

NUKA Research & Planning Group, LLC.

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
AEA-19-01	Izembek Lagoon-East Nearshore waters in the general area of: Lat. 55°25.87'N Lon. 162°42.07'W	Free-oil Recovery Maximize free-oil recovery in the offshore & nearshore environment of Izembek Lagoon-East depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of Izembek Lagoon-East. 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.	Vessel platform	Via marine waters Chart 16520-1	Same as AEA-19-02	Vessel master should have local knowledge. Use extreme caution, shoal waters with numerous reefs and rocks.
AEA-19-02	Izembek Lagoon-East Stream Locations a. Lat. 55°27.80'N Lon. 162°30.47'W b. Lat. 55°24.84'N Lon. 162°30.25'W c. Lat. 55°23.44'N Lon. 162°29.48'W d. Lat. 55°23.08'N Lon. 162°29.67'W e. Lat. 55°22.45'N Lon. 162°31.26'W f. Lat. 55°21.27'N Lon. 162°33.22'W	Exclusion Exclude oil from impacting the identified streams in Izembek Lagoon-East.	Deploy (a),(b),(e),(f) using a helicopter due to extremely shallow waters. Position boom for (c) &(d) using the helicopter. Deploy using a skiff to high tide. Tend throughout the tide. <u>Boom Lengths:</u> a. 200 ft. b. 200 ft. c. 500 ft. d. 700 ft. e. 100 ft. f. 200 ft.	Deployment Equipment 1900 ft. protected-water boom 8 ea. small anchor systems 24 ea. anchor stakes Vessels 1 ea. helicopter 1 ea. skiff Personnel/Shift 4 ea. vessel crew/spill tech Tending Vessels 1 ea. helicopter Personnel/Shift 2 ea. vessel crew/spill tech	Izembek NWR Heavy equipment Shed	Helicopter & via marine waters Chart 16520-1	Fish- intertidal spawning- salmon (May-Sept.), herring spawning (April- May) Birds- waterfowl concentration- threatened species present, shorebird concentration Marine mammals- seals, otters Human use- Wildlife viewing Habitat- eel grass, gravel beach, exposed rocky shoreline	Title 16 permitting required from ADF&G. A large population of bears forage on the tidal flats in the spring and are present during salmon runs. A bear guard is required. Historic Properties Specialist should MONITOR operations. THREATENED OR ENDANGERED SPECIES/HABITAT POSSIBLE/PRESENT. Discuss with DOI prior to on-site operations.
AEA-19-03	Izembek Lagoon-East Nearshore waters in the general area of: Lat. 55°24.44'N Lon. 162°32.53'W	Wildlife Hazing Under the direction of wildlife managers, use hazing techniques to drive waterfowl away from incoming oil.	Access the identified areas with helicopter. Use hazing equipment as directed to drive waterfowl away. Maintain hazing techniques until the oil is immobilized or removed from the area. Tend throughout the tide.	Deployment Equipment 1 ea. hazing package Vessels/Personnel/Shift Same as AEA-19-02 Tending Vessels/Personnel/Shift Same as AEA-19-02	Izembek NWR Heavy equipment Shed	Skiffs and helicopter	Same as AEA-19-02	Use aerial surveys to determine slick location and trajectory. Many waterfowl are annually tagged during motling and many are accustom to corralling. Consider using USFWS to isolate waterfowl from oil.
AEA-19-04	Izembek Lagoon-East Site determined by oil trajectory, in the general location of: Lat. 55°22.00'N Lon. 162°39.92'W	Passive Recovery Place passive recovery tactics to recover oil that may collect on the shoreline at locations determined during aerial survey.	Place and anchor snare or sorbent boom at the high tide line at the natural collection areas in Izembek Lagoon-East.	Deployment Equipment 2000 ft. snare or sorbent boom 20 ea. anchor stakes Vessels/Personnel/Shift Same as AEA-19-02 Tending Vessels/Personnel/Shift Same as AEA-19-02	Izembek NWR Heavy equipment Shed	Skiffs and helicopter	Same as AEA-19-02	Use aerial surveys to determine collection areas on shore.