

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
-  Kayak Ramp
- +** Railroad
-  Protected-Water Boom
-  Protected-Water Boom (Ebb Tide)
-  Snare/ Sorbent Boom



Equipment - All Tactics

Boom(ft)	600
Marine anchors	3
Shore anchors	1
Sorbent Boom(ft)	0
FO Recovery Sys	0
Shore Responders	4
Boat Responders	2
Boats	2




Tactics Deployment, Responder Safety, and GRS Data Information

Always consider on-scene conditions before deploying GRS tactics. Responder safety should always be the first priority.

Location

**Latitude:** 45° 0' 21"  
**Longitude:** 73° 9' 41"  
**State:** Vermont

**Version**  
 9/20/2022

Tactic #	Purpose	Response Equipment	Deployment Resources	Deployment Notes
PR-01 	Remove spilled oil by collecting it in a sorbent material.	0 ft sorbent boom 0 ft sorbent pom-poms 0 anchor stakes	2 shore responders	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.
		N/A	Testing Date	
PR-01 	Remove spilled oil by collecting it in a sorbent material.	0 ft sorbent boom 0 ft sorbent pom-poms 0 anchor stakes	2 shore responders	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.
		N/A	Testing Date	
DF-01a 	Direct spilled oil away from a location to be protected or to change the course of the slick.	600 ft protected water boom 3 marine anchor system 1 shoreline anchor system	4 shore responders 2 response boats 2 boat operators	Deploy boom as depicted to deflect incoming oil away from sensitive areas. Adjust configuration as necessary to reduce entrainment. Anchor every 200-300'. Deploy shoreside anchor first.
			Testing Date	

Local contacts

All VT Fire Departments	Call 911
EPA Region 1 Tribal Program	617-918-1123
Missisquoi National Wildlife Refuge	802-868-4781
National Response Center	800-424-8802
VT Comm. on Native American Affairs	802-779-7015
VT DEC (24-Hour)	800-641-5005
VT Drinking Water & Groundwater	802-741-5311
VT Emergency Mgmt & Homeland Security	800-347-0488
VT Fish & Wildlife Dept (Essex)	802-878-1564
VT Hazmat Response Team	800-641-5005
VT Div of Historical Preservation	802-272-2509



*Mouth of Missisquoi River near DF-01a during Spring flood stage. View looks east/southeast.*



*Aerial view of Missisquoi National Wildlife Refuge and surrounding area.*

Resources Protected

<b>Fish</b>	Fish Species of Special Concern, Lake Sturgeon, Sand Darter
<b>Birds</b>	Black Tern, Common Nighthawk, Common Tern, Nesting Sites, Shorebirds, Wildlife and Migratory Bird Habitat
<b>Threat/End. Species</b>	Fishes, Plants, Rare habitat & species, Species of Special Concern/Conservation Need, Sturgeon
<b>Cultural/Historical Resources</b>	Historical/Archaeological Sites, Native American Tribal Lands
<b>Human Use</b>	Boat Ramp, Park
<b>Land Management</b>	Conservation Area, Exemplary Wetland Natural Community, Nat'l Wildlife Refuge, State Management Area, State Park
<b>Riverine</b>	No available data

Navigational Hazards

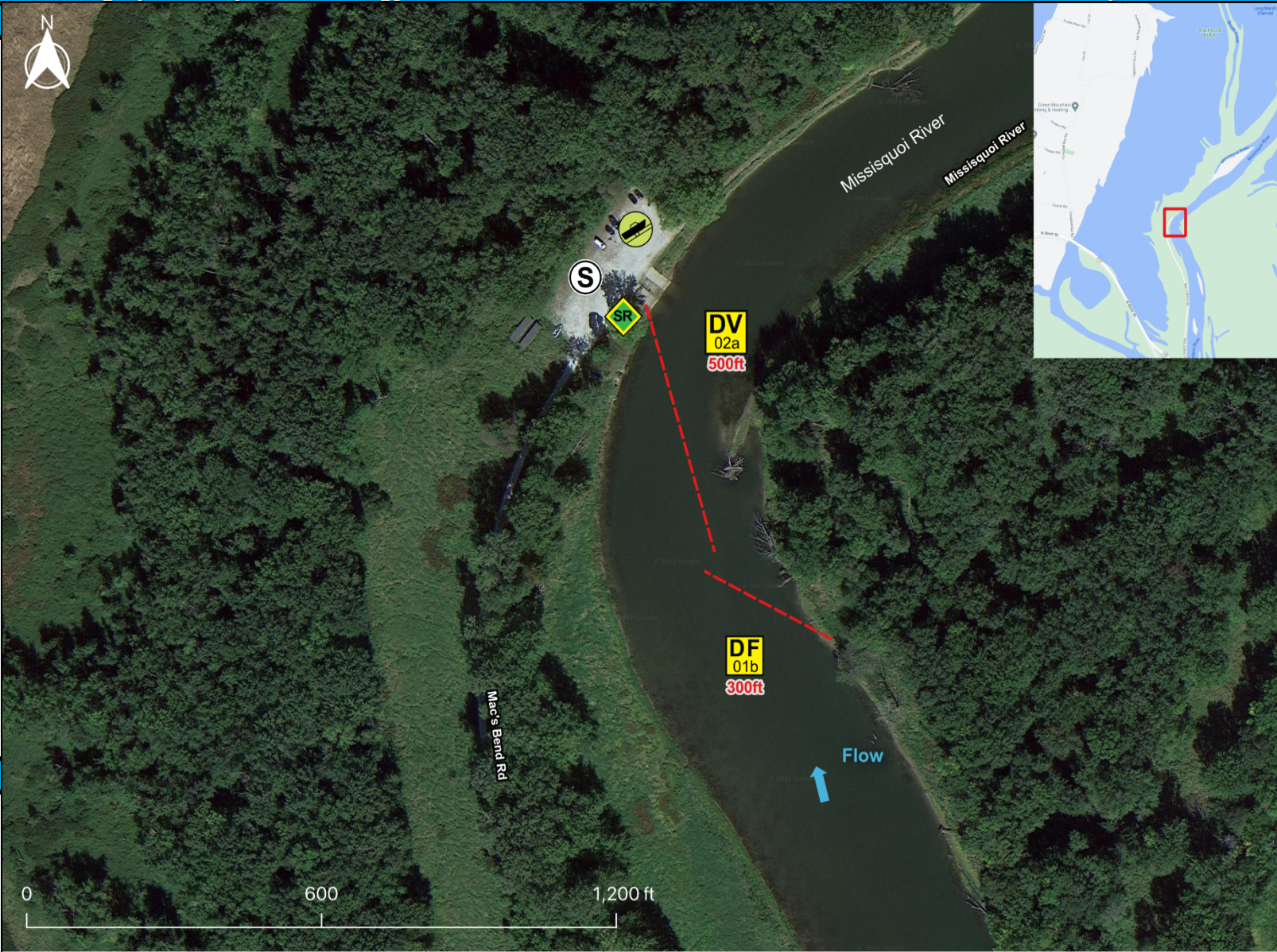
Lake and river conditions such as flow rate and flood stage vary depending on the time of year and heavy rain or snowfall.  
 If ice is present GRS tactics and strategies must be reevaluated.  
 Vessel operators should have local knowledge and experience operating in riverine environments.

Special Considerations

Survey site prior to deployment and modify deployment tactics and techniques as appropriate based on observed river/lake conditions.

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-  Railroad
-  Protected-Water Boom
-  Protected-Water Boom (Ebb Tide)
-  Snare/ Sorbent Boom



Equipment - All Tactics

Boom(ft)	800
Marine anchors	3
Shore anchors	2
Sorbent Boom(ft)	0
FO Recovery Sys	0
Shore Responders	4
Boat Responders	2
Boats	2




**Version**  
9/20/2022

Tactics Deployment, Responder Safety, and GRS Data Information

Always consider on-scene conditions before deploying GRS tactics. Responder safety should always be the first priority.

Location

**Latitude:** 44° 58' 16"  
**Longitude:** 73° 10' 4"  
**State:** Vermont

Tactic #	Purpose	Response Equipment	Deployment Resources	Deployment Notes
DF-01b 	Direct spilled oil away from a location to be protected or to change the course of the slick.	300 ft protected water boom 1 marine anchor system 1 shoreline anchor system	4 shore responders 2 response boats 2 boat operators	Deploy boom as depicted to deflect incoming oil away from sensitive areas. Adjust configuration as necessary to reduce entrainment. Anchor every 200-300'. Deploy shoreside anchor first.
		Testing Date	N Tested	
DV-02a 	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	500 ft protected water boom 2 marine anchor system 1 shoreline anchor system	2 shore responders 1 response boats 1 boat operators	Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust configuration as necessary to reduce entrainment. Set up shoreside recovery. Deploy shoreside anchor first.
		Testing Date	N Tested	
SR-02a 	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	2 shore responders	Set up shoreside recovery tactic at general location depicted on map.
		N/A	Testing Date	Tested

**Local contacts**

All VT Fire Departments	Call 911
EPA Region 1 Tribal Program	617-918-1123
Missisquoi National Wildlife Refuge	802-868-4781
National Response Center	800-424-8802
VT Comm. on Native American Affairs	802-779-7015
VT DEC (24-Hour)	800-641-5005
VT Drinking Water & Groundwater	802-741-5311
VT Emergency Mgmt & Homeland Security	800-347-0488
VT Fish & Wildlife Dept (Essex)	802-878-1564
VT Hazmat Response Team	800-641-5005
VT Div of Historical Preservation	802-272-2509



*Aerial view of Missisquoi National Wildlife Refuge and surrounding area.*



*Boat ramp at Larry Green Fishing Access Area. View looks west.*

**Resources Protected**

<b>Fish</b>	Fish Species of Special Concern, Lake Sturgeon, Sand Darter
<b>Birds</b>	Black Tern, Common Nighthawk, Common Tern, Nesting Sites, Shorebirds, Wildlife and Migratory Bird Habitat
<b>Threat/End. Species</b>	Fishes, Plants, Rare habitat & species, Species of Special Concern/Conservation Need, Sturgeon
<b>Cultural/Historical Resources</b>	Historical/Archaeological Sites, Native American Tribal Lands
<b>Human Use</b>	Boat Ramp, Park
<b>Land Management</b>	Conservation Area, Exemplary Wetland Natural Community, Nat'l Wildlife Refuge, State Management Area, State Park
<b>Riverine</b>	No available data

**Navigational Hazards**

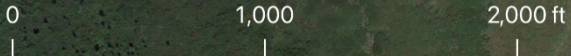
Lake and river conditions such as flow rate and flood stage vary depending on the time of year and heavy rain or snowfall.  
 If ice is present GRS tactics and strategies must be reevaluated.  
 Vessel operators should have local knowledge and experience operating in riverine environments.

**Special Considerations**

Survey site prior to deployment and modify deployment tactics and techniques as appropriate based on observed river/lake conditions.

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- Boat Ramp
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- Railroad
- Protected-Water Boom
- Protected-Water Boom (Ebb Tide)
- Snare/ Sorbent Boom



Equipment - All Tactics

Boom(ft)	900
Marine anchors	4
Shore anchors	4
Sorbent Boom(ft)	0
FO Recovery Sys	0
Shore Responders	2
Boat Responders	2
Boats	2

Tactics Deployment, Responder Safety, and GRS Data Information




Always consider on-scene conditions before deploying GRS tactics. Responder safety should always be the first priority.

Location

**Latitude:** 44° 57' 20"  
**Longitude:** 73° 9' 52"  
**State:** Vermont

Version

9/20/2022

Tactic #	Purpose	Response Equipment	Deployment Resources	Deployment Notes
SR-01b 	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	2 shore responders Tested	Set up shoreside recovery tactic at general location depicted on map.
DV-02b 	Redirect spilled oil from one location or direction of travel to a specific site for recovery.	800 ft protected water boom 4 marine anchor system 2 shoreline anchor system Testing Date	2 shore responders 1 response boats 1 boat operators N Tested	Deploy boom as depicted to divert incoming oil to the collection site. Anchor every 200-300'. Adjust configuration as necessary to reduce entrainment. Set up shoreside recovery. Deploy shoreside anchor first.
EX-03a 	Prohibit oil slicks from entering a sensitive area.	100 ft protected water boom marine anchor system 2 shoreline anchor system Testing Date	2 shore responders 1 response boats 1 boat operators N Tested	Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Adjust configuration as necessary to reduce entrainment. Deploy shoreside anchor first.



Local contacts

All VT Fire Departments	Call 911
EPA Region 1 Tribal Program	617-918-1123
Missisquoi National Wildlife Refuge	802-868-4781
National Response Center	800-424-8802
VT Comm. on Native American Affairs	802-779-7015
VT DEC (24-Hour)	800-641-5005
VT Drinking Water & Groundwater	802-741-5311
VT Emergency Mgmt & Homeland Security	800-347-0488
VT Fish & Wildlife Dept (Essex)	802-878-1564
VT Hazmat Response Team	800-641-5005
VT Div of Historical Preservation	802-272-2509



Aerial view of Missisquoi National Wildlife Refuge and surrounding area.

Resources Protected

<b>Fish</b>	Fish Species of Special Concern, Lake Sturgeon, Sand Darter
<b>Birds</b>	Black Tern, Common Nighthawk, Common Tern, Nesting Sites, Shorebirds, Wildlife and Migratory Bird Habitat
<b>Threat/End. Species</b>	Fishes, Plants, Rare habitat & species, Species of Special Concern/Conservation Need, Sturgeon
<b>Cultural/Historical Resources</b>	Historical/Archaeological Sites, Native American Tribal Lands
<b>Human Use</b>	Boat Ramp, Park
<b>Land Management</b>	Conservation Area, Exemplary Wetland Natural Community, Nat'l Wildlife Refuge, State Management Area, State Park
<b>Riverine</b>	No available data

Site photo provided for reference

Navigational Hazards

Lake and river conditions such as flow rate and flood stage vary depending on the time of year and heavy rain or snowfall.  
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 Vessel operators should have local knowledge and experience operating in riverine environments.

Special Considerations

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Tactics Legend

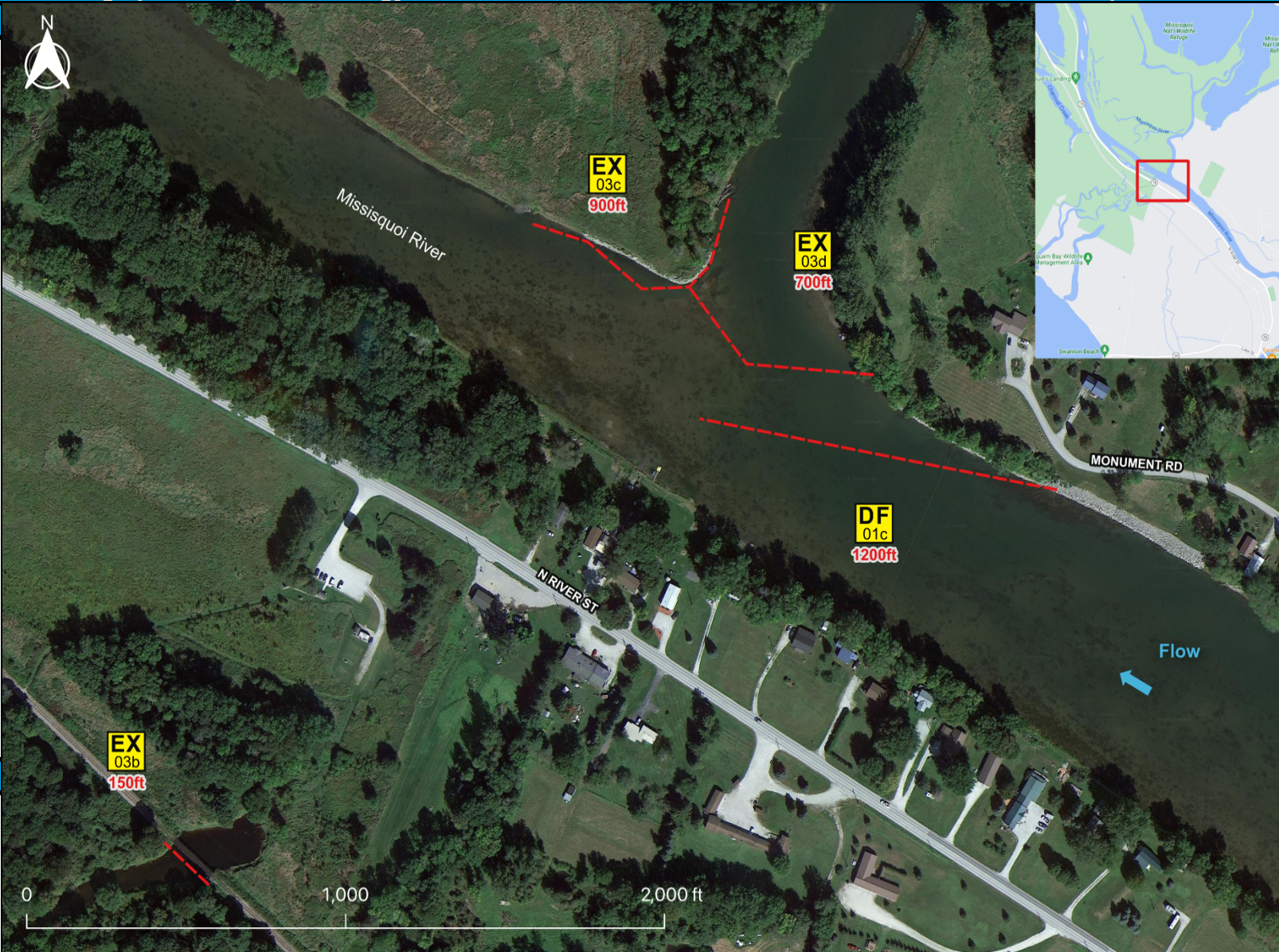
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- SR** Shoreside Recovery
- S** Staging Area
-  Boat Ramp
-  Kayak Ramp
-  Railroad
-  Protected-Water Boom
-  Protected-Water Boom (Ebb Tide)
-  Snare/ Sorbent Boom

Equipment - All Tactics

Boom(ft)	2950
Marine anchors	13
Shore anchors	7
Sorbent Boom(ft)	0
FO Recovery Sys	0
Shore Responders	4
Boat Responders	2
Boats	2

Version

9/20/2022



Tactics Deployment, Responder Safety, and GRS Data Information

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Location

**Latitude:** 44° 56' 43"  
**Longitude:** 73° 8' 52"  
**State:** Vermont

EPA Lake Champlain River Geographic Response Strategy

Missisquoi LC-VT-01D

Tactic #	Purpose	Response Equipment	Deployment Resources	Deployment Notes
DF-01c <b>DF</b>	Direct spilled oil away from a location to be protected or to change the course of the slick.	1200 ft protected water boom 6 marine anchor system 1 shoreline anchor system	4 shore responders 2 response boats 2 boat operators	Deploy boom as depicted to deflect incoming oil away from sensitive areas. Adjust configuration as necessary to reduce entrainment. Anchor every 200-300'. Deploy shoreside anchor first.
		<b>Testing Date</b>	<b>N Tested</b>	
EX-03b <b>EX</b>	Prohibit oil slicks from entering a sensitive area.	150 ft protected water boom marine anchor system 2 shoreline anchor system	2 shore responders 1 response boats 1 boat operators	Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Adjust configuration as necessary to reduce entrainment. Deploy shoreside anchor first.
		<b>Testing Date</b>	<b>N Tested</b>	
EX-03c <b>EX</b>	Prohibit oil slicks from entering a sensitive area.	900 ft protected water boom 4 marine anchor system 2 shoreline anchor system	2 shore responders 1 response boats 1 boat operators	Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Adjust configuration as necessary to reduce entrainment. Deploy shoreside anchor first.
		<b>Testing Date</b>	<b>N Tested</b>	
EX-03d <b>EX</b>	Prohibit oil slicks from entering a sensitive area.	700 ft protected water boom 3 marine anchor system 2 shoreline anchor system	2 shore responders 1 response boats 1 boat operators	Deploy boom as depicted to exclude oil from sensitive areas. Anchor every 200-300'. Adjust configuration as necessary to reduce entrainment. Deploy shoreside anchor first. Readjust boom angle as needed to reduce entrainment
		<b>Testing Date</b>	<b>N Tested</b>	

**Local contacts**

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EPA Region 1 Tribal Program	617-918-1123
Missisquoi National Wildlife Refuge	802-868-4781
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*Aerial view of Missisquoi National Wildlife Refuge and surrounding area.*

**Resources Protected**

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*Site photo provided for reference*

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