01B

Tactics Legend

- DF — Deflection Booming
- DV — Diversion Booming
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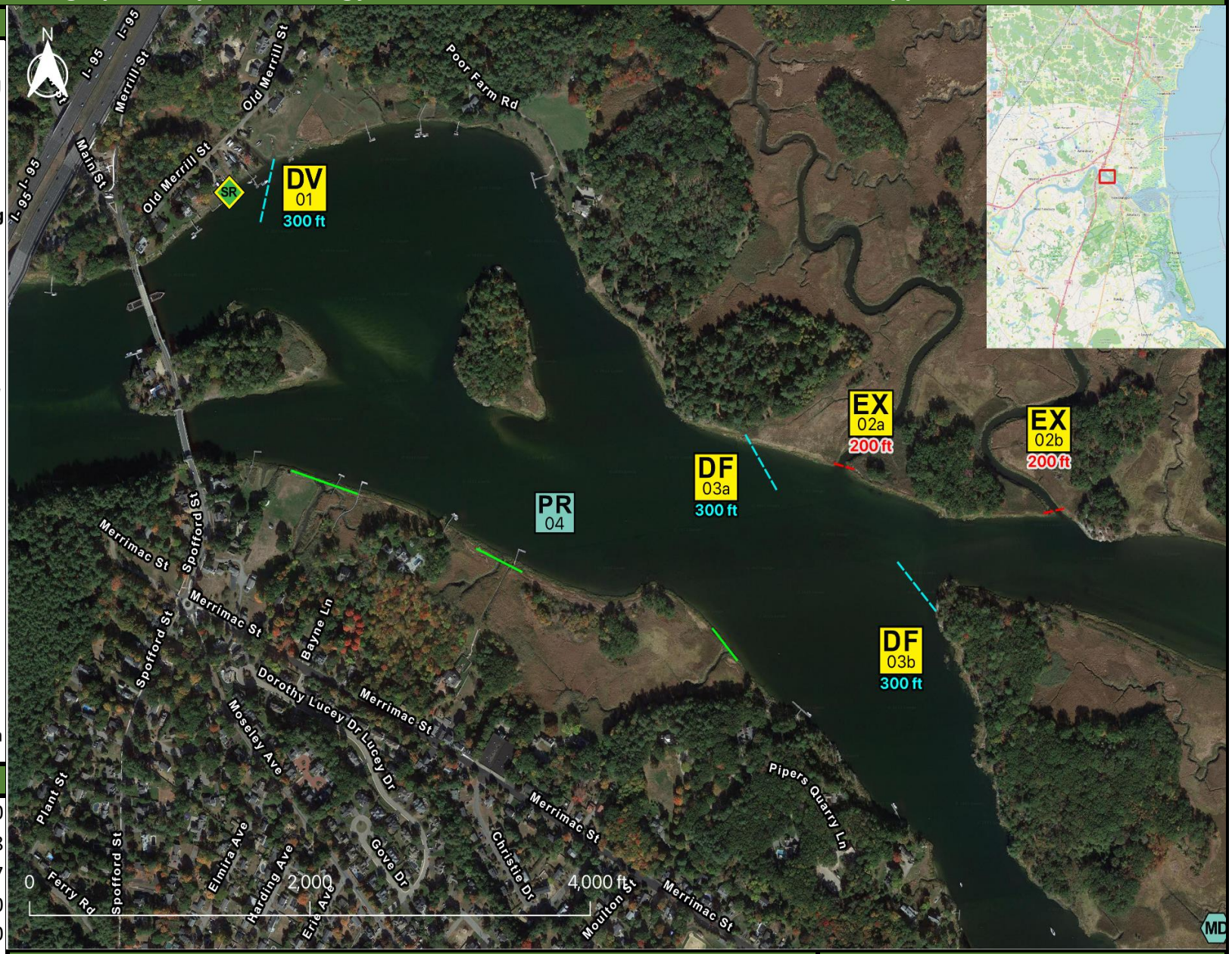
- S — Staging Area
- Boat Ramp
- BB — Beach Berm
- TG — Tide Gate
- Protected-Water Boom
- Open-Water Boom
- Snare/ Sorbent Boom



Equipment - All Tactics

Boom(ft)	1300
Marine anchors	8
Shore anchors	7
Sorbent Boom(ft)	250
FO Recovery Sys	0
Shore Responders	2
Boat Responders	6
Boats	2

Version

12/31/2025

Response Trailer, Tactics Deployment, and Responder Safety Information

A total of **2** state response trailers are required to implement all the tactics in this GRS.

Responders should always consider on-scene conditions before deploying GRP tactics.

Tactics may not be safe or effective under certain conditions.

Responder safety should always be the first priority.

Location

Latitude:	42°49’59” N
Longitude:	70°53’54” W
NOAA Chart #	13282

Geographic Response Strategy				Upper Merrimack River NS01B
Tactic #	**Purpose**	**Response Equipment**	**Deployment Resources**	**Deployment Notes**
DV-01 DV	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust angle as necessary to reduce entrainment. Set up shoreside recovery and tend throughout tide. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
EX-02a EX	Prohibit oil slicks from entering a sensitive area	200 ft protected water boom 1 marine anchor system 2 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Not tide dependent. Deploy shoreside anchor first.
EX-02b EX	Prohibit oil slicks from entering a sensitive area	200 ft protected water boom 1 marine anchor system 2 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Not tide dependent. Deploy shoreside anchor first.
DF-03a DF	Direct spilled oil away from a location to be protected or to change the course of the slick.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 2 response boats 6 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to deflect incoming oil away from sensitive areas. Anchor every 200-300'. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
DF-03b DF	Direct spilled oil away from a location to be protected or to change the course of the slick.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 2 response boats 6 boat responders N **Tested**	Tend through tidal changes. Deploy boom as depicted to deflect incoming oil away from sensitive areas. Anchor every 200-300'. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	250 ft sorbent boom 250 ft sorbent pom-poms 7 anchor stakes N/A **Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
SR-05 SR	Remove spilled oil that has been diverted to a designated recovery site accessible from shore	1 skimming system 1 storage tank or bladder 1 hoses, pumps, fittings N/A **Testing Date**	2 shore responders **Tested**	Set up shoreside recovery tactic at general location depicted on map. Some access points located at private residences. Access may be difficult.

Local contacts

Newburyport Fire Department	978-465-4427
Newburyport Harbormaster	978-462-3746
Salisbury Fire Department	978-465-3631
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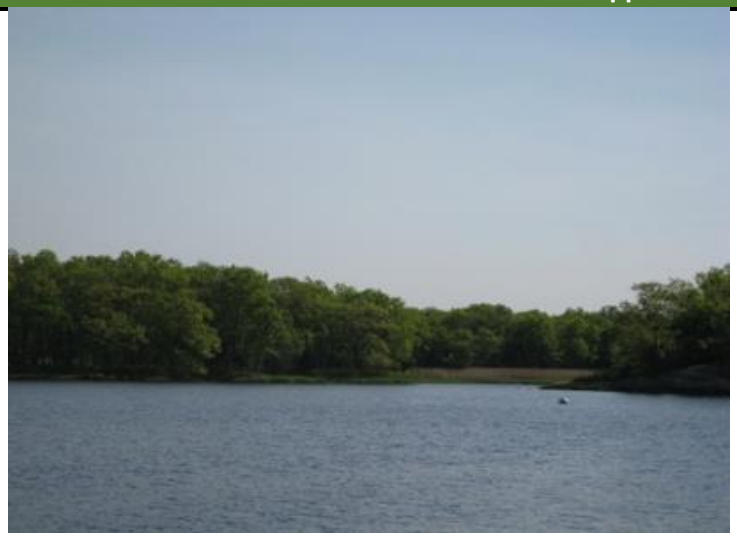
Mass Bays Estuary Assn	978-374-0519
USCG Station Merrimack	978-462-3428
Mass Division of Marine Fisheries	617-626-1520
Environmental Police	800-632-8075

Resources Protected

Marine Mammals	**None identified**
Fish	Anadromous, finfish
Invertebrates	**None identified**
Birds	Bald Eagle, Seabirds
Threat/End. Species	**None identified**
Cultural	**None identified**
Subsistence	**None identified**
Human Use	Boat Ramps, Marinas
Commercial Fishing	**None identified**
Land Management	**None identified**
Coastal Habitiat	Fresh Water River, Muddy Banks, Marsh/Swamp, Riprap



Carr Island Channel looking north at high tide on 20 May 2009. Site of DF-03b

Collection site west of Newburyport Boat Basin at high tide on 20 May 2009. Site of DV-01e

Special Considerations & Navigational Hazards

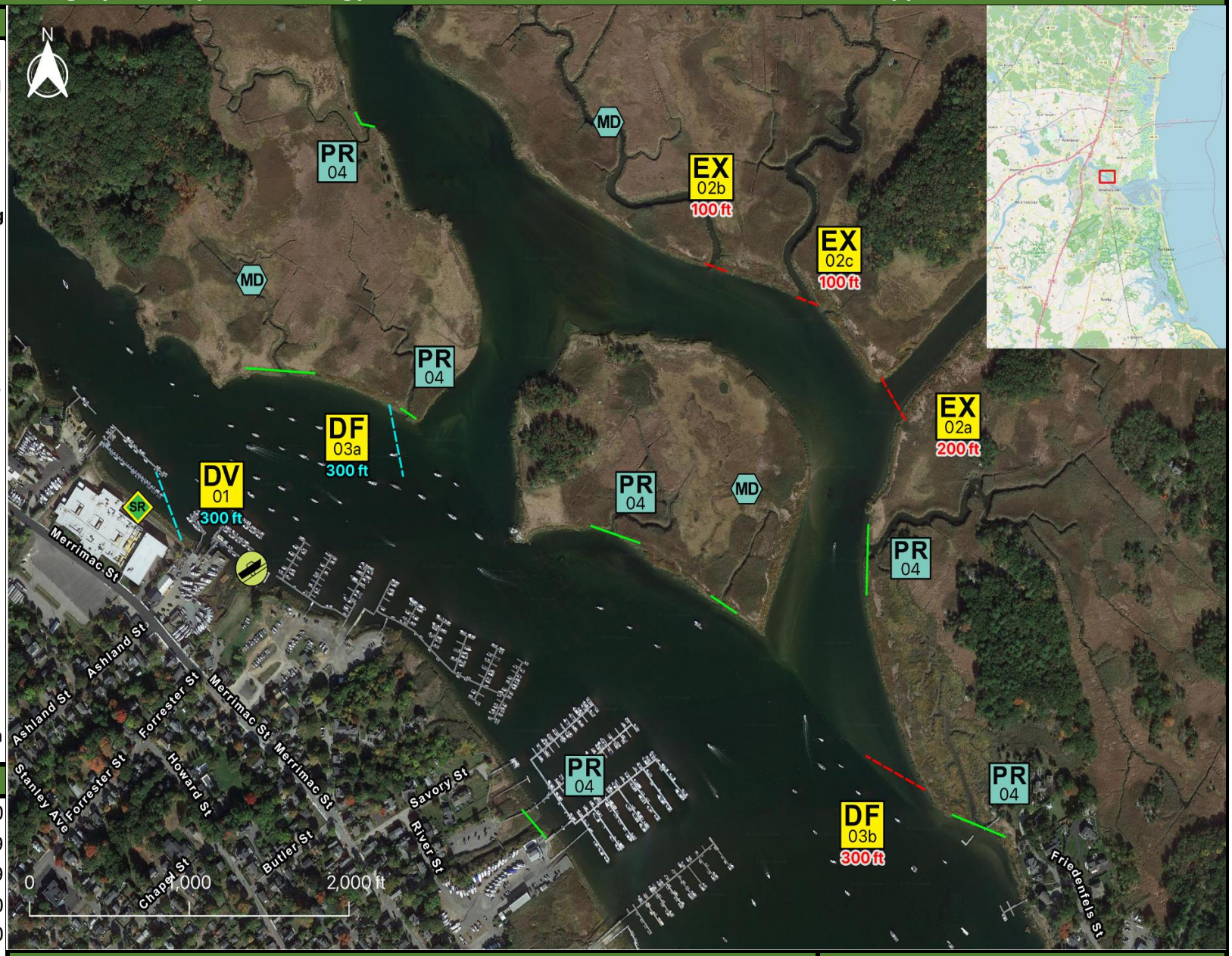
Tidal range of 6-8 ft. Tidal current max speed 4-5 kts in constricted areas 1.5 - 2 kts elsewhere. Vessel operators should have local knowledge and experience in operating in strong currents.

MassDEP North Shore Geographic Response Strategy

Upper Merrimack River NS01C

Tactics Legend

- DF — Deflection Booming
- DV — Diversion Booming
- EX — Exclusion Booming
- FO — Free Oil Recovery
- PR — Passive Recovery
- SR — Shoreside Recovery
- S — Staging Area
- Boat Ramp
- BB — Beach Berm
- TG — Tide Gate
- Protected-Water Boom
- Open-Water Boom
- Snare/ Sorbent Boom



Equipment - All Tactics

Boom(ft)	1300
Marine anchors	9
Shore anchors	9
Sorbent Boom(ft)	1500
FO Recovery Sys	0
Shore Responders	2
Boat Responders	6
Boats	2

Version

12/31/25

Response Trailer, Tactics Deployment, and Responder Safety Information

A total of **2** state response trailers are required to implement all the tactics in this GRS.

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Location

Latitude:	42°49’30” N
Longitude:	70°52’49” W
NOAA Chart #	13282

Geographic Response Strategy				Upper Merrimack River NS01C
Tactic #	**Purpose**	**Response Equipment**	**Deployment Resources**	**Deployment Notes**
DV-01 DV	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders **N Tested**	Tend through tidal changes. Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust angle as necessary to reduce entrainment. Set up shoreside recovery and tend throughout tide. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
EX-02a EX	Prohibit oil slicks from entering a sensitive area	200 ft protected water boom 1 marine anchor system 2 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders **N Tested**	Tend through tidal changes. Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Not tide dependent. Deploy shoreside anchor first.
EX-02b EX	Prohibit oil slicks from entering a sensitive area	100 ft protected water boom 1 marine anchor system 2 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders **N Tested**	Tend through tidal changes. Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Not tide dependent. Deploy shoreside anchor first.
EX-02c EX	Prohibit oil slicks from entering a sensitive area	100 ft protected water boom 1 marine anchor system 2 shoreline anchor system **Testing Date**	2 shore responders 1 response boats 3 boat responders **N Tested**	Tend through tidal changes. Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Not tide dependent. Deploy shoreside anchor first.
DF-03a DF	Direct spilled oil away from a location to be protected or to change the course of the slick.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 2 response boats 6 boat responders **N Tested**	Tend through tidal changes. Deploy boom as depicted to deflect incoming oil away from sensitive areas. Anchor every 200-300'. Deploy shoreside anchor first. Alternate deployment with tide - reset during slack.
DF-03b DF	Direct spilled oil away from a location to be protected or to change the course of the slick.	300 ft protected water boom 2 marine anchor system 1 shoreline anchor system **Testing Date**	2 shore responders 2 response boats 6 boat responders **N Tested**	Tend through tidal changes. Deploy boom as depicted to deflect incoming oil away from sensitive areas. Anchor every 200-300'. Deploy shoreside anchor first.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	150 ft sorbent boom 150 ft sorbent pom-poms 4 anchor stakes **N/A Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	300 ft sorbent boom 300 ft sorbent pom-poms 9 anchor stakes **N/A Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	400 ft sorbent boom 400 ft sorbent pom-poms 11 anchor stakes **N/A Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	300 ft sorbent boom 300 ft sorbent pom-poms 9 anchor stakes **N/A Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	250 ft sorbent boom 250 ft sorbent pom-poms 7 anchor stakes **N/A Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
PR-04 PR	Remove spilled oil by collecting it in a sorbent material	100 ft sorbent boom 100 ft sorbent pom-poms 3 anchor stakes **N/A Testing Date**	2 shore responders **Tested**	Place and stake snare or sorbent boom in areas that are likely to pool and collect oil and across the mouths of the streams and intertidal areas. Use snare boom for persistent oils and sorbent boom for non-persistent oils. Approach the streams and intertidal areas on rising tide. Replace as necessary to maximize oil recovery.
SR-05 SR	Remove spilled oil that has been diverted to a designated recovery site accessible from shore	1 skimming system 1 storage tank or bladder 1 hoses, pumps, fittings **N/A Testing Date**	2 shore responders **Tested**	Set up shoreside recovery tactic at general location depicted on map. Some access points located at private residences. Access may be difficult.

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Resources Protected

Marine Mammals	**None identified**
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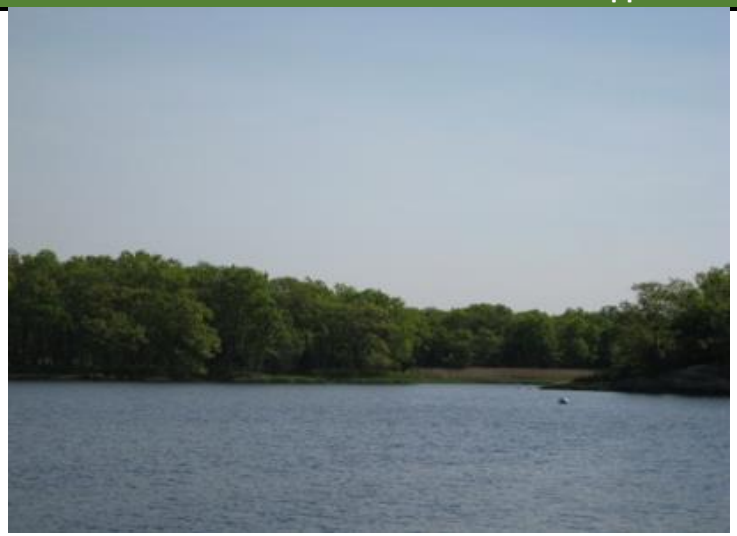

Carr Island Channel looking north at high tide on 20 May 2009. Site of DF-03b

Collection site west of Newburyport Boat Basin at high tide on 20 May 2009. Site of DV-01e

Special Considerations & Navigational Hazards

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