

REDACTED SUBMITTAL - PUBLIC COPY

Tactical

GPS (NAD 83) Decimal/Degree:	Latitude: Longitude:	Upstream Control Point:	Upstream Valve Site /s:
Distance to POE:	Upstream:	Downstream Control Point:	Downstream Valve Site /s:
Objective: Control Point	CONTROL POINT ON CASS LAKE (PIKE BAY)		

Watercourse Information

Name: **Cass Lake - Pike Bay**

Watercourse Depth: 120' Watercourse Width: 7 miles

Watercourse Description:

The Control Point is located at the end of 2nd St. SE (2 lane improved gravel road) at the boat ramp on the north shore of Pike Bay. Once approval is granted to use the boat launch, the site will provide optimal conditions for instant access and remediation. The property affords nearly 500' of shoreline that can be used to promote containment and recovery options. Upstream of the control point is a canal that connects Pike Bay to Cass Lake, this is where the pipeline ROW is located. Downstream of the control point the lake bottle necks into a tributary which feeds several surrounding lakes. The lake provides enough depth for full size work boats.

For current flow velocity, view the USGS website. (<https://waterdata.usgs.gov/il/nwis/current/?type=flow>). Cass Lake has wind driven surface flow that will vary day to day. Although it is unlikely that contaminants would reach the Knutson Dam, it is important for responders to be prepared.

Resources at Risk / Environmental Sensitive Areas

Pending a release event size and unforeseen characteristics, the resources at risk can be any, all or none of the following; the immediate area around release location, the community, Cass Lake, Pike Bay and the Mississippi River. Other operators, Cass County and surrounding counties, fish, wildlife and waterfowl. Contact Enbridge Environment Department for further details. Wetland/waterbody impacts likely. Water wells within area. High archaeological/historical potential. Protected species potentially present. Federal, tribal, state and local approval likely required. Contact Environment Department for clearance before proceeding.

Safety Concerns

Utilize flaggers to direct traffic around work site entrance. Security is needed to keep out all nonessential personnel and direct supplies to their prospective areas. Depending on levels of soil saturation, matting may be required for ease of access. The site also has overhead powerlines, that will need to be marked off with posts and flagging in accordance with Enbridge's HASP. Consider implementing a roadblock and redirecting traffic around the work area. Makes sure a line locate is performed prior to the disturbance of any sediment.

Product pending, screen for LEL, O2, Benzene and Toluene and wear proper PPE. Ensure a small decontamination area is created to prevent cross contamination.

Logistical Information

Site Access Requirements: Dry Conditions: Truck, UTVs
Wet Conditions: 100m of matting

Staging Area Location: There is ample room for staging in the main parking lot in the park and near the shoreline. The parking lot and beach can accommodate a staging area up to 100' x 100'. This staging area can house needed supplies, offices, port-a-johns, and serve as the operation dispatch center for spill response resources.

Work Area Location/Comments: The shoreline adjacent to the control point will be utilized as the work area. A work area of 15ft x 15ft can be constructed adjacent to the collection point and be utilized for the extraction and recovery process to ensure minimal impact to the environment, and to create sustainable infrastructure, for heavier and more abundant traffic.

Boat Launch Access: There is a boat launch at the Forrest E. Villier Memorial Park, which can be utilized as a logistical midpoint between the upstream and downstream control points. The boat launch is comprised of poured concrete and is approximately 20' wide. It may require repairs prior to or following the termination of use.

Site Comments/Restrictions: This is a city owned park, and will therefore require all the necessary permitting, and approval. The site is the closest southern access to pipeline ROW, and will be essential to terminating the leak and containing the point of entry. Additionally, a traffic plan for traffic flow through the staging area should be established with security personnel (check in/check out), vehicles, and inventoried equipment.

Implementation

Seasonal Considerations

Implementation tactics would change with wind speeds exceeding 3 mph and in extreme weather conditions.

Closest Equipment Cache to CP	Business / Landowner Contact Information
	City of Cass Lake Community Park PO BOX 877 Cass Lake, MN 56633
	Contact the Superior Region land agent for additional information.

Strategy Site Visited: 17-Nov-2016 Strategy Updated: 17-Nov-2016



Recommended Equipment

Quantity	Description
3	Work Boats
300'	6" x 6" Hard Containment Boom
5	Hand Line Bridles
600'	1/2" Rope
1	Skimmer/Port-A-Vac
3	Danforth Anchors
5	Wing Anchors
15	T-Posts
1plt	Debris Bags
3/3/3	Rakes, Shovels, Sheers

Recommended Personnel

Number	Description
1	Supervisor
1	Safety Inspector
4	Shoreline Crew
3	Boat Operator & Deckhand
1	Vacuum Truck Operator
2	Site Security
2	Flaggers/Rail Crossing Guard

Equipment Notes

Equipment requirements will vary depending on the sites weather conditions, the tactics provided will be most widely usable with different environmental factors. Cass Lake has a sub-surface flow that moves north west toward Lake Winnibigoshish, however the biggest factor in product movement will be the direction of the wind, and should be addressed prior to the installation of the containment configuration.

Directions

[Redacted Content]

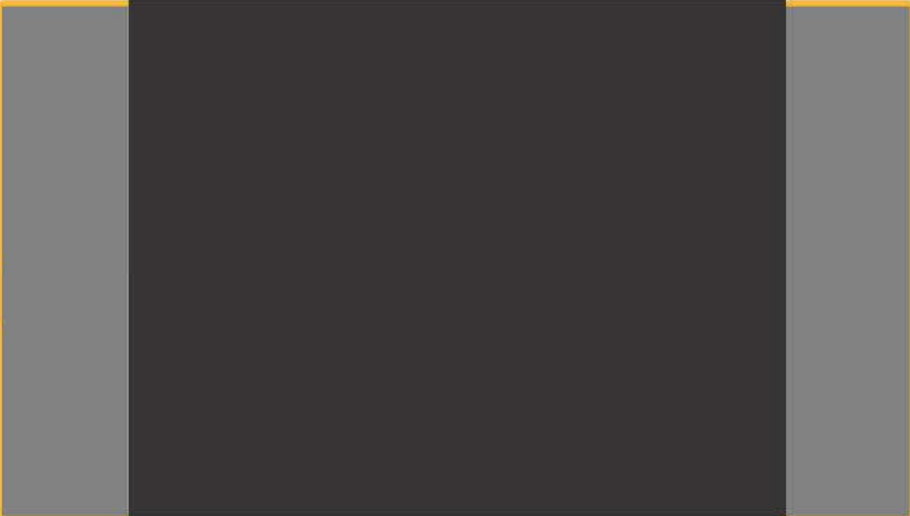
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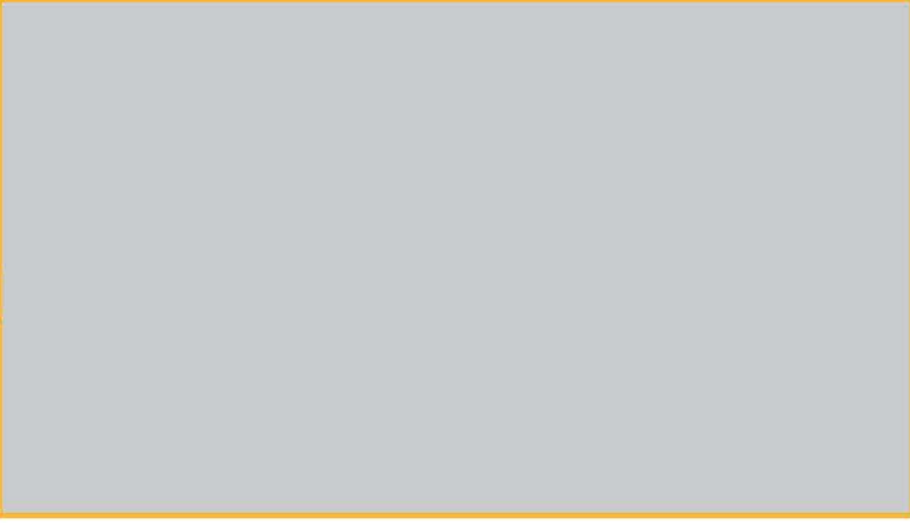
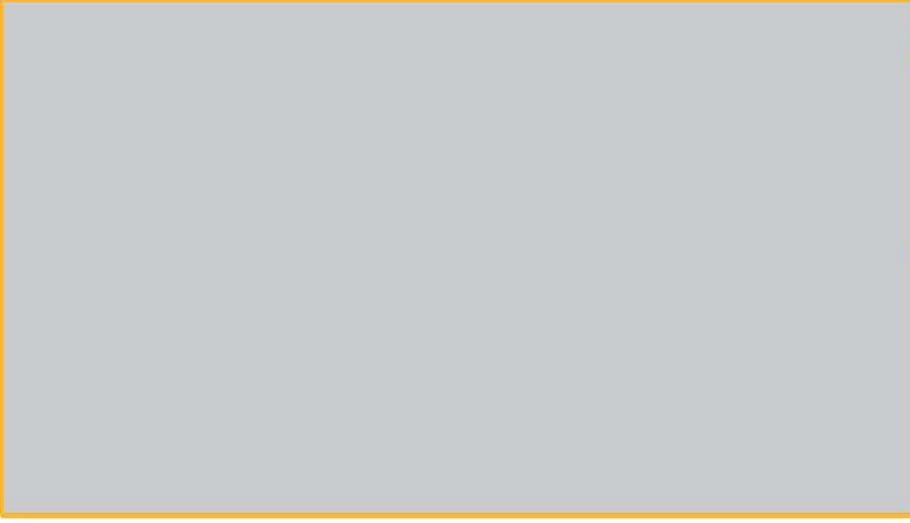
AREA PHOTO 1
Cass Lake (Pike Bay) CP956-0.5W Forrest E. Villier Memorial Park Sign, facing south east.

AREA PHOTO 2
Cass Lake (Pike Bay) CP956-0.5W Southwest shoreline access at the Memorial Park. Note the boat launch, is located at the western corner of the park.



AREA PHOTO 3
Cass Lake (Pike Bay) CP956-0.5W Aerial view of the entire control point location. It is important to note that the POE is located north of the railroad crossing. Depending on seasonal flow directions, this control point may not be affected.

AREA PHOTO 4
Cass Lake (Pike Bay) CP956-0.5W East viewpoint of Pike Bay, depending on wind conditions recovery efforts may change drastically. Plenty of room for a staging area inside the park.



Additional Comments
Immediately Contact: Edmonton Control Center Liquids US. – (888) 838-4545
NRC 800-424-8802 within 1 hour of spill
Notify Regional Enbridge On Call Manager

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