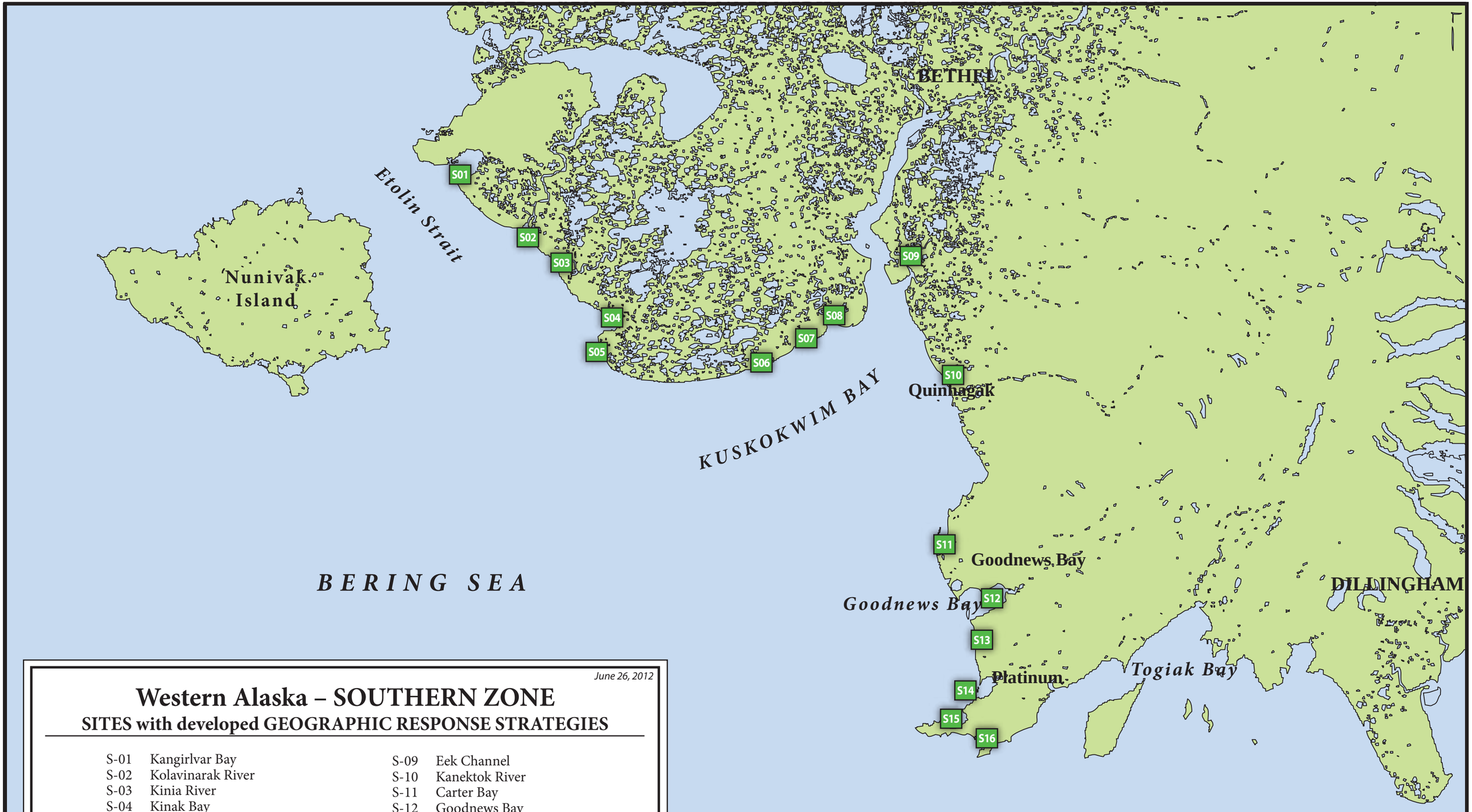


June 26, 2012

Western Alaska – SOUTHERN ZONE

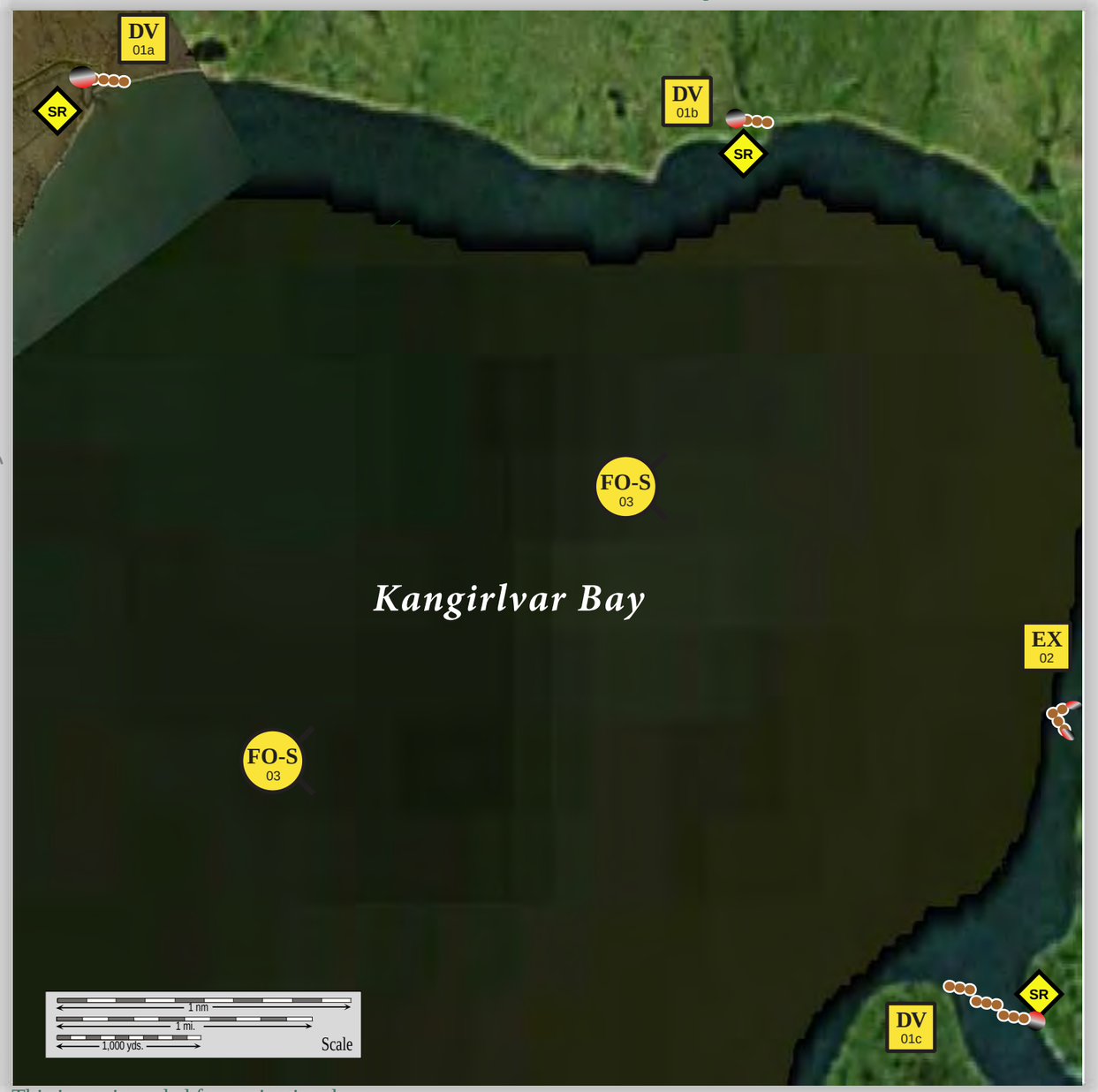
SITES with developed GEOGRAPHIC RESPONSE STRATEGIES

S-01	Kangirlvar Bay	S-09	Eek Channel
S-02	Kolavinarak River	S-10	Kanektok River
S-03	Kinia River	S-11	Carter Bay
S-04	Kinak Bay	S-12	Goodnews Bay
S-05	Kikegtek & Pingrbek Islands	S-13	Salmon River
S-06	Kwigillingok River	S-14	Chaguan Bay
S-07	Kongiganak River	S-15	Security Cove
S-08	Ishkowik River	S-16	Nanuak Bay

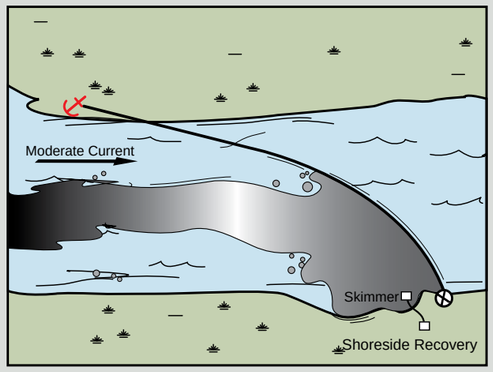
Geographic Response Strategies for Western Alaska Subarea, Southern Zone

Kangirlvar Bay, WAK-S01

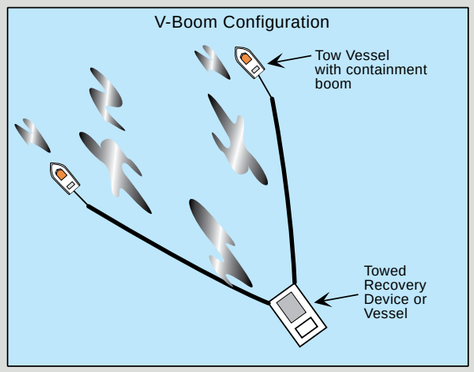
Center of map at 60˚ 28.55' N Lat., 165˚ 08.23' W Lon.



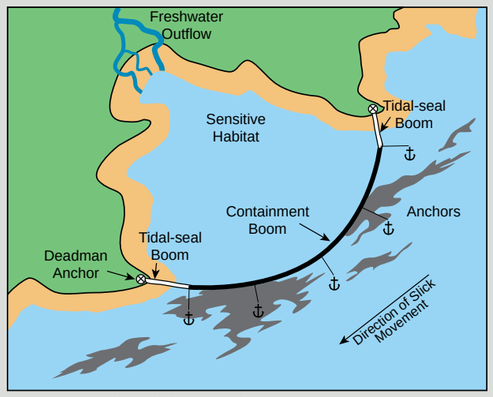
This is not intended for navigational use.



An example of the ***Diversion Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Exclusion Booming Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

FO-S	Free-oil Recovery	SR	Shoreside Recovery
DV	Diversion Booming		Fast-water Boom
EX	Exclusion Booming		Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-01-01 **DV**	**Kangirlvar Bay** **Toksook Bay** a. Lat. 60º31.91'N Lon. 165º06.25'W **Alackuchak Creek** b. Lat. 60º 32.62'N Lon. 165º03.82'W **Toksook River** c. Lat. 60º 30.21'N Lon. 164º58.26'W	**Divert and Collect** Divert oil to shore side collection location on the shore of the identified creeks and rivers in Kangirlvar Bay	Deploy anchors and boom with skiffs (class 6). Place fast-water boom at the proper angle to divert incoming oil to the collection sites. For (c) cascade 3 sections of boom to deflect the oil to the collection site. Complete the arrays with 60-foot sections of tidal seal boom. Set up shore-side recovery and tend throughout the tide. Boom Lengths: a. 300 ft b. 300 ft. c. 900 ft.	**Deployment** **Equipment** 1500 ft. fast-water boom 180 ft. tidal seal boom 10 ea. anchor systems 12 ea. anchor stakes 3 ea. shore-side recovery systems **Vessels** 3 ea. class 6 **Personnel/Shift** 6 ea. vessel crew/general techs 4 ea. response techs **Tending** **Vessels** 2 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs 3 ea. skilled tech	Toksook Bay	Via marine waters Chart 16006	Fish- intertidal spawning-salmon, herring (June-Sept.), arctic char, sheefish,white fish, Birds-waterfowl, seabird and shorebird concentration Marine mammals- seals Habitat- exposed tidal flats, peat shoreline, marsh Human use-subsistence	Vessel master should have local knowledge. Use appropriate measures as outlined in the STAR manual to protect the shoreline. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-01-02 **EX**	**Kangirlvar Bay** Lat. 60º 31.40'N Lon. 164º57.67'W	**Exclusion** Exclude oil from impacting the identified stream and in Kangirlvar Bay.	Deploy anchors and boom with skiffs (class 6) at high tide. Place fast-water boom in a chevron pattern across the mouths of the identified stream. Complete the array with 60 ft. of tidal seal boom on each leg. Tend throughout the tide.	**Deployment** **Equipment** 200 ft. fast-water boom 120 ft. tidal seal boom 19 ea. anchor systems 16 ea. anchor stakes **Vessels/Personnel/Shift** Same as S-01-01 **Tending** **Vessels/Personnel/Shift** Same as S-01-01	Toksook Bay	Via marine waters Chart 16006	Same as S-01-01	Vessel master should have local knowledge.
S-01-03 **FO-S**	**Kangirlvar Bay** Nearshore waters in the general area of: Lat. 60° 28.55'N Lon. 165°08.23'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kangirlvar Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kangirlvar Bay. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Toksook Bay	Via marine waters Chart 16006	Same as S-01-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

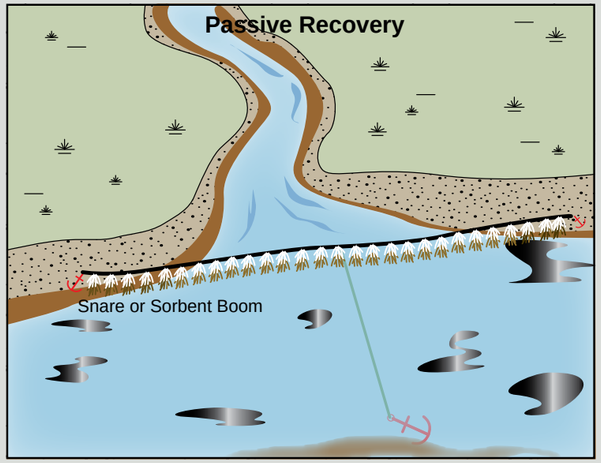
NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

Kolavinarak River, WAK-S02

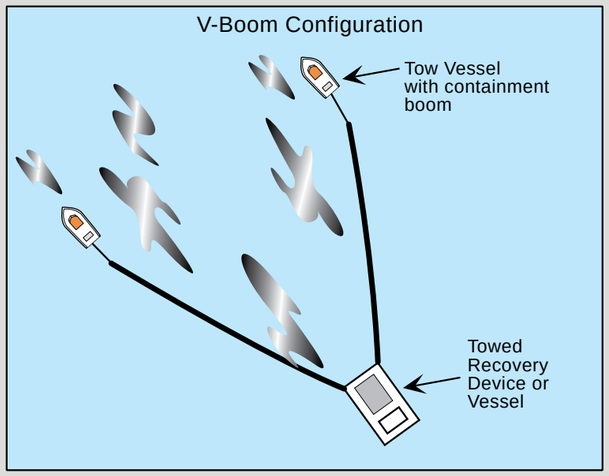
Center of map at 60˚ 15.44' N Lat., 164˚ 42.98' W Lon.

This is not intended for navigational use.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- PR — Passive Recovery
- Snare or Sorbent Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.

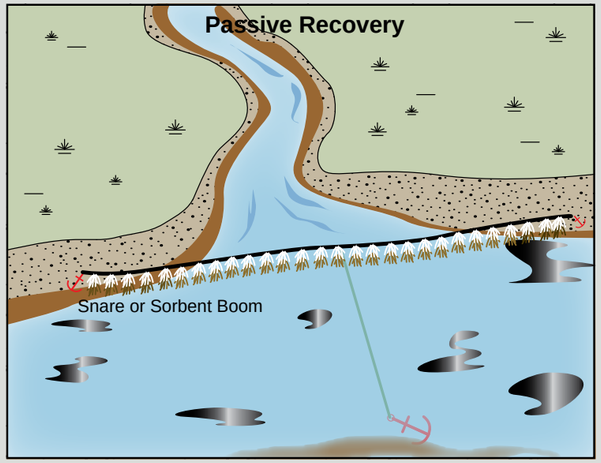
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-02-01 **PR**	**Kolavinarak River** a. Lat. 60º 18.75'N Lon. 164º40.04'W b. Lat. 60º 17.79'N Lon. 164º38.45'W c. Lat. 60º 16.36'N Lon. 164º36.95'W	**Passive Recovery** Survey and identify the drainages from the tundra prior to deployment. Place passive recovery across the channels of the river and drainages in the area near Kolavinarak River. a. 1800 ft b. 1200 ft c. 600 ft	Place and anchor snare line or sorbent boom across the channels of streams in Kolavinarak River. Replace as necessary to maximize the recovery.	**Deployment** **Equipment** 3600 ft. snare line or sorbent boom 18 ea. small anchor systems 12 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels** 1 ea. class 3 2 ea. class 6 **Personnel/Shift** 7 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 3 ea. vessel crew/general techs	Toksook Bay	Via marine waters Chart 16006	Fish- intertidal spawning-salmon, herring (June-Sept.), arctic char, white fish Birds-waterfowl, seabird and shorebird concentration Marine mammals- seals Habitat- exposed tidal flats, peat shoreline, marsh Human use-subsistence	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations.
S-02-02 **FO-S**	**Kolavinarak River** Nearshore waters in the general area of: Lat. 60° 15.44'N Lon. 164°42.98'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kolavinarak River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kolavinarak River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Toksook Bay	Via marine waters Chart 16006	Same as S-02-02	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

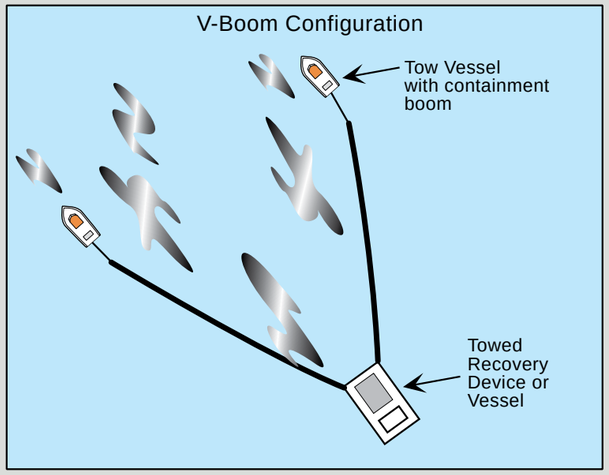
Kinia River, WAK-S03

Center of map at 60˚ 10.76' N Lat., 164˚ 30.01' W Lon.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

This is not intended for navigational use.

Map Legend

- FO-S — Free-oil Recovery
- PR — Passive Recovery
- Snare or Sorbent Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

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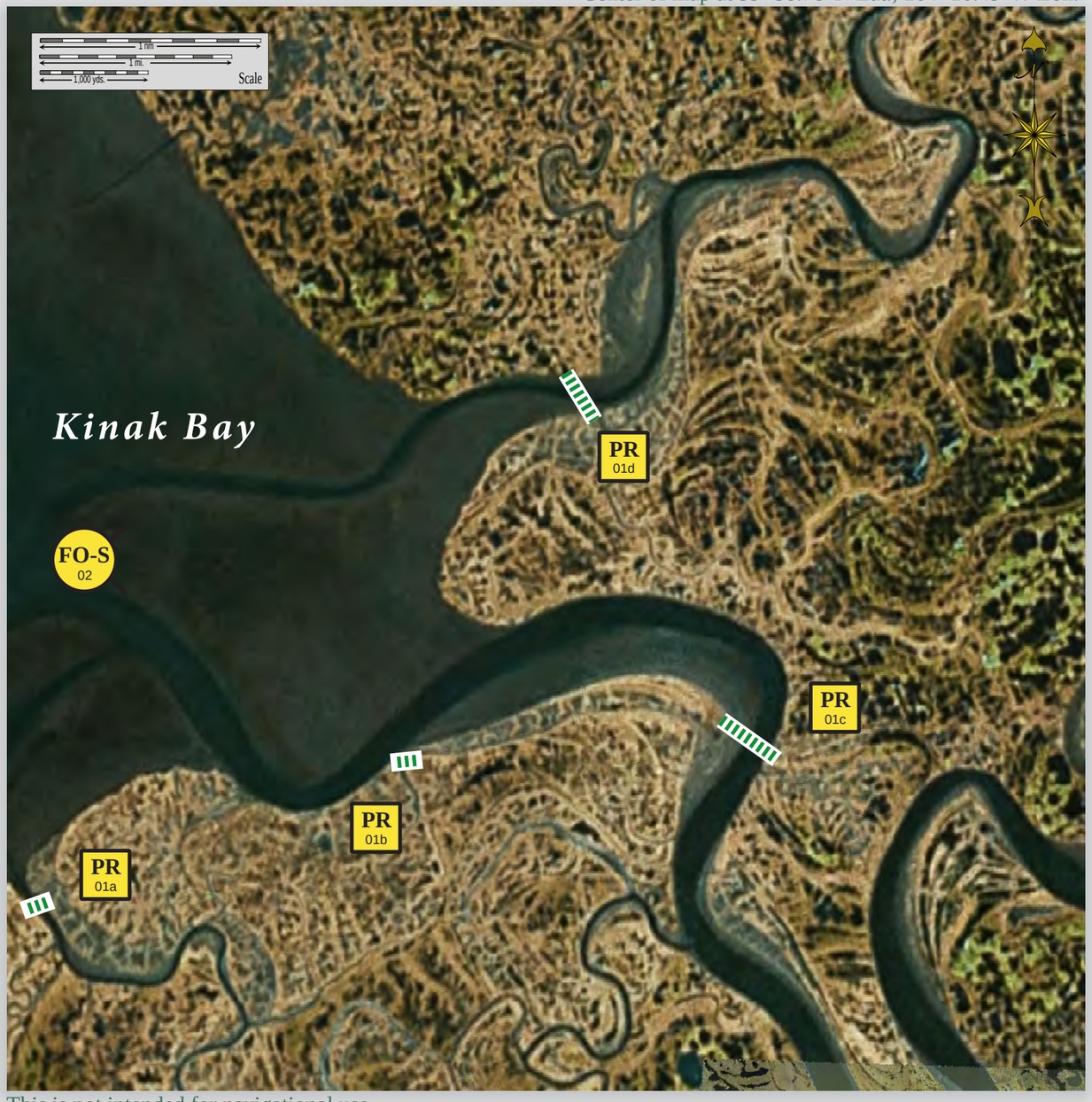
NUKA Research & Planning Group, LLC.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-03-01 **PR**	**Kinia River** a. Lat. 60º 10.89'N Lon. 164º28.69'W b. Lat. 60º 10.85'N Lon. 164º28.09'W c. Lat. 60º 10.42'N Lon. 164º27.33'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified sloughs and other major cuts in the Kinia River.	Place and anchor snare line or sorbent boom across the main channel and the sloughs of the Kinia River. Replace as necessary to maximize the recovery. Boom Lengths: a. 200 ft. b. 200 ft. c. 1200 ft.	**Deployment** **Equipment** 1600 ft. snare line or sorbent boom 8 ea. small anchor systems 12 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels** 2 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs 2 ea. response techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs 1 ea. skilled tech	Chefornak	Via marine waters Chart 16606	Fish- intertidal spawning-herring(June) Birds-waterfowl, seabird and shorebird concentration Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence	Vessel master should have local knowledge. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations.
S-03-02 **FO-S**	**Kinia River** Nearshore waters in the general area of: Lat. 60° 10.76'N Lon. 164°30.01'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kinia River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kinia River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Chefornak	Via marine waters Chart 16606	Same as S-03-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

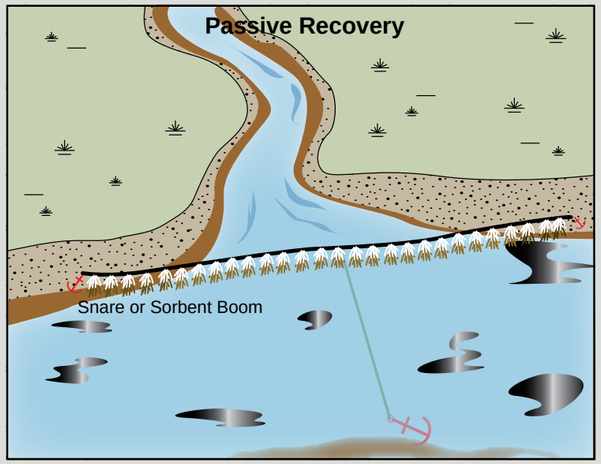
Kinak Bay, WAK-S04

Center of map at 59˚ 58.78' N Lat., 164˚ 10.49' W Lon.

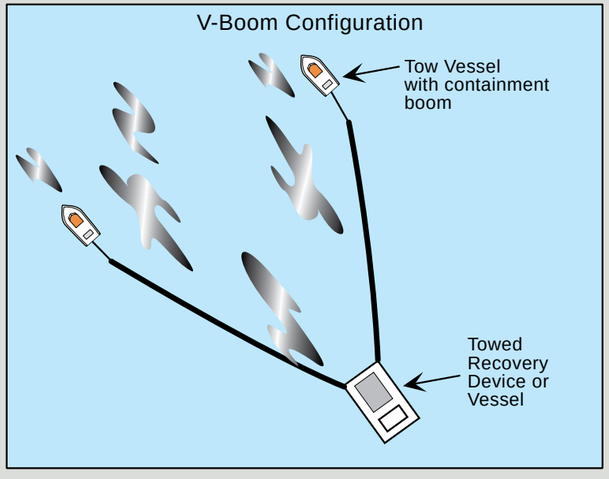


This is not intended for navigational use.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- PR — Passive Recovery
- Snare or Sorbent Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

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NUKA Research & Planning Group, LLC.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-04-01 PR	**Kinak Bay** a. Lat. 59º 57.40'N Lon. 164º11.52'W b. Lat. 59º 57.98'N Lon. 164º08.04'W **Kuguklik River** c. Lat. 59º 57.90'N Lon. 164º04.77'W **Kinak River** d. Lat. 59° 59.50'N Lon. 164°06.22'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across the main channel and across entrances to the identified sloughs and other major cuts in the Kinak Bay.	Place and anchor snare line or sorbent boom across the channels of streams/sloughs in Kinak Bay. Replace as necessary to maximize the recovery. Boom Lengths: a. 300 ft. b. 150 ft. c. 1300 ft. d. 1200 ft.	**Deployment** **Equipment** 2950 ft. snare line or sorbent boom 15 ea. small anchor systems 16 ea. anchor stakes (Adjust equipment to reflect survey findings) **1 ea. class 3** 2 ea. class 6 **Personnel/Shift** 7 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 3 ea. vessel crew/general techs	Kipnuk	Via marine waters Chart 16606	Fish- intertidal spawning-herring(June),white fish Birds-waterfowl, seabird and shorebird concentration Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations.
S-04-02 FO-S	**Kinak Bay** Nearshore waters in the general area of: Lat. 59° 58.78'N Lon. 164°10.49'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kinak Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kinak Bay. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kipnuk	Via marine waters Chart 16606	Same as S-04-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

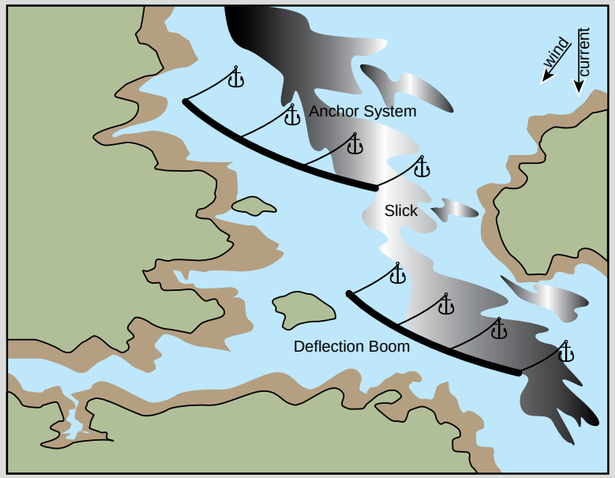
NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

Kikegtek & Pingurbek Islands, WAK-S05

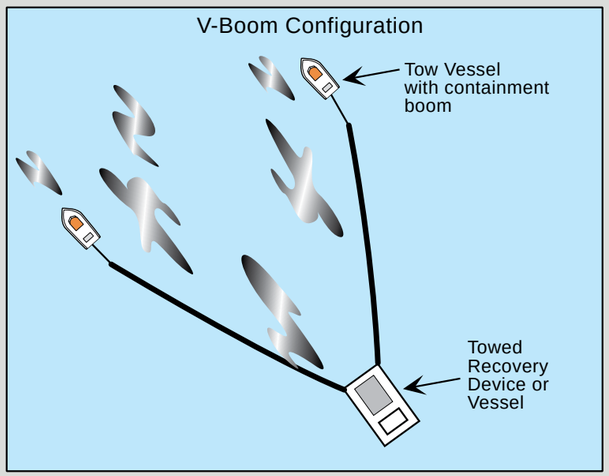
Center of map at 59˚ 51.47' N Lat., 164˚ 19.61' W Lon.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone

This is not intended for navigational use.



An example of the ***Deflection Live Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- DF-L — Deflection Live Booming
- Protected Water Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

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NUKA Research & Planning Group, LLC.

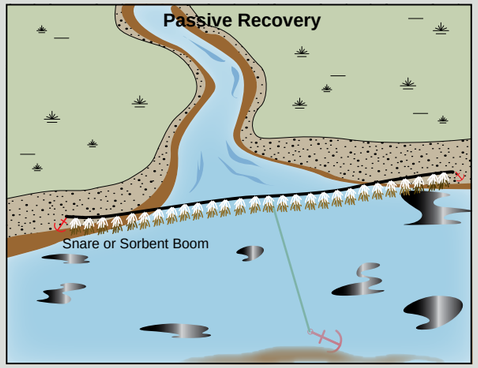
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-05-01 FO-S	**Kikegtek & Pingurbek Islands** Nearshore waters in the general area of: Lat. 59° 51.47'N Lon. 164°19.61'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kikegtek & Pingurbek Islands depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kikegtek & Pingurbek Islands. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kipnuk	Via marine waters Chart 16606	Same as S-05-02	Vessel master should have local knowledge. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Use extreme caution, shallow waters with shifting channels and bars.
S-05-02 DF-L	**Kikegtek & Pingurbek Islands** a. Lat. 59º 51.77'N Lon. 164º16.61'W b. Lat. 59º 54.45'N Lon. 164º21.24'W	**Deflection-Live** In coordination with the Free-oil Task Force, deflect oil that is going to impact the haul outs and rookery on Kikegtek & Pingurbek Islands away from the area and into the channel for free oil collection.	Deploy anchors and boom with skiffs (class 6). Use aerial surveillance to identify the incoming oil and it's direction. Using vessel, hold 3 arrays of 300 ft. protected-water boom in a cascaded pattern in the path of the incoming oil. Deflect incoming oil out for free oil collection.	**Deployment** **Equipment** 900 ft. protected-water boom **Vessels** 6 ea. class 6 **Personnel/Shift** 18 ea. vessel crew/general techs **Tending** **Vessels** 6 ea. class 6 **Personnel/Shift** 18 ea. vessel crew/general techs	Kipnuk	Via marine waters Chart 16606	Fish- intertidal spawning- Herring (June-July) Birds-waterfowl, seabird and shorebird nesting Habitat- exposed rocky shore Human use-subsistence	Vessel master should have local knowledge. Surveyed: not yet Tested: not yet

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

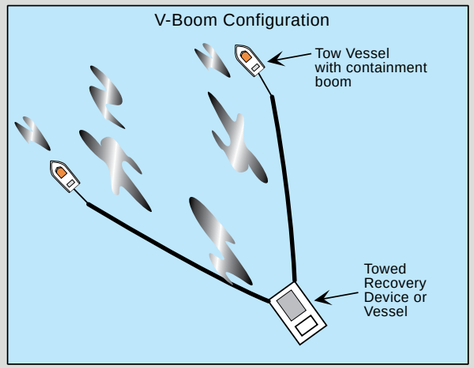
Kwigillingok River, WAK-S06

Center of map at 59˚ 50.74' N Lat., 163˚ 07.27' W Lon.

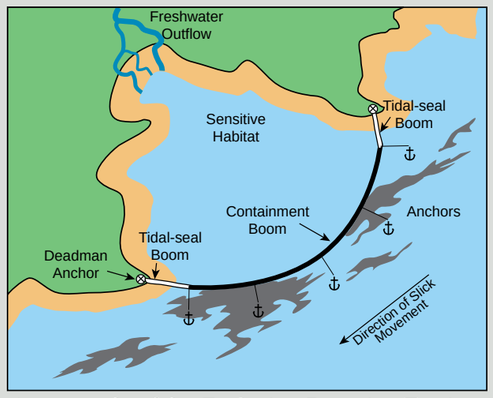
Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Exclusion Booming Tactic***. Actual deployment should be adjusted for local conditions.

This is not intended for navigational use.

Map Legend

- FO-S — Free-oil Recovery
- PR — Passive Recovery
- EX — Exclusion Booming
- Snare or Sorbent Boom
- Fast-water Boom
- Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

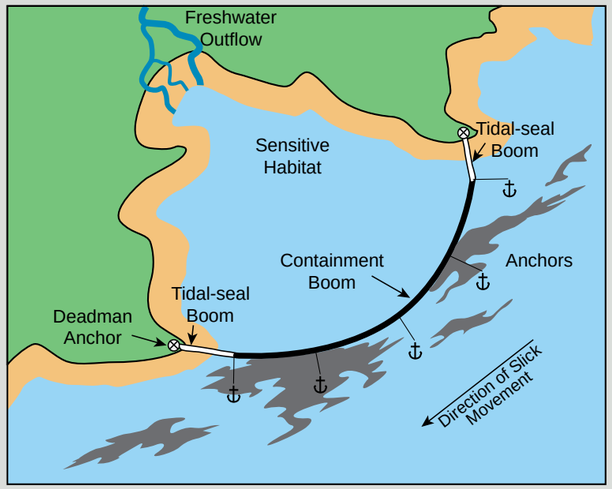
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-06-01 **EX**	**Kwigillingok River** Lat. 59º 51.29'N Lon. 163º07.70'W	**Exclusion** Exclude oil from impacting the stream and intertidal area in Kwigillingok River.	Deploy anchors and boom with skiffs (class 6) at high tide. Place fast-water boom in a chevron pattern across the mouth of the Kwigillingok River. Complete the array with 60 ft. of tidal seal boom on each leg. Tend throughout the tide.	**Deployment** **Equipment** 800 ft. fast-water boom 120 ft. tidal seal boom 5 ea. anchor systems 2 ea. anchor stakes systems **Vessels** 2 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs	Kwigillingok	Via marine waters Chart 16606	Fish- intertidal spawning-herring(June),white fish Birds-waterfowl, seabird and shorebird concentration Marine mammals-walrus Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-06-02 **PR**	**Kwigillingok River** Lat. 59º 51.24'N Lon. 163º08.08'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified slough next to the Kwigillingok River.	Place and anchor 200 ft. of snare line or sorbent boom across the channels of streams/sloughs next to the Kwigillingok River. Replace as necessary to maximize the recovery.	**Deployment** **Equipment** 200 ft. snare line or sorbent boom 1 ea. small anchor systems 4 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels/Personnel/Shift** Same as S-06-01 **Tending** **Vessels/Personnel/Shift** Same as S-06-01	Kwigillingok	Via marine waters Chart 16606	Same as S-06-01	Vessel master should have local knowledge.
S-06-03 **FO-S**	**Kwigillingok River** Nearshore waters in the general area of: Lat. 59° 50.74'N Lon. 163°07.27'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kwigillingok River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kwigillingok River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kwigillingok	Via marine waters Chart 16606	Same as S-06-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

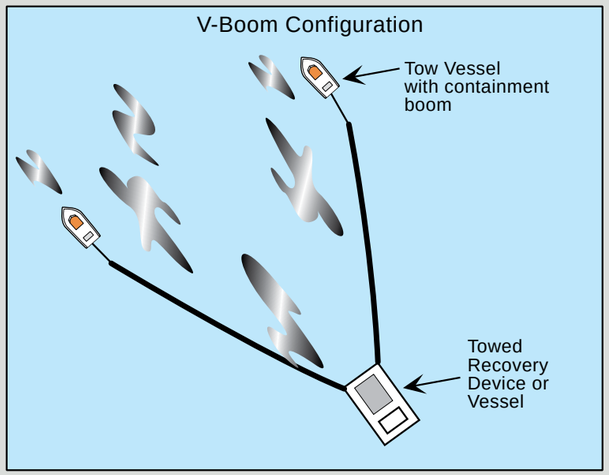
Kongiganak River, WAK-S07

Center of map at 59˚ 54.86' N Lat., 162˚ 54.68' W Lon.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Exclusion Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

This is not intended for navigational use.

Map Legend

- FO-S — Free-oil Recovery
- EX — Exclusion Booming
- Fast-water Boom
- Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-07-01 EX	**Kongiganak River** Lat. 59º 55.42'N Lon. 162º54.27'W	**Exclusion** Exclude oil from impacting the stream and intertidal area in Kongiganak River.	Deploy anchors and boom with skiffs (class 6) at high tide. Place fast-water boom in a chevron pattern across the mouth of the Kongiganak River. Complete the array with 60 ft. of tidal seal boom on each leg. Tend throughout the tide.	**Deployment** **Equipment** 400 ft. fast-water boom 120 ft. tidal seal boom 2 ea. anchor systems 4 ea. anchor stakes **Vessels** 2 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs	Kongiganak	Via marine waters Chart 16606	Fish- intertidal spawning-herring(June),white fish Birds-waterfowl, seabird and shorebird concentration Marine mammals-walrus Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-07-02 FO-S	**Kongiganak River** Nearshore waters in the general area of: Lat. 59° 54.86'N Lon. 164°54.68'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kongiganak River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kongiganak River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kongiganak	Via marine waters Chart 16606	Same as S-07-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

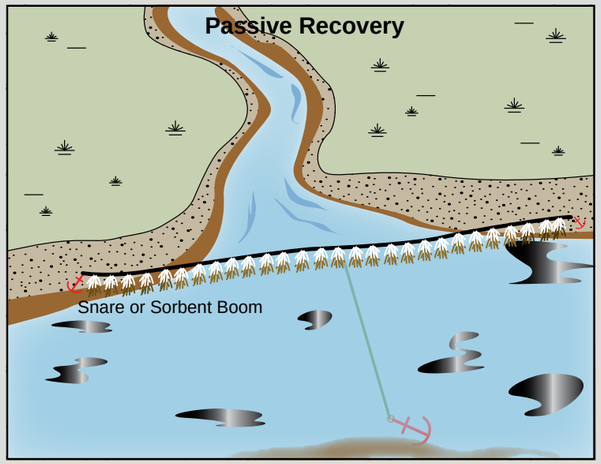
NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

Ishkowik River, WAK-S08

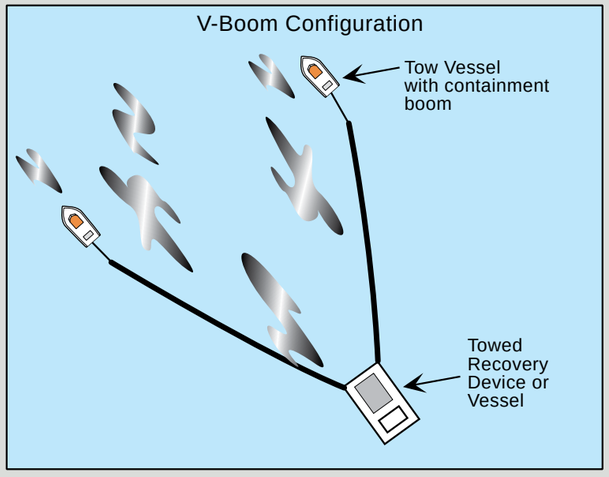
Center of map at 59˚ 57.89' N Lat., 162˚ 42.32' W Lon.

This is not intended for navigational use.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- PR — Passive Recovery
- Snare or Sorbent Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

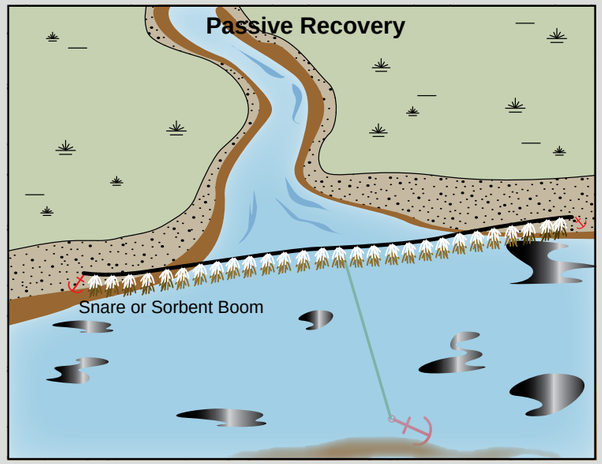
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-08-01 PR	**Ishkowik River** a. Lat. 59º 59.07'N Lon. 162º44.64'W b. Lat. 59º 59.41'N Lon. 162º45.50'W c. Lat. 60º 00.50'N Lon. 162º43.97'W d. Lat. 60º 00.81'N Lon. 162º45.15'W	**Passive Recovery** Survey and identify the drainages from the tundra prior to deployment. Place passive recovery across the channels of the streams and drainages in the area near Ishkowik River. a. 200 ft b. 200 ft c. 400 ft d. 200 ft	Place and anchor snare line or sorbent boom across the channels of streams in Ishkowik River. Replace as necessary to maximize the recovery.	**Deployment** **Equipment** 1000 ft. snare line or sorbent boom 4 ea. small anchor systems 16 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels** 2 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs	Kongiganak	Via marine waters Chart 16006	Fish- intertidal spawning- herring (June), white fish Birds-waterfowl, seabird and shorebird concentration Habitat- exposed tidal flats, peat shoreline, marsh, sheltered rocky shoreline Human use-subsistence	Vessel master should have local knowledge. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations.
S-08-02 FO-S	**Ishkowik River** Nearshore waters in the general area of: Lat. 59° 57.89'N Lon. 162°42.32'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Ishkowik River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Ishkowik River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Kongiganak	Via marine waters Chart 16006	Same as S-08-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

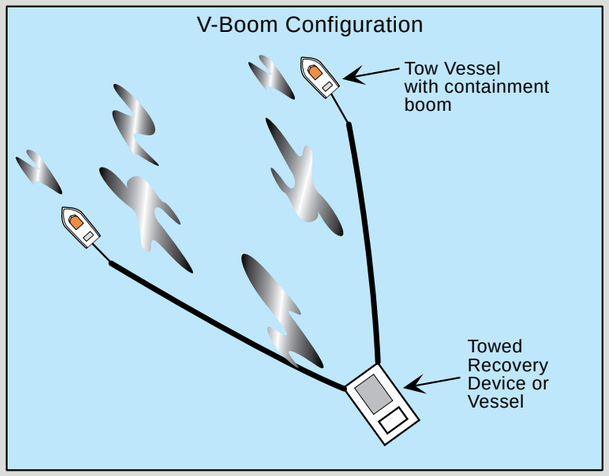
Geographic Response Strategies for Western Alaska Subarea, Southern Zone

Eek Channel, WAK-S09

Center of map at 60˚ 08.57' N Lat., 162˚ 11.86' W Lon.



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.

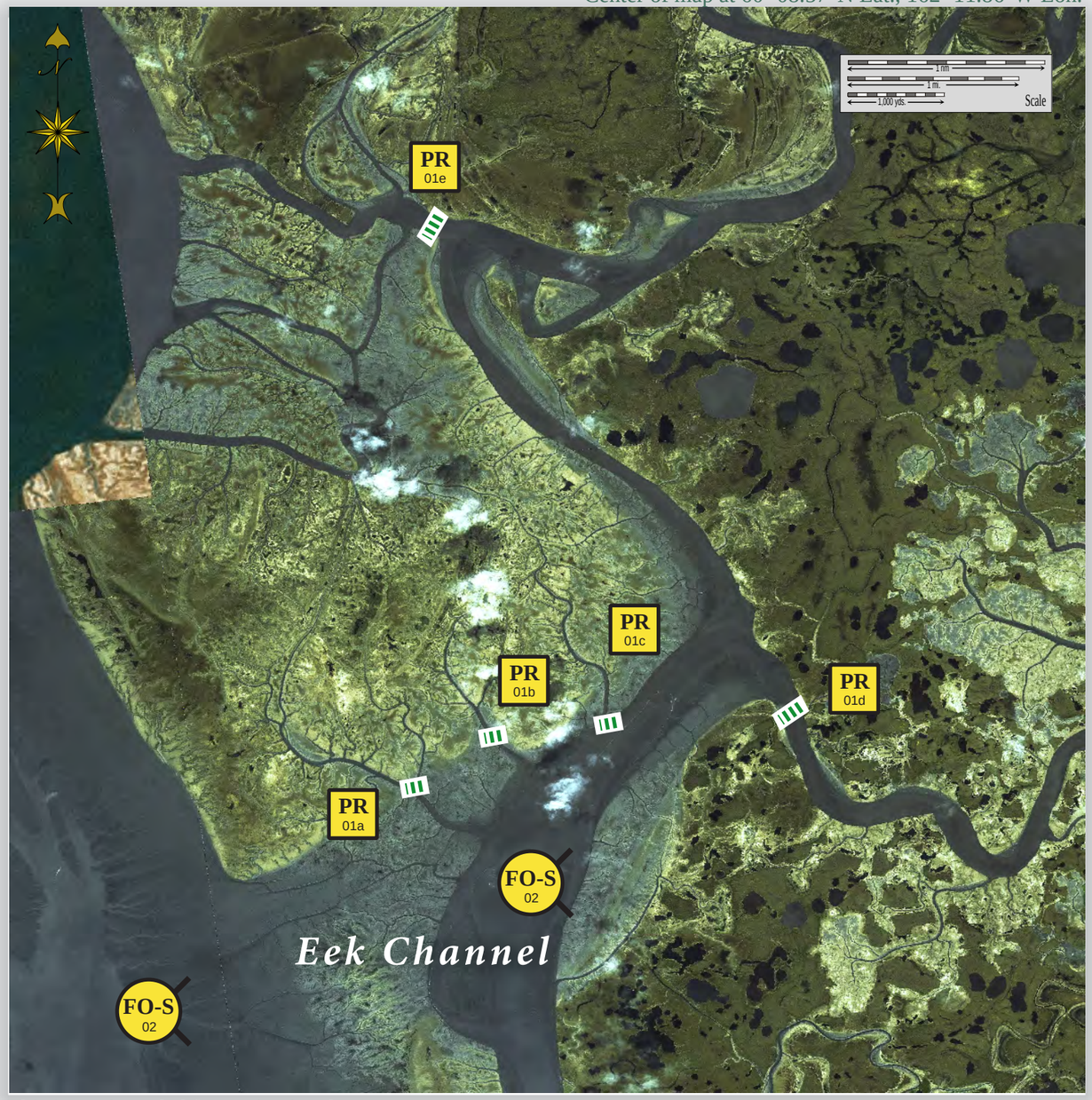


An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- PR — Passive Recovery
- Snare or Sorbent Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.



This is not intended for navigational use.

DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.

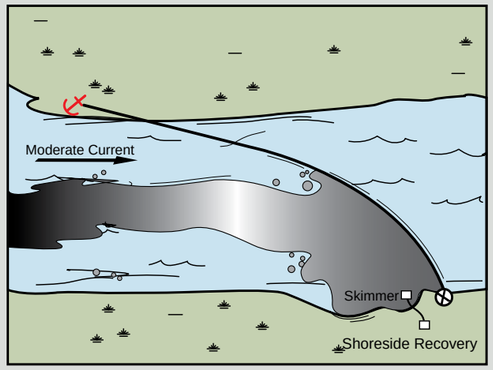
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-09-01 PR	**Eek Channel** a. Lat. 60º 07.40'N Lon. 162º16.23'W b. Lat. 60º 08.03'N Lon. 162º15.16'W c. Lat. 60º 08.33'N Lon. 162º13.34'W **Apokak Slough** d. Lat. 60º 08.19'N Lon. 162º10.55'W e. Lat. 60º 10.40'N Lon. 162º13.50'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified sloughs and other major cuts in the Eek Channel.	Place and anchor snare line or sorbent boom across the channels of streams/sloughs in Eek Channel. Replace as necessary to maximize the recovery. Boom Lengths: a. 350 ft b. 350 ft c. 300 ft d. 1500 ft. e. 1500 ft.	**Deployment** **Equipment** 4000 ft. snare line or sorbent boom 3 ea. small anchor systems 12 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels** 3 ea. class 6 **Personnel/Shift** 6 ea. vessel crew/general techs 4 ea. response techs **Tending** **Vessels** 3 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs 3 ea. skilled tech	Eek	Via marine waters Chart 16606	Fish- intertidal spawning-salmon(June-Sept.),sheefish, arctic char, white fish Birds-waterfowl, seabird and shorebird concentration Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence	Vessel master should have local knowledge. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations.
S-09-02 FO-S	**Eek Channel** Nearshore waters in the general area of: Lat. 60° 08.57'N Lon. 162°11.86'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Eek Channel depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Eek Channel. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Eek	Via marine waters Chart 16606	Same as S-09-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

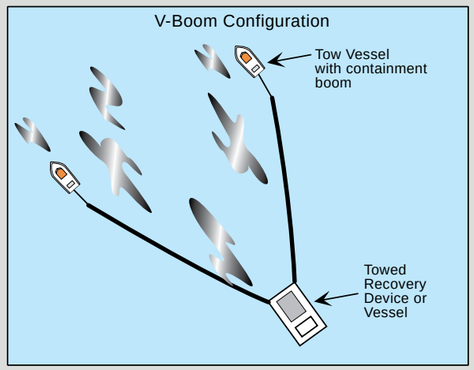
Kanektok River, WAK-S10

Center of map at 59˚ 44.90' N Lat., 161˚ 58.15' W Lon.

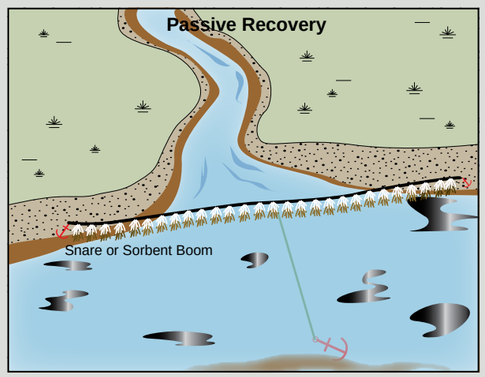
Geographic Response Strategies for Western Alaska Subarea, Southern Zone



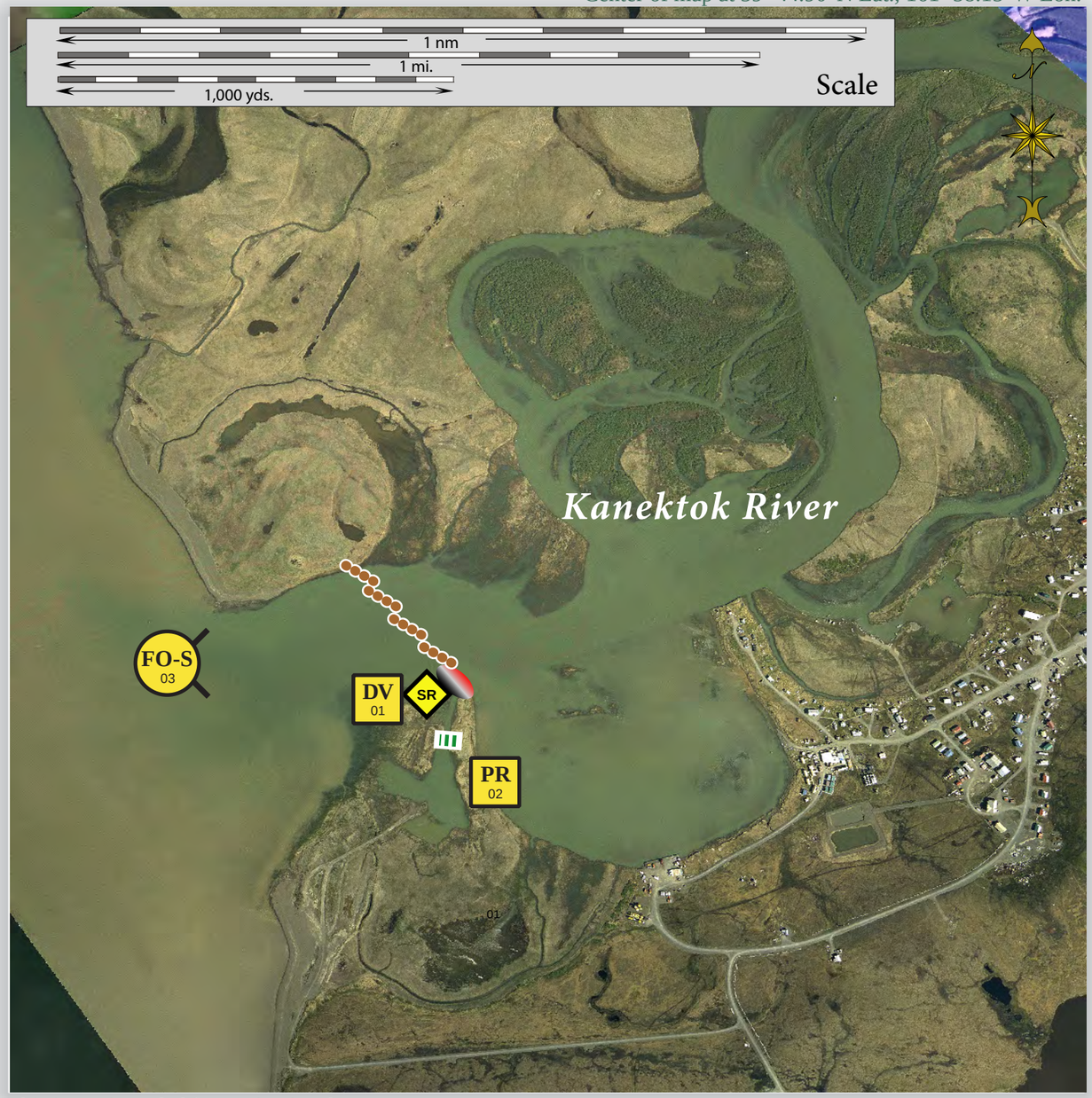
An example of the ***Diversion Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



This is not intended for navigational use.

Map Legend

- FO-S — Free-oil Recovery
- DV — Diversion Booming
- PR — Passive Recovery
- SR — Shoreside Recovery
- Fast-water Boom
- Snare or Sorbent Boom
- Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

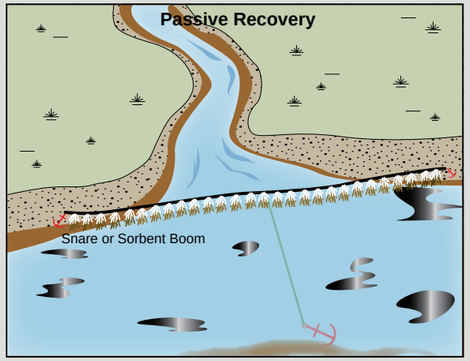
DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-10-01 **DV**	**Kanektok River** Lat. 59º 44.95'N Lon. 161º55.43'W	**Divert and Collect** Divert oil to shore side collection location on the shore of the Kanektok River.	Deploy anchors and boom with skiffs (class 6). Place 4 x 300 foot section of fast-water boom in a cascaded pattern at the proper angle to divert incoming oil to the collection sites. Complete the array with 60 ft. of tidal seal boom on the shore that will be used as a collection site. Set up shore-side recovery and tend throughout the tide.	**Deployment** **Equipment** 1200 ft. fast-water boom 60 ft. tidal seal boom 12 ea. anchor systems 4 ea. anchor stakes 1 ea. shore-side recovery systems **Vessels** 2 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs 2 ea. response techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs 1 ea. skilled tech	Quinhagak	Via marine waters Chart 16300	Fish- intertidal spawning-salmon(June-Sept.)herring,sheefish, arctic char, white fish Birds-waterfowl, seabird and shorebird concentration Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Use appropriate measures as outlined in the STAR manual to protect the shoreline. Surveyed: not yet Tested: not yet
S-10-02 **PR**	**Kanektok River** Lat. 59º 44.88'N Lon. 161º55.49'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified slough next to the Kanektok River.	Place and anchor snare line or sorbent boom across the channels of streams/sloughs in Kanektok River. Replace as necessary to maximize the recovery.	**Deployment** **Equipment** 100 ft. snare line or sorbent boom 1 ea. small anchor systems 4 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels/Personnel/Shift** Same as S-10-01 **Tending** **Vessels/Personnel/Shift** Same as S-10-01	Quinhagak	Via marine waters Chart 16300	Same as S-10-01	Vessel master should have local knowledge.
S-10-03 **FO-S**	**Kanektok River** Nearshore waters in the general area of: Lat. 59° 44.90'N Lon. 161°58.15'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Kanektok River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Kanektok River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Quinhagak	Via marine waters Chart 16300	Same as S-10-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

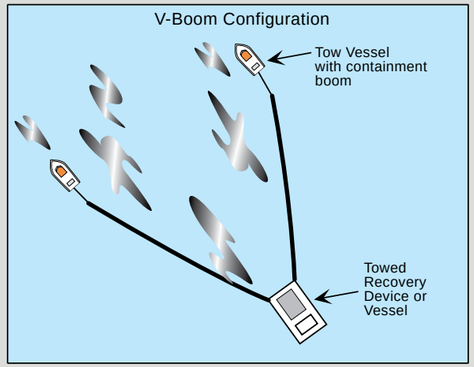
NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone

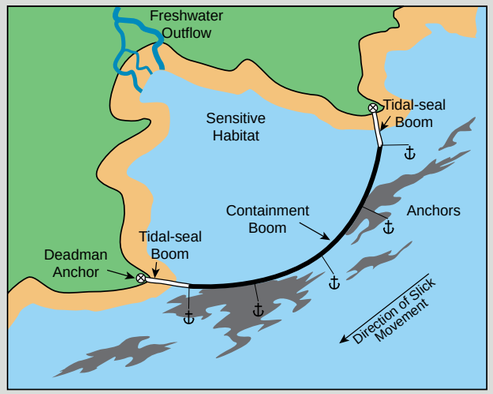
Carter Bay, WAK-S11



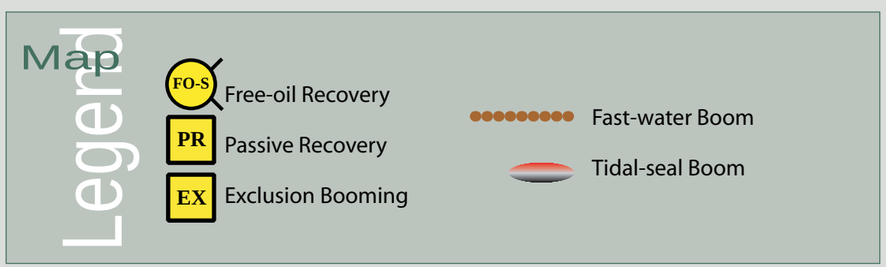
An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

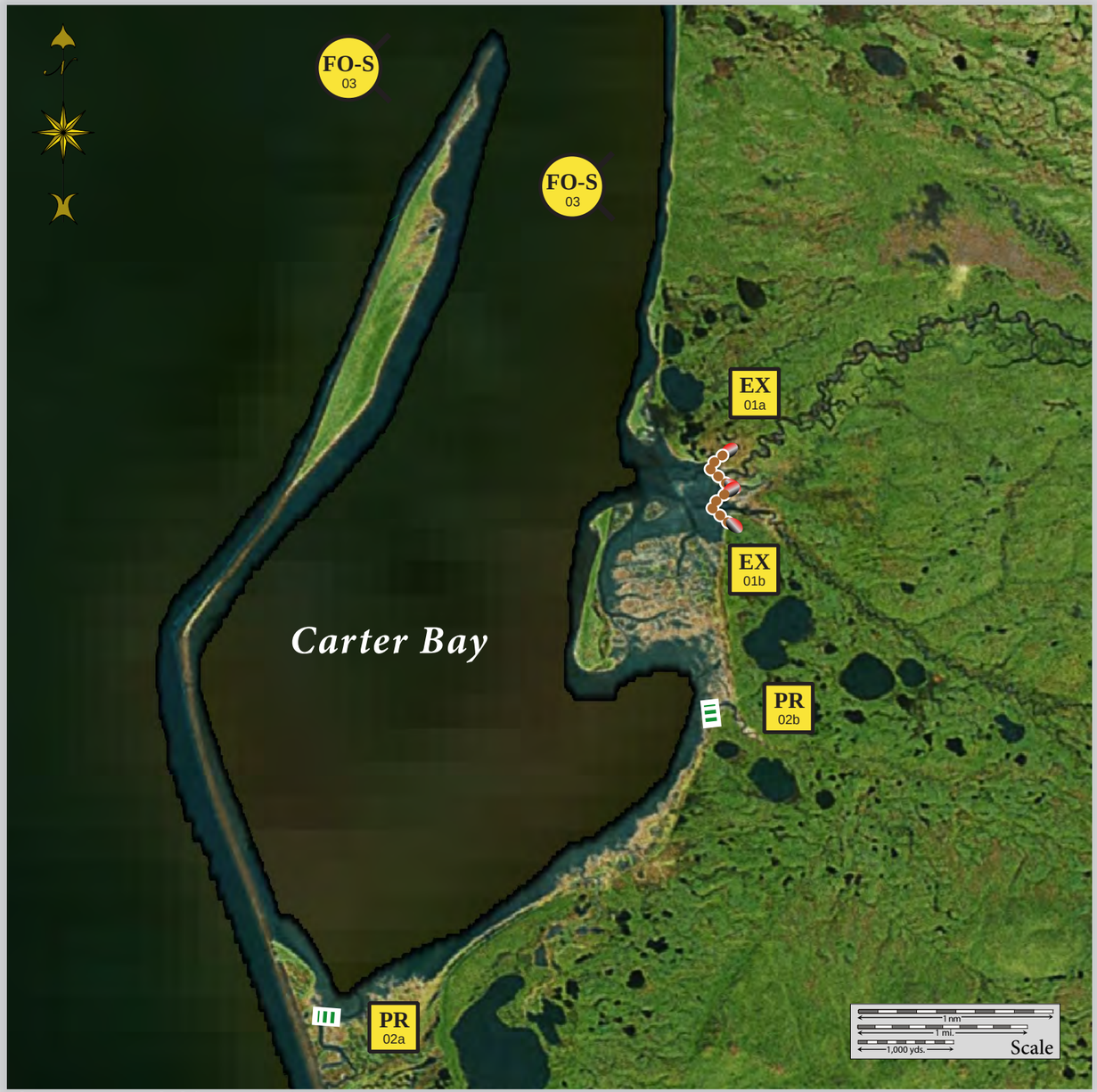


An example of the ***Exclusion Booming Tactic***. Actual deployment should be adjusted for local conditions.



Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

Center of map at 59˚ 18.39' N Lat., 161˚ 58.68' W Lon.



This is not intended for navigational use.

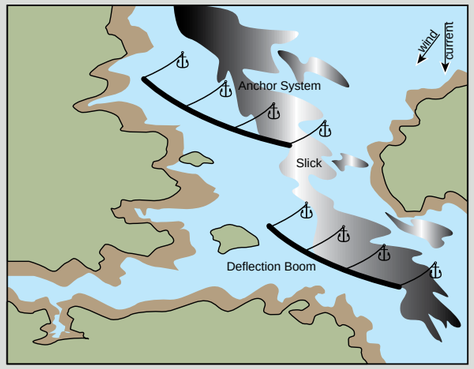
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-11-01 **EX**	**Carter Bay** a. Lat. 59º 17.39'N Lon. 161º56.64'W b. Lat. 59º 17.12'N Lon. 161º56.64'W	**Exclusion** Exclude oil from impacting the identified streams and intertidal area in Carter Bay.	Deploy anchors and boom with skiffs (class 6) at high tide. Place 500 ft. of fast-water boom in a chevron pattern in front of each entrance to the streams. Complete the arrays by placing 60 ft. of tidal seal boom on each leg. Tend throughout the tide.	**Deployment** **Equipment** 1000 ft. fast-water boom 240 ft. tidal seal boom 6 ea. anchor systems 8 ea. anchor stakes **Vessels** 1 ea. class 3 2 ea. class 6 **Personnel/Shift** 7 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 4 ea. vessel crew/general techs	Vessel Platform	Via marine waters Chart 16300	Fish- intertidal spawning-salmon, herring (June-Sept.) Birds-waterfowl, seabird and shorebird concentration Habitat- exposed tidal flats, peat shoreline, marsh, Human use-subsistence, commercial fishing	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-11-02 **PR**	**Carter Bay** a. Lat. 60º 10.89'N Lon. 164º28.69'W b. Lat. 59° 15.69'N Lon. 161°56.58'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified sloughs and other major cuts in the Carter Bay.	Place and anchor snare line or sorbent boom across the channels of streams/sloughs in Carter Bay. Replace as necessary to maximize the recovery. <u>Boom Lengths:</u> a. 500 ft b. 500 ft	**Deployment** **Equipment** 1000 ft. snare line or sorbent boom 4 ea. small anchor systems 8 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels/Personnel/Shift** Same as S-11-01 **Tending** **Vessels/Personnel/Shift** Same as S-11-01	Vessel Platform	Via marine waters Chart 16300	Same as S-11-01	Vessel master should have local knowledge.
S-11-03 **FO-S**	**Carter Bay** Nearshore waters in the general area of: Lat. 59° 18.39'N Lon. 161°58.68'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Carter Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Carter Bay. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Platinum	Via marine waters Chart 16300	Same as S-11-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

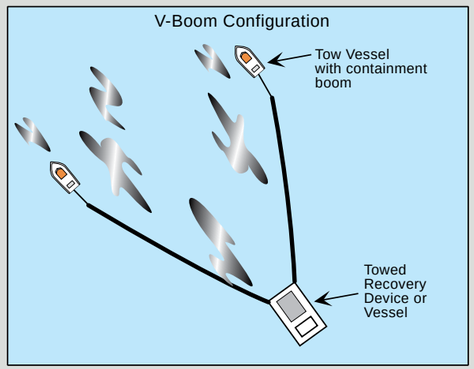
Geographic Response Strategies for Western Alaska Subarea, Southern Zone

Goodnews Bay, WAK-S12

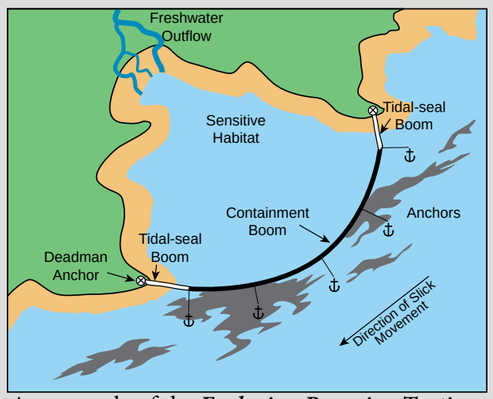
Center of map at 59˚ 04.04' N Lat., 161˚ 46.35' W Lon.



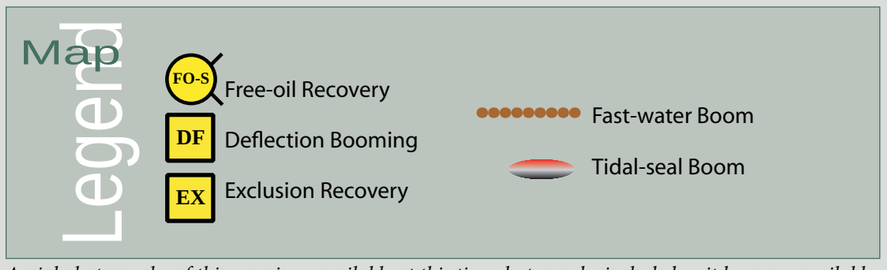
An example of the ***Deflection Booming Tactic***. Actual deployment should be adjusted for local conditions.



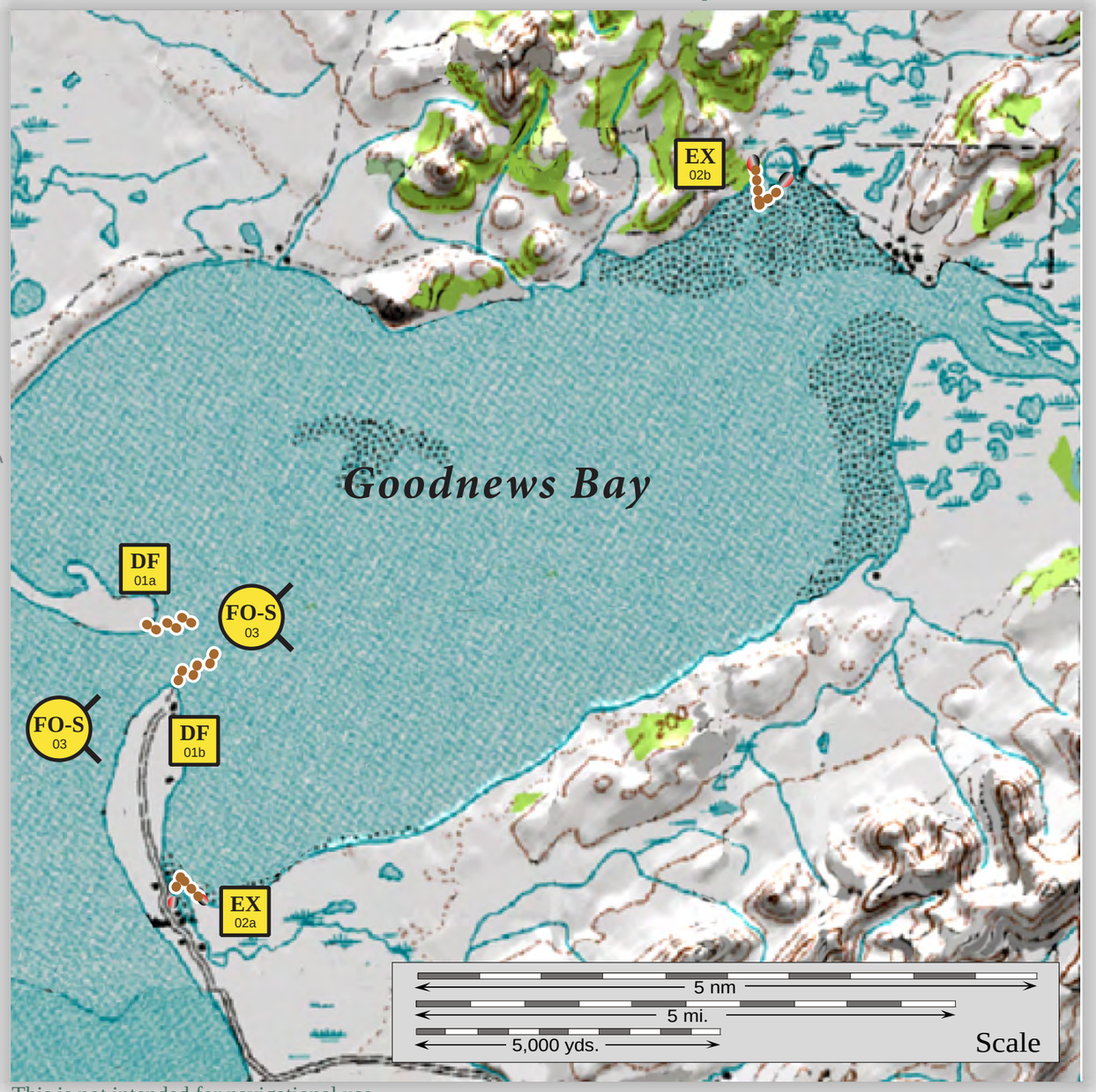
An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Exclusion Booming Tactic***. Actual deployment should be adjusted for local conditions.



Aerial photography of this area is unavailable at this time, but may be included as it becomes available.



This is not intended for navigational use.

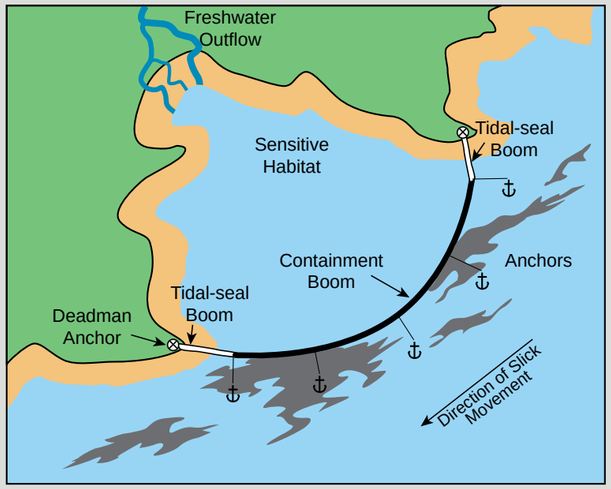
DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-12-01 **DF**	**Goodnews Bay** a. Lat. 59º 03.00'N Lon. 161º49.28'W b. Lat. 59º 03.57'N Lon. 161º49.70'W	**Deflection** Deflect oil that is entering Goodnews Bay away from the shore and concentrate it in the channel for free oil collection.	Deploy anchors and boom with skiffs (class 6). Place 3 arrays of 300 ft. fast-water boom in a cascaded pattern in the path of the incoming oil on each spit. Deflect incoming oil into the channel for free oil collection. Tend throughout the tide.	**Deployment** **Equipment** 1800 ft. fast-water boom 18 ea. anchor systems **Vessels** 2 ea. class 6 1 ea. Class 3 **Personnel/Shift** 7 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 6 1 ea. class 3 **Personnel/Shift** 5 ea. vessel crew/general techs	Platinum/Goodnews Bay	Via marine waters Chart 16300	Fish- intertidal spawning-salmon, herring(June-Sept.) Birds-waterfowl, seabird and shorebird nesting Habitat- exposed rocky shore Human use-subsistence, commercial fishing	Vessel master should have local knowledge. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-12-02 **EX**	**Goodnews Bay** a. Lat. 59º 01.01'N Lon. 161º49.19'W b. Lat. 59º 07.96'N Lon. 161º37.50'W	**Exclusion** Exclude oil from impacting the identified streams and intertidal area in Goodnews Bay.	Deploy anchors and boom with skiffs (class 6) at high tide. Place 600 ft. of fast-water boom in a chevron pattern in front of each entrance to the streams. Complete the arrays by placing 60 ft. of tidal seal boom on each leg. Tend throughout the tide.	**Deployment** **Equipment** 1200 ft. fast-water boom 240 ft. tidal seal boom 6 ea. anchor systems 8 ea. anchor stakes **Vessels/Personnel/Shift** Same as S-12-01 **Tending** **Vessels/Personnel/Shift** Same as S-12-01	Platinum/Goodnews Bay	Via marine waters Chart 16300	Same as S-12-01	Vessel master should have local knowledge. Title 41 permitting required from ADNR. Surveyed: not yet Tested: not yet
S-12-03 **FO-S**	**Goodnews Bay** Nearshore waters in the general area of: Lat. 59° 04.04'N Lon. 161°46.35'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Goodnews Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Goodnews Bay. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Platinum/Goodnews Bay	Via marine waters Chart 16300	Same as S-12-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

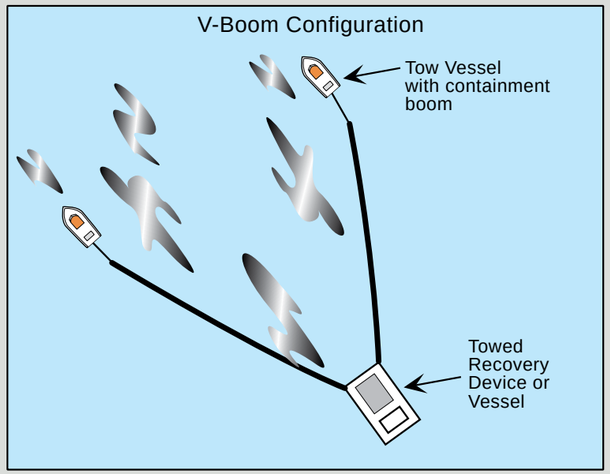
NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

Salmon River, WAK-S13

Center of map at 58˚ 51.39' N Lat., 161˚ 47.97' W Lon.



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.



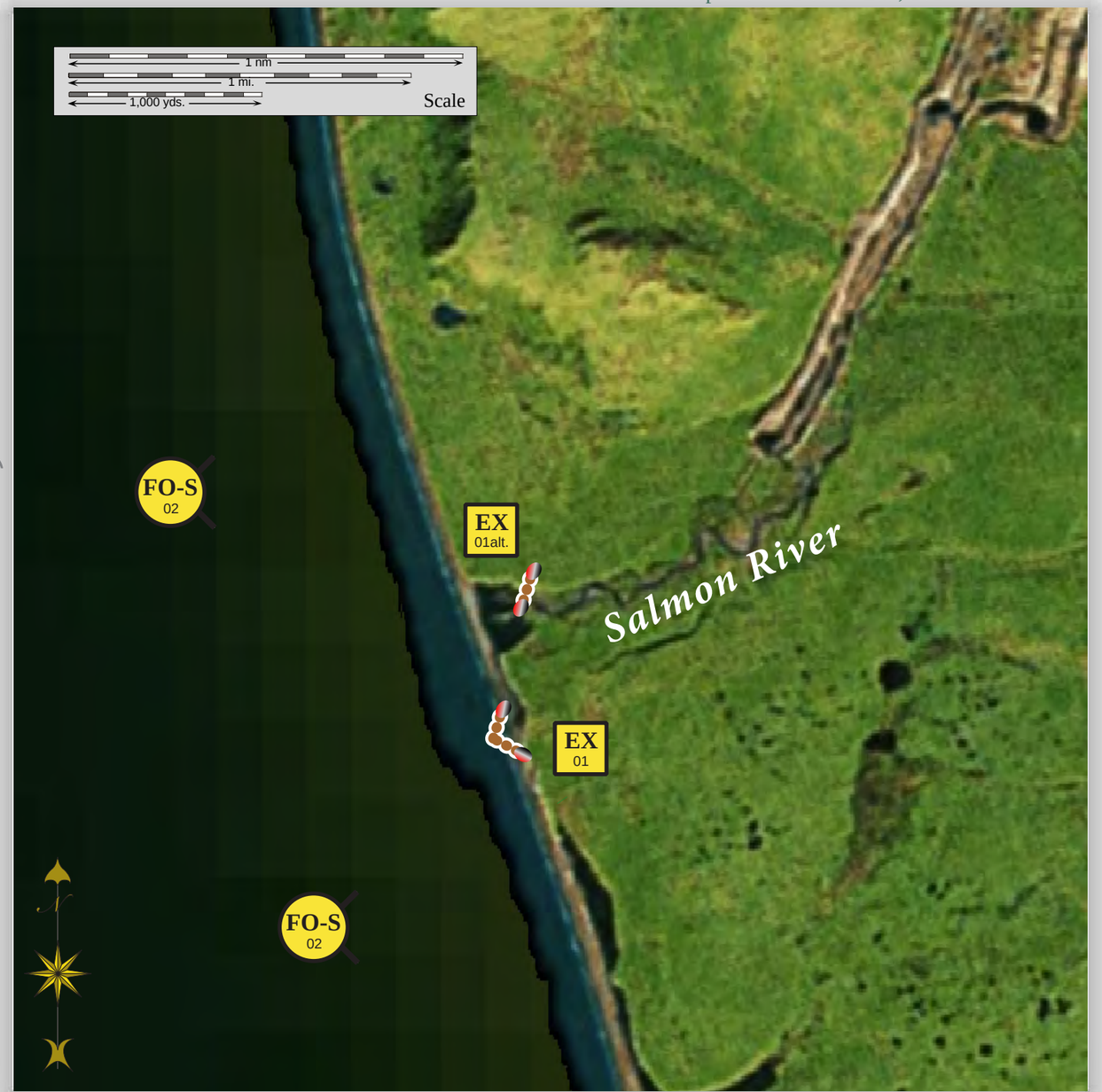
An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- EX — Exclusion Booming
- Fast-water Boom
- Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

Geographic Response Strategies for Western Alaska Subarea, Southern Zone



This is not intended for navigational use.

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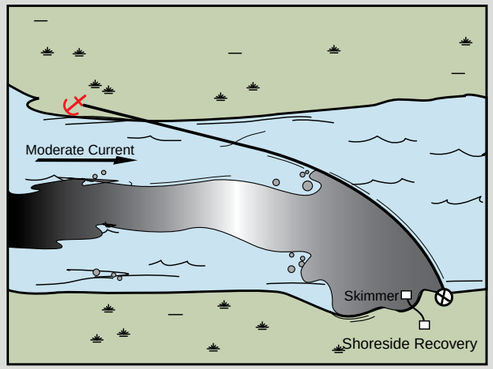
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-13-01 EX	**Salmon River** a. Lat. 58º51.72'N Lon. 161º46.31'W **Alternative** b. Lat. 58° 51.82"N Lon. 161°46.13'W	**Exclusion** Exclude oil from impacting the identified streams and intertidal area in Salmon River. The site is accessible via the Red Mountain Road from Platinum.	Deploy anchors and boom with skiffs (class 6) at high tide. Place 250 ft. of fast-water boom in a chevron pattern in front of the entrance to the river. Complete the arrays by placing 60 ft. of tidal seal boom on each leg. If surf conditions don't allow deployment off the beach, move the array further back into the lagoon. Tend throughout the tide.	**Deployment** **Equipment** 250 ft. fast-water boom 120 ft. tidal seal boom 1 ea. anchor systems **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs	Platinum via Red Mountain Road	Via marine waters Chart 16300	Fish- intertidal spawning- salmon, herring(June-Sept.) Birds-waterfowl, seabird and shorebird nesting Habitat- exposed rocky shore, marsh, peat shoreline Human use- subsistence, commercial fishing	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-13-02 FO-S	**Salmon River** Nearshore waters in the general area of: Lat. 58° 51.39'N Lon. 161°47.97'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Salmon River depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Salmon River. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Platinum	Via marine waters Chart 16300	Same as S-13-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

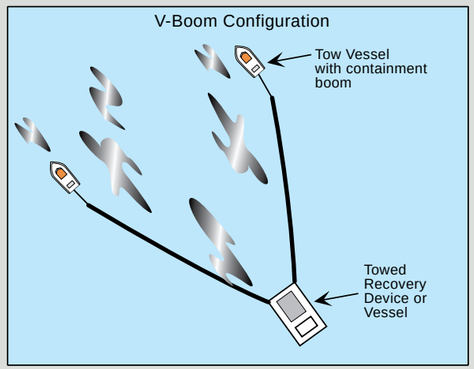
Geographic Response Strategies for Western Alaska Subarea, Southern Zone

Chagvan Bay, WAK-S14

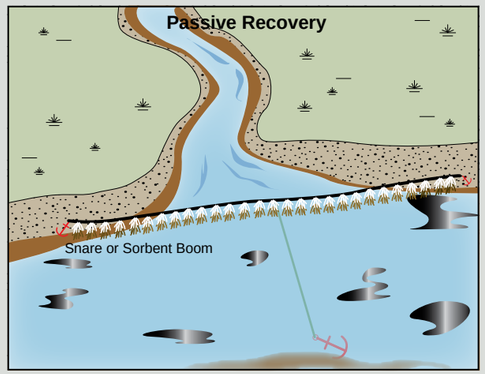
Center of map at 58˚ 46.29' N Lat., 161˚ 47.43' W Lon.



An example of the ***Diversion Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.

This is not intended for navigational use.

Map Legend

- FO-S — Free-oil Recovery
- DV — Diversion Booming
- PR — Passive Recovery
- SR — Shoreside Recovery
- Protected-water Boom
- Snare or Sorbent Boom

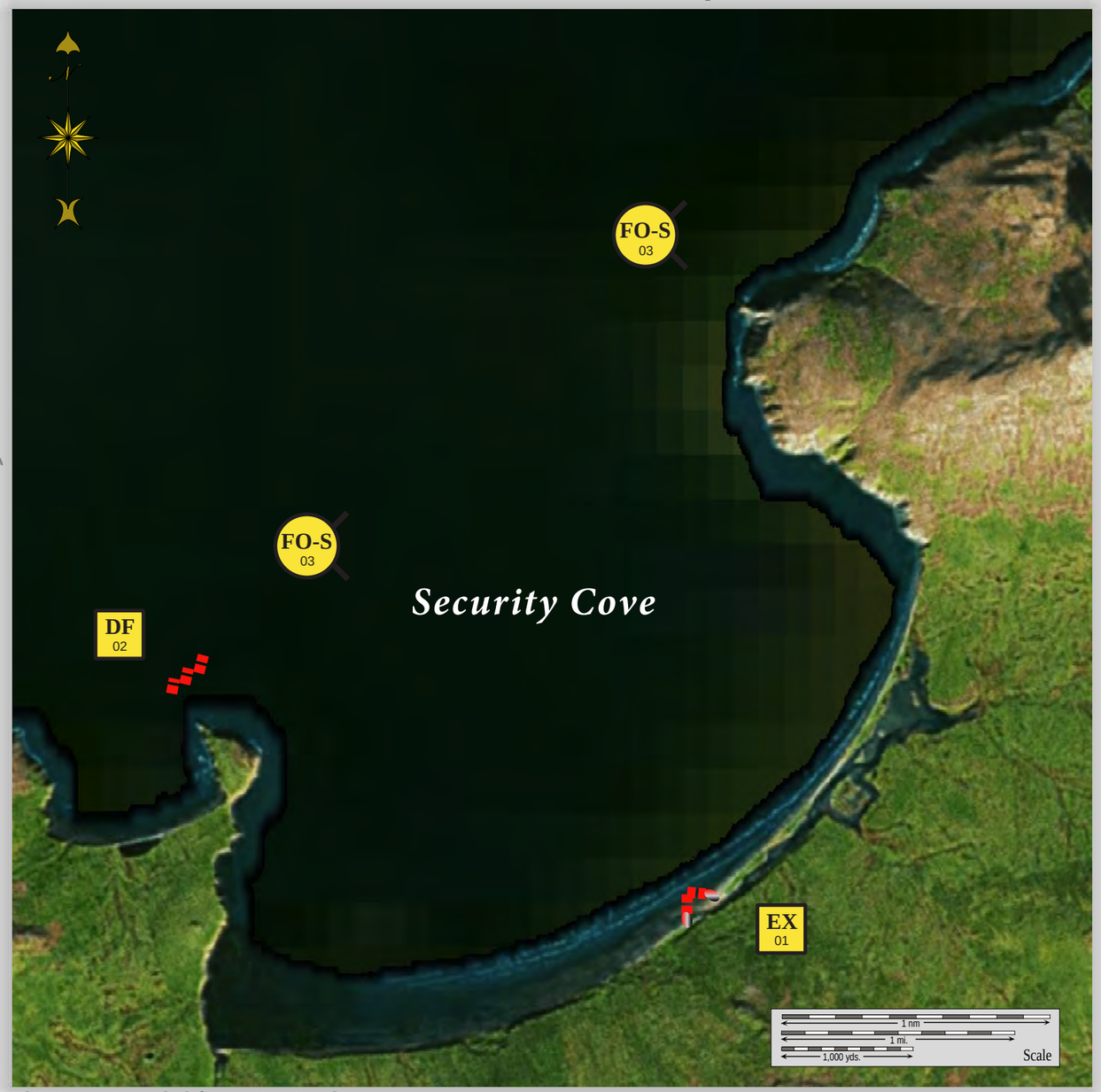
Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-14-01 **DV**	**Chagvan Bay** Lat. 58º 45.63'N Lon. 161º46.33'W	**Divert and Collect** Divert oil to a shoreside collection location in the entrance into Chagvan Bay.	Deploy anchors and boom with skiffs (class 6). Identify the direction of the incoming oil and position the array in the path most likely to intercept oil. Cascade 3 sections of protected-water boom at the proper angle to divert incoming oil to the collection site. Set up shoreside collection unit and tend throughout the tide.	**Deployment** **Equipment** 900 ft. protected-water boom 9 ea. anchor systems 2 ea. anchor stakes 1 ea. shore-side recovery system **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 5 ea. vessel crew/general techs 2 ea. response techs **Tending** **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 3 ea. vessel crew/general techs 1 ea. skilled tech	Vessel Platform	Via marine waters Chart 16300	Fish- intertidal spawning-salmon (May-Sept.), herring (June) Birds-waterfowl concentration, eagle nesting, seabird nesting Marine mammals- seal, sealions Habitat- marsh, sheltered rocky shoreline, shelter tidal flats, exposed wavecut platforms Human use-subsistence, commercial fishing	Vessel master should have local knowledge. Use appropriate measures as outlined in the STAR manual to protect the shoreline. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-14-02 **PR**	**Chagvan Bay** a. Lat. 58º 49.21'N Lon. 161º40.56'W b. Lat. 58º 47.94'N Lon. 161º39.00'W c. Lat. 58º 47.52'N Lon. 161º39.50'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified sloughs and other major cuts in Chagvan Bay.	Place and anchor snare line or sorbent boom across the channels of streams/sloughs in Chagvan Bay. Replace as necessary to maximize the recovery. Boom Lengths: a. 500 ft b. 500 ft c. 300 ft	**Deployment** **Equipment** 1300 ft. snare line or sorbent boom 5 ea. small anchor systems 12 ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels/Personnel/Shift** Same as S-14-02 **Tending** **Vessels/Personnel/Shift** Same as S-14-02	Vessel Platform	Via marine waters Chart 16300	Same as S-14-01	Vessel master should have local knowledge.
S-14-03 **FO-S**	**Chagvan Bay** Nearshore waters in the general area of: Lat. 58° 46.29'N Lon. 161°47.43'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Chagvan Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Chagvan Bay. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Platnium	Via marine waters Chart 16300	Same as S-14-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

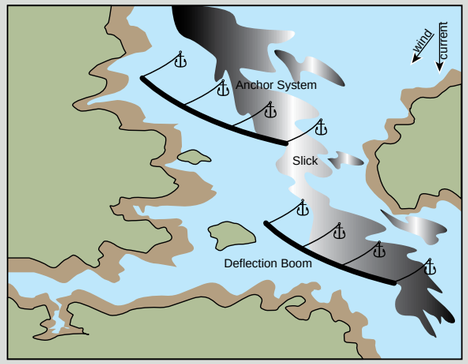
Security Cove, WAK-S15

Center of map at 58˚ 41.24' N Lat., 161˚ 54.85' W Lon.

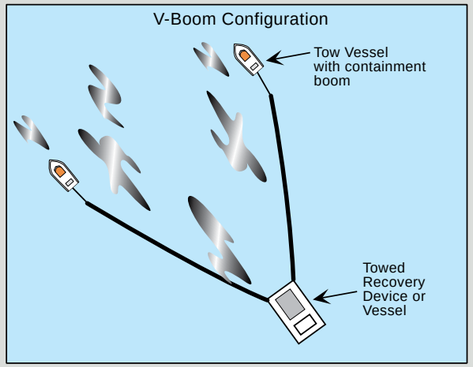


This is not intended for navigational use.

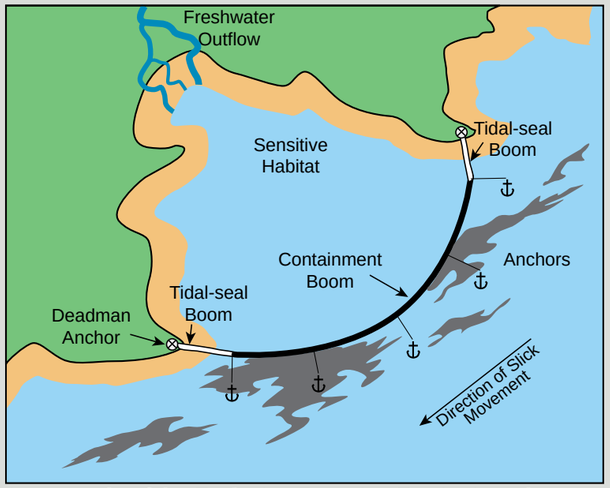
Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Deflection Live Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Exclusion Booming Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- DF-L — Deflection Booming, Live
- EX — Exclusion Booming
- Protected-water Boom
- Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

DRAFT This tactic map is a working draft being used to develop a Geographic Response Strategy at this location. The tactics represented here have not been approved by the Subarea Committee and should not be considered final. If you have questions or comments please contact us by email at contact@nukaresearch.com.

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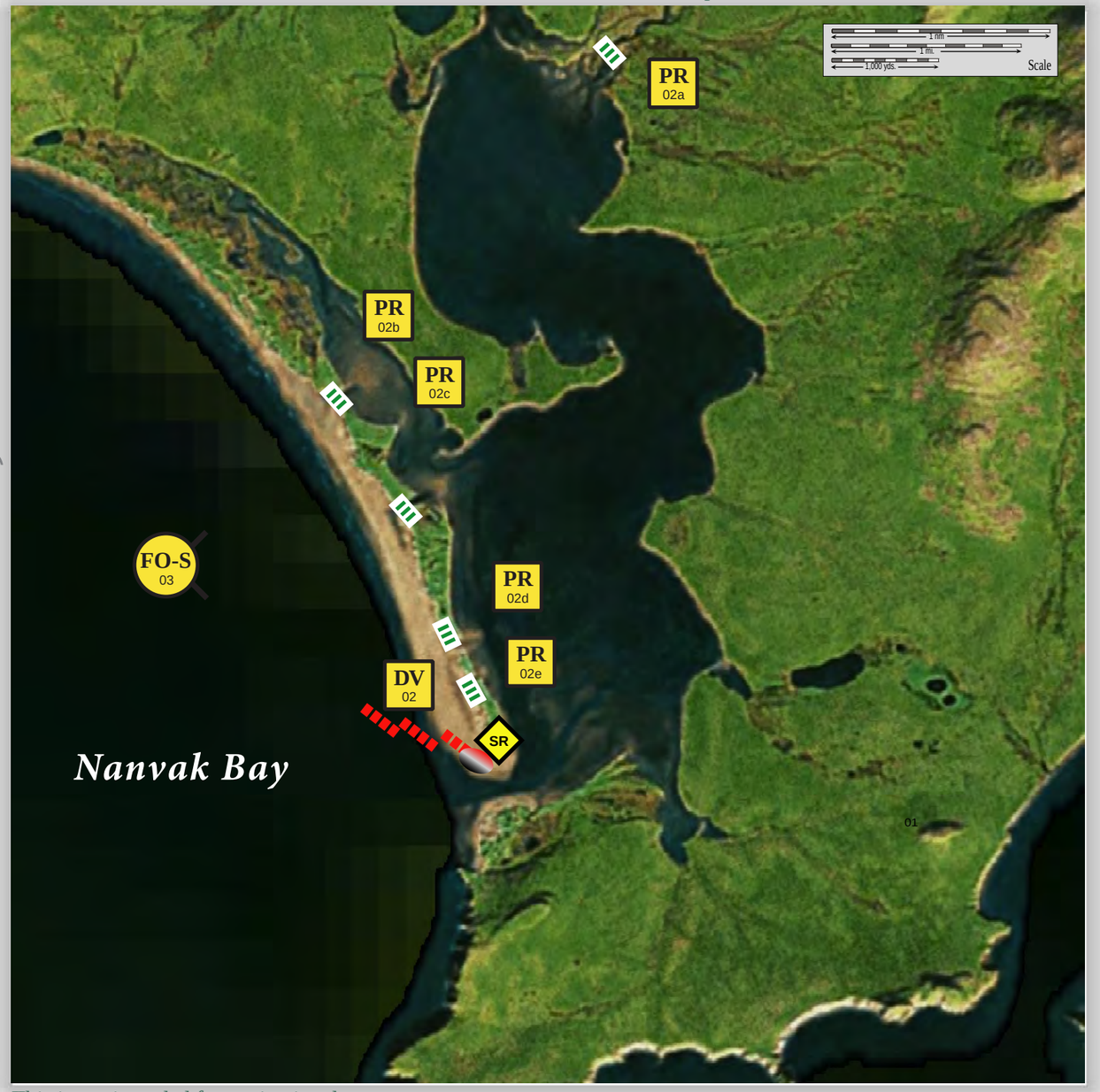
ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-15-01 EX	**Security Cove** Lat. 58º 39.76'N Lon. 161º52.10'W	**Exclusion** Exclude oil from impacting the identified streams and intertidal area in Security Cove. The site is accessible via the Red Mountain Road from Platinum.	Deploy anchors and boom with skiffs (class 6) at high tide. Place 250 ft. of protected-water boom in a chevron pattern in front of the entrance to the river. Complete the arrays by placing 60 ft. of tidal seal boom on each leg. If surf conditions don't allow deployment off the beach, move the array further back into the lagoon. Tend throughout the tide.	**Deployment** **Equipment** 250 ft. protected-water boom 120 ft. tidal seal boom 1 ea. anchor systems **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs **Tending** **Vessels** 1 ea. class 6 **Personnel/Shift** 2 ea. vessel crew/general techs	Vessel Platform	Via marine waters Chart 16300	Fish- intertidal spawning-herring (June) Marine mammals-seals, sealion Birds-waterfowl, seabird and shorebird nesting Habitat- exposed rocky shore, marsh, peat shoreline Human use-subsistence, commercial fishing	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-15-02 DF-L	**Security Cove** Lat. 58º 43.12'N Lon. 161º52.01'W Exact location directed by aerial surviallance.	**Deflection-Live** Deflect oil that is going to impact the haul outs and rookery in the Security Cove area away from the area and into the channel for free oil collection.	Deploy anchors and boom with skiffs (class 6). Use aerial surveillance to identify the incoming oil and it's direction. Using available vessels, hold in place 3 arrays of 300 ft. protected-water boom in a cascaded pattern in the path of the incoming oil. Deflect incoming oil out for free oil collection. Tend throughout the tide.	**Deployment** **Equipment** 900 ft. protected-water boom **Vessels** 6 ea. class 3 **Personnel/Shift** 18 ea. vessel crew/general techs **Tending** **Vessels** 6 ea. class 3 **Personnel/Shift** 18 ea. vessel crew/general techs	Vessel Platform	Via marine waters Chart 16300	Same as S-15-01	Vessel master should have local knowledge. Surveyed: not yet Tested: not yet
S-15-03 FO-S	**Security Cove** Nearshore waters in the general area of: Lat. 58° 41.24'N Lon. 161°54.85'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Security Cove depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Security Cove. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Platinum	Via marine waters Chart 16300	Same as S-15-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.

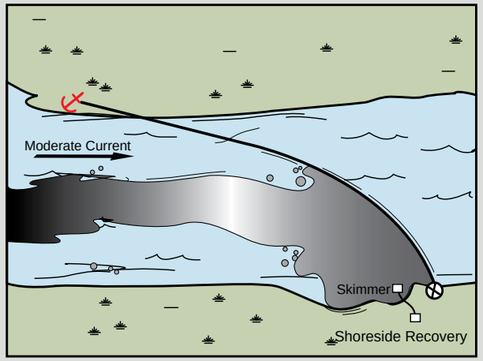
Nanvak Bay, WAK-S16

Center of map at 58˚ 34.51' N Lat., 161˚ 46.36' W Lon.

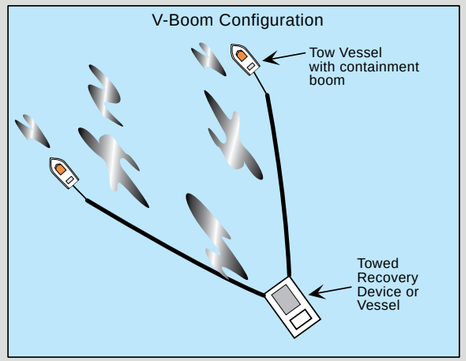


This is not intended for navigational use.

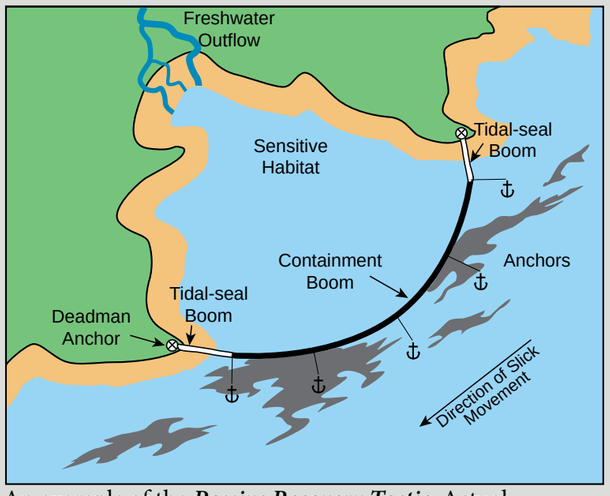
Geographic Response Strategies for Western Alaska Subarea, Southern Zone



An example of the ***Diversion Booming Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Free-oil Recovery Tactic***. Actual deployment should be adjusted for local conditions.



An example of the ***Passive Recovery Tactic***. Actual deployment should be adjusted for local conditions.

Map Legend

- FO-S — Free-oil Recovery
- DV — Diversion Booming
- PR — Passive Recovery
- SR — Shoreside Recovery
- Protected-water Boom
- Snare or Sorbent Boom
- Tidal-seal Boom

Aerial photography of this area is unavailable at this time, but may be included as it becomes available.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
S-16-01 **DV**	**Nanvak Bay** Lat. 58º 34.81'N Lon. 161º45.05'W	**Divert and Collect** Divert oil to shore side collection location on the shore of the spit forming Nanvak Bay.	Deploy anchors and boom with skiffs (class 6). Identify the direction of the incoming oil and position the array in the path most likely to intercept oil. Cascade 3 sections of protected-water boom at the proper angle to divert incoming oil to the collection site. Complete the arrays with a 60-foot section of tidal-seal boom. Set up shore-side collection unit and tend throughout the tide.	**Deployment** **Equipment** 900 ft. protected-water boom 60 ft. tidal-seal boom 9 ea. anchor systems 2 ea. anchor stakes 1 ea. shore-side recovery system **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 5 ea. vessel crew/general techs 2 ea. response techs **Tending** **Vessels** 1 ea. class 3 1 ea. class 6 **Personnel/Shift** 3 ea. vessel crew/general techs 1 ea. skilled tech	Togiak	Via marine waters Chart 16305	Fish- intertidal spawning-salmon(June-Sept.)herring, sheefish, arctic char, white fish Marine mammals-seals Birds-waterfowl, seabird and shorebird concentration Habitat- sheltered tidal flats, peat shoreline, marsh, Human use-subsistence, commercial fishing	Vessel master should have local knowledge. Title 41 permitting required from ADNR. THREATENED OR ENDANGERED SPECIES/ HABITAT POSSIBLE. Discuss with DOI prior to on-site operations. Surveyed: not yet Tested: not yet
S-16-02 **PR**	**Nanvak Bay** a. Lat. 58º 38.21'N Lon. 161º44.25'W b. Lat. 58º 36.61'N Lon. 161°46.66'W c. Lat. 58º 36.10'N Lon. 161º46.08'W d. Lat. 58º 35.40'N Lon. 161º45.59'W e. Lat. 58º 35.25'N Lon. 161º45.44'W	**Passive Recovery** Survey the area prior to deployment. Place passive recovery across entrances to the identified slough next to the Nanvak Bay.	Place and anchor snare line or sorbent boom across the channels of streams at the back of the bay. Place the remaining arrays at the breaks in the spit that creates Nanvak Bay. Replace as necessary to maximize the recovery. Boom Lengths: a. 600 ft b. 400 ft c. 300 ft d. 500 ft e. 300 ft	**Deployment** **Equipment** 2100 ft. snare line or sorbent boom 8 ea. small anchor systems 20ea. anchor stakes (Adjust equipment to reflect survey findings) **Vessels/Personnel/Shift** Same as S-16-01 **Tending** **Vessels/Personnel/Shift** Same as S-16-01	Togiak	Via marine waters Chart 16305	Same as S-16-01	Vessel master should have local knowledge.
S-16-03 **FO-S**	**Nanvak Bay** Nearshore waters in the general area of: Lat. 58° 34.51'N Lon. 161°46.36'W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Nanvak Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Nanvak Bay. Use aerial surveillance to locate incoming slicks.	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Togiak	Via marine waters Chart 16305	Same as S-16-01	Vessel master should have local knowledge. Use extreme caution, shallow waters with shifting channels and bars.

NOTE: Sensitive resource information can be found on other maps which can be accessed through the sensitive area section of the Western Alaska Subarea Contingency Plan: http://dec.alaska.gov/spar/perp/plans/scp_wak.htm.