US EPA Region 1
Merrimack River Site Survey Summary
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Site Survey Participants:

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SITE: Nashua (MR-06)- Greeley Park, Merrill Park, Hudson Flume

SURVEY TEAM
Hall, Popovich, DeCola, Brown, Bourgouin, McClaine, Hearn, Carew, Kates, Nashua EMA Interns
SPILL RISKS
Incidents from rail line abutting river (west side) and/or upstream oil spills. Potential incidents on bridges that cross over the Merrimack.
DISCUSSION
The following sites were visited for this GRP: Greeley Park, Merrill Park, Crown St. Waterfront, Hudson Flume. Greeley Park is situated on the west side of the Merrimack and is accessible at the end of Hills Ferry Rd. The team identified the following characteristics of the site and potential clean-up capacity on the river: - This site has good river access, with a boat ramp. The town has a grant to update this boat ramp. - There is only one other sand canoe/kayak put-in further downstream. - The Beazer East Brownfield site could potentially be used for staging boom though it is private property. Merrill Park provides access to the Merrimack River from Maple Ave. in Hudson, NH. The team identified the following characteristics of the site and potential clean-up capacity on the river: - This site has access to the river via a small walking trail down the bank, but the staging area is at a higher elevation (approx. 25 feet). This location can support shoreside recovery. - The group surveyed the western shoreline below the Ferry St. bridge and just upstream from Merrill Park (Crown St. area) to determine if this site could support booming operations and shoreside recovery. The survey team

determined it to be unsuitable due to the steep, rocky shoreline with approximately 40-50’ of elevation.

- Hudson Flume (Radcliffe/Winnhaven Dr in Hudson, NH) was surveyed but the site did not have adequate access to the river for oil cleanup, as the bank elevation was too steep. As such, this location will not be included in the GRP.

STRATEGIC OBJECTIVE

Contain spills close to the source. Stop oil from reaching further downstream.

RECOMMENDED TACTICS

Greeley Park:

- 1,000’ Diversion booming with collection at the boat ramp.

Merrill Park Boat Ramp:

- 750’ Diversion booming with collection at shoreline access.

SITE: Pennichuck (MR-07)- Merrimack Wastewater Treatment Facility (WWTF)

SURVEY TEAM
Hall, Popovich, DeCola, Brown, Bourgouin, Domke, McClaine, Hearn, Carew, Kates, Nashua EMA interns, Porter
SPILL RISKS
Rail line incidents or oil spills from further upstream.
DISCUSSION
The Merrimack Wastewater Treatment Facility (WWTF) has an access road to the Pennichuck Waterworks pumping station/water intake. The survey team was unable to access the site landside as we could not contact anyone with the WWTF to gain access. A waterside survey of the water intake area was conducted by some survey team members utilizing Gene Porter's small boat launched from Greely Park. Later in the afternoon Pete, Kim, and James conducted a survey of the river adjacent to the Pennichuck pumping station/water intake . The current water intake was observable from the water. • It consisted of a two square concrete culverts approximate 6 feet wide with metal doors to control water intake. • There were stairs leading up from the culverts to the pumping station. No roads were visible from the water but it's clear from Google Earth that an access road leads right up to the pump house. • There is room for response equipment to be deployed in this area. • A bald eagle was observed in a tree along the western bank of the river between Greely Park boat ramp and the WWTF.
STRATEGIC OBJECTIVE
Contain spills close to the source, Protect drinking water sources and intake. Prevent oil from getting into the drinking water system.
RECOMMENDED TACTICS
- There are future plans for a sub-surface intake. Notifying WWTF staff so they can consider shutting down the intake in response to a spill incident. - Exclusion booming around the existing shore side intake.

SITE: Merrimack/Souhegan (MR-08)- Watson Park

SURVEY TEAM
Hall, Popovich, DeCola, Brown, Bourgouin, Domke, McClaine, Hearn, Carew, Kates, Nashua EMA Interns
SPILL RISKS
Rail line and oil from potential upstream sources along the Souhegan River.
DISCUSSION
Watson Park is accessible from Route 3 and is at the end of a park south of Loop Rd. Watson Park gives access to the west side of the Merrimack and the north side of the Souhegan. The team identified the following characteristics of the site and potential clean-up capacity on the river: - The access road at Watson Park that leads to the Souhegan River can be accessed by pedestrians but is gated and locked at two locations. Contact information for these gates should be confirmed by contacting the town of Merrimack. - Staging, booming and shoreside recovery operations can be undertaken at the confluence of the Merrimack and Souhegan Rivers just upstream of the rail line bridge. - There is a small overflow dam approximately 1,500 ft up river on the Souhegan River that could support response activities for a spill further upriver. This location was not reviewed due to time considerations.
STRATEGIC OBJECTIVE
Protecting the Merrimack and Souhegan Rivers from oil or contaminants originating from the Souhegan, containing oil spills close to the source.
RECOMMENDED TACTICS
- 300’ diversion boom and shoreline collection just directly upstream of the confluence of the Merrimack and the Souhegan.

SITE: Manchester/Amoskeag Dam (MR-09)- Amoskeag Fishways and Stark Landing Boat Ramp

SURVEY TEAM

Hall, Popovich, DeCola, Brown, Bourgouin, Domke, Stone, McClaine, Hearn, Carew, Quinn, Healey,

SPILL RISKS

Vehicle incidents on West Salmon Street, Bridge Street, and Granite Street and spills from upstream sources. Incidents on rail line abutting the river.

DISCUSSION

The following sites were visited for this GRP: Amoskeag Dam and Fishways, Stark Landing Boat Ramp.

The AmoskeagDam/Fishways has an access point on the west side of the Merrimack above the dam at the end of the parking lot for the Fishways Learning Center. The team identified the following characteristics of the site and potential clean-up capacity on the river:

- Booming and recovery operations can take place above the dam from the river access point just below the Amoskeag St. Bridge but will be dependent on river flow rate. There are significant safety concerns with conducting response operations this close to the dam in a high current environment.
- Due to the close proximity to the dam, first responders should utilize a rescue boat during all on-water operations.
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The Stark Landing Boat Ramp is located behind Northeast Delta Dental Stadium at the end of Commercial Street and gives access to the east side of the river. The team identified the following characteristics of the site and potential clean-up capacity on the river:

- In addition to the fall from the dam, there are rocks and rapids between this location and the Amoskeag Dam upstream, so any oil that goes over the dam will likely emulsify and mix in the water column. However, tactics for diversion and shoreside recovery will be developed at this site as it offers good access and should support oil recovery operations depending on river flow rate.
- There are two more bridges downstream where the river is calmer, but there are rapids further down after those two bridges with no more access points before the rapids further downstream of Stark Landing.
- There is a culvert and Combined Sewer Overflow (CSO) just to the south of the shoreline access point

STRATEGIC OBJECTIVE

The primary objective is to stop oil from migrating downstream beyond the Amoskeag Dam, protect the fishways and collect oil that has migrated beyond the dam.

RECOMMENDED TACTICS

Fishways:
- Notify Eversource of an oil spill in the event they would like to shut down fishways/fish ladder or take other appropriate measures.
- 750’ Diversion booming with shoreline collection at kayak input.
  o Elevation of bank would require supplemental pumps for vac truck operations.
  o Response operations would be very dangerous in the vicinity of the dam, a rescue boat would be needed for this operation.
Stark Landing boat ramp:
- 750’ of diversion booming with shoreline collection at Stark Landing.

SITE: South Hookset (MR-10)- 90 Martins Ferry/Depot Rd.

SURVEY TEAM
Hall, Popovich, DeCola, Brown, Bourgouin, Domke, Stone, McClaine, Hearn, Carew,
SPILL RISKS
Rail line incidents and oil spills from up river.
DISCUSSION
The focus at this site is to protect a soon-to-be completed collector well being constructed as part of a Manchester WWTF under construction on the western shoreline in the vicinity of Kimball Dr. The team identified the following characteristics of the site and potential clean-up capacity on the river: - There are no boat access points between this location and the Suncook/Hookset Dam upstream (approx. 4.3 miles). - The intake will be approximately 50 feet below the river bed, so it should not be impacted from surface oil spills, but exclusion and deflection boom can be considered for deployment to minimize the likelihood of oil impacts at or near the collector wells and water treatment facility.
STRATEGIC OBJECTIVE
Contain spills as close to the source as possible. Protect the drinking water source from contamination.
RECOMMENDED TACTICS
Notifying WWTF staff so they can consider shutting down the intake when a spill occurs. Potential booming around the surface of the intake, once the intake location is determined.

SITE: Suncook/Hooksett Dam-(MR-11)- Memorial Field Boat Ramp and 101 Merrimack Street

SURVEY TEAM
Hall, Popovich, DeCola, Brown, Bourgouin, Stone, McClaine, Hearn, Carew, Domke
SPILL RISKS
Oil Spill incidents upstream from Suncook and Merrimack, incidents at Allenstown Sewer Commission, and vehicular incidents on surrounding streets.
DISCUSSION
The following sites were visited for this GRP: Memorial Field boat ramp in Suncook, Hookset Dam, boat ramp at Amoskeag Rowing Club. Memorial Field Boat ramp gives access to the Merrimack from the east side of the river and upstream of the Hookset Dam. The boat ramp is located behind the baseball fields at the confluence of the Suncook River and the Merrimack. The team identified the following characteristics of the site and potential clean-up capacity on the river: - Gate at the end of the road is locked, but the town of Hooksett can provide access at the park/fields. - Very calm water with small boat ramps. - The entire area surrounding the confluence of the Suncook and Merrimack Rivers is historically sensitive. NH Division of Historical Resources should be contacted prior to commencement of oil spill response operations. Originally, the team looked at the turn-out just above the dam and near the district courthouse facility, but this location was not feasible for boom deployment or shoreside recover due to bank elevation and lack of access. It was noted that a kayak launch across the river could be used to support response operations. The survey team then proceeded to the boat ramp at Amoskeag Rowing Club is located behind 101 Merrimack Street in Hooksett and provides access to the east bank of the river. The team identified the following characteristics of the site and potential clean-up capacity on the river: - This location provides a large staging area for oil spill operations immediately adjacent to the river. - The river is wider and calmer here. - The river depth, at normal levels is about 10 feet in the middle of the river.
STRATEGIC OBJECTIVE
It is a priority to protect the historically sensitive areas surrounding Memorial Field and the Suncook/Merrimack confluence. This site provides a great opportunity to collect oil upstream of the dam to stop oil from going over the dam and emulsifying.

RECOMMENDED TACTICS
Memorial Field: - 900’ of diversion boom on Androscoggin with shoreline recovery at end of memorial field. - 350’ of diversion boom at confluence with shoreline recovery at boat ramp. 101 Merrimack Street: - 1,500’ of Diversion booming with shoreline recovery at rowing club