p actions.

Collect ephemeral data (data that would be lost if not recorded by these surveys at this time) regarding potential injury to trust resources.

Collect any additional information necessary for designing or implementing future NRDA and restoration studies.

**Surveys of Intertidal Habitats in June 2005**

*Methods:*The NOAA and responsible party preassessment teamconducted two sets of surveys of intertidal habitats in June 2005, coinciding with the minus low tide series of 2-9 June and 19-23 June. The extreme low tides during these two periods facilitated our access to the lowest intertidal levels of the shores in the spill area.

The primary scientific personnel conducting the intertidal surveys for NOAA are all marine biologists with years of experience surveying intertidal biota in Alaska and/or the Pacific Northwest.

John Cubit (Lead scientist), marine ecologist, NOAA Damage Assessment Center: all June 2005 surveys (2-9 June and 19-23 June)

Allan Fukuyama, marine ecologist, University of Washington: first June surveys (2-9 June 2005)

Sandra Lindstrom, marine phycologist, University of British Columbia: first June surveys (2-9 June 2005)

Carolyn Kurle, marine ecologist specializing in Aleutian Intertidal biota, University of California, Santa Cruz: second June surveys (19-23 June 2005)

Ian Zelo (NOAA Hazmat) was data manager and participated in various field surveys. Nick Iadanza (NOAA DAC) and John Hudson (NMFS Auke Bay Laboratory) also participated in these intertidal field studies, but focused primarily on surveys of anadromous fish streams (see stream section below and their separate reports in the appendices). Jordan Stout (USFWS) conducted the photo-documentation for Cubit’s surveys in the first tide series. Christian Marcotte provided field support for Carolyn Kurle’s surveys. Amy Merten (NOAA Hazmat) also contributed field support. Representatives of the responsible party who participated in the surveys were Gary Mauseth, Bruce Kvan, Greg Challenger (all of Polaris Applied Sciences), and Jon Houghton (Pentec Environmental).

The work platform for these studies was the F/V *Ocean Olympic*, a 155-foot commercial crab fishing vessel whose use was arranged and paid for by the Responsible Party. Shores were accessed by skiffs with experienced skiff operators. In the fjord-like coastline of the spill area, the captain of the F/V *Ocean Olympic* was able to position the vessel near all the study areas for rapid access by skiff. This arrangement allowed the field team to visit any shore at any time of day, weather permitting, and then process data aboard the vessel. High surf prevented landing on some shores on some days, but visits to all shores of interest (as described below) were achieved by adjusting schedules around wave conditions. Thus the choice and number of shoreline locations visited was not restricted by accessibility.

Survey sites were chosen to maximize the following:

Geographic variation in the spatial patterns and degrees of oil exposure (e.g., amount of exposed surface covered with oil, amount of oil buried in beach, amount of oil deposited on high shore, extent of exposure to oil remobilized by beach cleaning operations, etc.). The northern extreme of the geographic range was Volcano Bay; the southern extreme was Chernofski Harbor (see map, Figure 1). The sites at the outer range of the surveys were only exposed to sporadic tar patties, as far as is known.

Ranges of substrate and shore types (e.g., mud, sand, gravel, cobble, boulder, solid bed rock, vertical shore, horizontal platforms, and combinations thereof).

Ranges of wave exposure (ranging from very high energy, wave-exposed, shores to very wave-protected, lake-like, inner inlets, with many intermediate shores within this gradient). The highly indented shoreline of the spill area had many bays and inlets, creating a high diversity of wave-exposure regimes.

Variations in types and diversities of intertidal biological communities (e.g., tidal marsh, algal dominated, invertebrate dominated, high diversity, low diversity, cryptic [under rock], exposed).

Per the methods described in the following, we also chose sites in the field to make matched comparisons of recently oiled and not oiled (“reference”) sites. This was done to scientifically investigate and test hypotheses regarding causality of effects observed during the field surveys.

Shoreline location segments (e.g., “SKN14”) were identified using the alphanumeric system instituted by the *Selendang Ayu* Unified Command (see map in Figure 1).

*Field Methods:*Because the location of the *Selendang Ayu* oil spill was remote and difficult to access, there was little preliminary information regarding possible impacts on which to base our survey designs. Therefore, we used an adaptive survey strategy in which one day’s observations were used to determine the next day’s operations. This strategy included field designation of gradients of oil exposure and designation of unoiled reference sites to test hypotheses that oil exposure caused any apparent adverse effects observed in the field.

In the field, the adaptive survey process was designed to function as follows. If apparent injury to biota was observed in the field, the first step was to determine if this injury was consistent with exposure to oil, as opposed to other factors, such as predation or effects of low tide exposure. Next, the shoreline location having apparently injured biota was compared to a “reference” location, which was the nearest location that had the same shoreline aspect (exposure to wave action, elevation, topography, etc.,) and habitat type, but with little or no exposure to oil. If similar injury also occurred in the reference location, the hypothesis that the injury was likely a result of exposure to oil discharged from the *Selendang Ayu* could be rejected.

As described below, at each site close-up examinations of the biota and substrata were made at all accessible shore levels. This included wading into shallow subtidal areas where shoreline slope and wave conditions permitted. The field surveys were conducted around the daytime low tides. The surveys started at upper tidal levels of the shore during the falling tide and proceeded to the lowest intertidal levels as the tide receded. Most intertidal surveys were conducted on foot after landing from skiffs. Vertical rock faces emerging from deeper water were surveyed from skiffs positioned next to the rock face. Observations of shallow subtidal biota were accomplished by wading into these habitats or floating over them in the skiffs. Deeper subtidal biota were surveyed by divers and video cameras, as described in the subtidal section.

Observations were made directly in the habitat surveyed, not from a distance. Biota were examined within arm’s length.

In the field, biota were examined, the condition, degree and distribution of oiling, and any indications of impacts of oil on the biota were documented. These observations were made by field biologists familiar with the taxonomy, appearance, and ecology of these species, including the effects of natural factors on these biota.

Biota were specifically inspected for visible oiling, abnormal coloration, necrosis, empty shells, abnormal behavior, mortality, and any other indications of possible oil exposure and oil effects. In particular, biota more than seven months old, i.e. preceding the *Selendang Ayu* grounding and oil spill, were carefully examined.

Fronds of large algae were lifted as necessary to view biota and oil, if any, beneath the fronds.

On beaches and boulder shores, boulders and cobble were lifted and gravel excavated, to examine cryptic biota.

Documentation of the observations made during the survey was by field notes and digital photographs, primarily.

Photographs were taken as close as necessary to document the species present, the condition of the biota, and patterns of oiling, if oil was present. Most documentation photos covered an area of about 0.25-1 square meter. Photographs of larger areas were used to document habitat-scale features.

Locations of photographs were recorded using the combined software set of Ozi Explorer (www.oziexplorer.com) and Ozi Photo Tool (oziphototool.alistairdickie.com). This software combination linked the GPS tracks to the digital photographs. GPS waypoints were used to link observations made in field notes to specific shore locations .

9. Voucher specimens were taken as necessary.

Each day when field biologists returned to the F/V *Ocean Olympic*, project data manager Ian Zelo downloaded data from the GPS units and digital camera media using the Ozi Explorer and Ozi Photo Tool programs described above.

*Observations and Discussion:*Portions of 55 shoreline segments (Table 1) were surveyed according to the procedures described above. Photo-documentation was extensive, totaling approximately 13GB of digital photos.

Rocky shore biota On shores with substrata of physically stable bedrock and boulders, an established biota of perennial marine algae and marine invertebrates was found (Table 2). Shores along the northeastern portion of Spray Cape (SPR11-SPR14) are near the wreck of the *Selendang Ayu*. In these segments, splatters of oil remained high on the shore. Here Lindstrom reported that the kelps (*Laminaria longipes* and other species) were reduced to stipes--the main portions of the blades were absent. Also, grazer populations appeared to be reduced. Bedrock at lower tidal elevations and fronds of the perennial algae *Fucus, Mastocarpus, Petrocelis*, and *Laminaria* in the mid-intertidal zone were overgrown by ephemeral green algae (e.g., *Acrosiphonia Ulothrix,* and *Urospora*).

On other shores, both oiled and unoiled, the perennial species were of a size and condition that indicated they had been present before the *Selendang Ayu* oil spill—i.e., they had settled and grown before 8 December 2004. In close and careful examination of the perennial biota there were no indications of visible acute mortality or other adverse effects on these perennial biota, except for Spray Cape and HMP-11a which was exposed to remobilized oil from beach clean-up operations















|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Segment** | **Date** | **Segment** |
| 6/2/2005 | ALM 8 | 6/9/052 | UDE3 |
|  | ALM 7 |  | UDE1 |
|  | ALM 6 |  | VLC9 |
|  | ALM10 |  | VLC10 |
|  | CFS 19 |  |  |
|  | CFS 20 | 6/19/2005 | SKN 3 |
| 6/3/2005 | KMK 30 |  | SKN 4 |
|  | PMS 7 |  | SKN 7 |
|  | PMS 10 |  | SKN 6 |
| 6/4/2005 | SPR 11 |  | PMS 16 |
|  | SPR12 | 6/20/2005 | HMP 12 |
|  | SKS 4 |  | HMP 9 |
|  | SKS 6 |  | PTN 3 |
| 6/5/2005 | CNB9 |  | PTS 11 |
|  | CNB10 | 6/21/2005 | MKS 4 |
|  | PTN2 |  | MKS 5 |
|  | PTN3 |  | MKS 6 |
| 6/6/2005 | HMP7 |  | SPR 2 |
|  | HMP6 |  | SPR 3 |
|  | HMP10 |  | UDW 1 |
|  | HMP11 | 6/22/2005 | SKN 14 |
|  | HMP5 |  | SKN 10 |
| 6/7/2005 | SKN8 |  | SKN 11 |
|  | SKN9 |  | SKN 7 |
|  | SKN11 |  | PMS 20 |
|  | SKN12 | 6/23/2005 | HMP 11 |
|  | SKN14 |  | HMP 13 |
|  | SKN15 |  |  |
| 6/8/2005 | SKS 18 |  |  |
|  | SKS 14 |  |  |
|  | SKS 15 |  |  |
|  | SKS 16 |  |  |
|  | SKS 17 |  |  |

|  |  |
| --- | --- |
| **Invertebrates** | **Common name category** |
| *Henricia* | starfish |
| *Katharina* | chiton |
| *Littorina* *sitkana* | snail |
| *Lottia digitalis* | limpet |
| *Lottia pelta* | limpet |
| *Nucella emarginata* | snail |
| *Calliostoma ligatum.* | snail |
| *Balanus glandula* | barnacle |
| *Semibalanus cariosus* | barnacle |
| *Mytilus trossulus* | mussel |
|  |  |
| **Marine algae** |  |
| *Laminaria* | kelp |
| *Alaria* | kelp |
| *Cymathere* | kelp |
| *Fucus* | rockweed |
| *Hedophyllum* | kelp |
| *Neorhodomela larix* | red alga |
| *Petrocelis* | tar-spot alga |
| *Agarum (or* possibly *Thalassiophyllum)* | kelp |
| The individuals of these species were large enough that they were probably present in the spill area before 8 December 2004, when the *Selendang Ayu* wrecked at Spray Cape. | |

| **SEGMENT NAME** | **WINTER OILING CAT.** | **SPRING OILING CAT.** | **SPRING**  **CLEAN-UP?** | **MANUAL CLEAN-UP** | **MECH. REMOVAL** | **MECH. TILL** | **BERM RELOC-ATION** | **OPEN BURN** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ALM03 | NOO | MODERATE | YES | X |  |  |  |  |
| ALM09 | NOO | MODERATE |  |  |  |  |  |  |
| AND01 | LIGHT | LIGHT | NFT |  |  |  |  |  |
| AND06 | LIGHT | LIGHT | YES | X |  |  |  |  |
| AND07 | NOO | HEAVY | NFT |  |  |  |  |  |
| AND08 | NOO | HEAVY | YES | X |  |  |  |  |
| ASP07 | NOO | LIGHT | YES | X |  |  |  |  |
| ASP14 | NOO | MODERATE | YES | X |  |  |  |  |
| ASP15 | NOO | LIGHT | YES | X |  |  |  |  |
| ASP16 | NOO | LIGHT | YES | X |  |  |  |  |
| BCK07 | NOO | HEAVY | YES | X |  |  |  |  |
| BCK09 | HEAVY | MODERATE | YES | X |  |  |  |  |
| BCK11 |  | HEAVY | YES | X |  |  |  |  |
| CBE21 | HEAVY | NOO | NFT |  |  |  |  |  |
| CNB01 | NOO | MODERATE | YES | X |  |  |  |  |
| CNB10 | NOO | LIGHT | YES | X |  |  |  |  |
| CNB11 | NOO | LIGHT | YES | X |  |  |  |  |
| CNB14 | NOO | LIGHT | YES | X |  |  |  |  |
| CNB15 | NOO | LIGHT | YES | X |  |  |  |  |
| CNB17 | NOO | MODERATE | YES | X |  |  |  |  |
| CNB19 | MODERATE | LIGHT | NFT |  |  |  |  |  |
| CNB20 | MODERATE | HEAVY | YES | X |  |  |  |  |
| CNB21 | HEAVY | HEAVY | YES | X |  |  |  |  |
| HMP02 | NOO | HEAVY | YES |  |  |  |  |  |
| HMP03 | NOO | HEAVY | YES |  |  |  |  |  |
| HMP05 | HEAVY | HEAVY | YES | X |  |  |  |  |
| HMP06 | HEAVY | HEAVY | YES | X |  |  |  |  |
| HMP07 | HEAVY | HEAVY | YES | X | X | X |  |  |
| HMP08 | HEAVY | LIGHT | YES | X |  |  |  |  |
| HMP10 | HEAVY | HEAVY | YES | X |  |  |  |  |
| HMP11 | HEAVY | HEAVY | YES | X | X | X |  | X |
| HMP12 | HEAVY | HEAVY | YES | X | X | X | X |  |
| HMP13 | HEAVY | HEAVY | YES | X |  |  |  |  |
| KFP01 | NOO | HEAVY | YES | X |  |  |  |  |
| KFP02 | NOO | HEAVY | YES | X |  |  |  |  |
| KFP03 | NOO | HEAVY | YES | X |  |  |  |  |
| KFP04 | NOO | VERY LIGHT | X | X |  |  |  |  |
| KFP05 | LIGHT | VERY LIGHT | NFT |  |  |  |  |  |
| KFP07 | LIGHT | VERY LIGHT | NFT |  |  |  |  |  |
| KFP08 | NOO | HEAVY | YES | X |  |  |  | X |
| KFP09 | MODERATE | HEAVY | YES | X |  |  |  |  |
| KFP10 | NOO | HEAVY | YES | X |  |  |  |  |
| KMK02 | NOO | HEAVY | YES | X |  |  |  |  |
| KMK06 | MODERATE | MODERATE |  |  |  |  |  |  |
| KMK07 | MODERATE | HEAVY | YES | X |  | X |  |  |
| KMK08 | HEAVY | NOO | NO |  |  |  |  |  |
| KMK09 | HEAVY | HEAVY | YES | X |  |  |  |  |
| KMK11 | HEAVY | LIGHT | YES | X |  |  |  |  |
| KMK15 | NOO | LIGHT | YES | X |  |  |  |  |
| KMK26 | NOO | HEAVY | YES | X |  |  |  |  |
| KMK27 | MODERATE | HEAVY | YES | X |  |  |  |  |
| KMK28 | HEAVY | HEAVY | YES | X |  |  |  |  |
| KMK29 | HEAVY | LIGHT | NFT |  |  |  |  |  |
| KMK30 | HEAVY | HEAVY | YES | X |  |  |  |  |
| KMK32 | NOO | MODERATE | YES | X |  |  |  |  |
| KSB01 | NOO | MODERATE | YES | X |  |  |  |  |
| KSB02 | MODERATE | HEAVY | YES | X |  |  |  |  |
| KSB03 | NOO | HEAVY | YES | X |  |  |  |  |
| KSB08 | MODERATE | MODERATE | YES | X |  |  |  |  |
| KSB10 | HEAVY | MODERATE | YES | X |  |  |  |  |
| KSB15 | NOO | LIGHT | YES | X |  |  |  |  |
| KTS19 |  | LIGHT | YES | X |  |  |  |  |
| MKS01 | HEAVY | HEAVY | YES | X | X | X |  | X |
| MKS02 | HEAVY | HEAVY | YES | X | X | X |  |  |
| MKS03 | HEAVY | LIGHT | YES | X |  |  |  |  |
| MKS04 | HEAVY | NOO | NFT |  |  |  |  |  |
| MKS05 | HEAVY | HEAVY | YES | X |  |  |  |  |
| MKS06 | HEAVY | HEAVY | YES | X |  |  |  |  |
| MKS07 | LIGHT | HEAVY | YES | X |  |  |  |  |
| MKS08 | LIGHT | NOO | NFT |  |  |  |  |  |
| MKS09 | HEAVY | HEAVY | YES | X |  |  |  |  |
| MKS10 | HEAVY | NOO | NFT |  |  |  |  |  |
| MKS11 | HEAVY | HEAVY | YES | X |  |  |  |  |
| MKS12 | NOO | HEAVY | YES | X |  |  |  |  |
| **MKS13** | NOO | HEAVY | NFT |  |  |  |  |  |
| **MKS14** | NOO | HEAVY | NFT |  |  |  |  |  |
| **MKS15** | NOO | HEAVY | NFT |  |  |  |  |  |
| **MKS16** | NOO | HEAVY | NFT |  |  |  |  |  |
| **MKS17** | NOO | HEAVY | NFT |  |  |  |  |  |
| **MKS18** | NOO | HEAVY | NFT |  |  |  |  |  |
| NGE07 | LIGHT | LIGHT | YES | X |  |  |  |  |
| NGW01 | LIGHT | LIGHT | NFT |  |  |  |  |  |
| NGW02 | MODERATE | LIGHT | YES | X |  |  |  |  |
| NGW03 | MODERATE | LIGHT | YES | X |  |  |  |  |
| NGW04 | LIGHT | LIGHT | NFT |  |  |  |  |  |
| NGW05 | LIGHT | LIGHT | NFT |  |  |  |  |  |
| NGW06 | LIGHT | LIGHT | NFT |  |  |  |  |  |
| NGW07 | LIGHT | LIGHT |  |  |  |  |  |  |
| PMN02 | HEAVY | NOO | NFT |  |  |  |  |  |
| PMN10 | LIGHT | NOO | NFT |  |  |  |  |  |
| PMN12 | LIGHT | LIGHT | NFT |  |  |  |  |  |
| PMN13 | NOO | VERY LIGHT | NFT |  |  |  |  |  |
| PMN15 | NOO | MODERATE | YES | X |  |  |  |  |
| PMN16 | NOO | MODERATE | YES | X |  |  |  |  |
| PMN24 | LIGHT | NOO | NFT |  |  |  |  |  |
| PMN25 | LIGHT | NOO | NFT |  |  |  |  |  |
| PMN28 | NOO | HEAVY | YES | X |  |  |  |  |
| PMS05 | LIGHT | LIGHT |  |  |  |  |  |  |
| PMS06 | LIGHT | MODERATE | YES | X |  |  |  |  |
| PMS10 | MODERATE | MODERATE | YES | X |  |  |  |  |
| PMS11 | LIGHT | LIGHT |  |  |  |  |  |  |
| PTN01 | MODERATE | LIGHT | NFT |  |  |  |  |  |
| PTN02 | NOO | HEAVY | YES | X |  |  |  |  |
| PTN03 | HEAVY | HEAVY | YES | X |  |  |  |  |
| PTN04 | HEAVY | HEAVY | YES | X |  |  |  |  |
| PTN10 | LIGHT | HEAVY | YES | X |  |  |  |  |
| PTS01 | LIGHT | HEAVY | YES | X |  |  |  |  |
| PTS03 | LIGHT | NOO | NFT |  |  |  |  |  |
| PTS04 | LIGHT | NOO | NFT |  |  |  |  |  |
| PTS05 | MODERATE | MODERATE | NFT |  |  |  |  |  |
| PTS06 | NOO | NOO | NO |  |  |  |  |  |
| PTS07 | MODERATE | LIGHT | NFT |  |  |  |  |  |
| PTS08 | MODERATE | NOO | NFT |  |  |  |  |  |
| PTS10 |  | MODERATE | NFT |  |  |  |  |  |
| SKN04 | NOO | LIGHT | YES | X |  |  |  |  |
| SKN05 | HEAVY | HEAVY | YES | X |  | X | X | X |
| SKN06 | NOO | MODERATE | YES | X |  |  | X |  |
| SKN08 | HEAVY | MODERATE | YES | X |  |  |  | X |
| SKN11 | HEAVY | HEAVY | YES | X | X | X |  | X |
| SKN12 | LIGHT | HEAVY | YES | X |  |  |  |  |
| SKN13 | HEAVY | MODERATE | YES | X |  |  |  |  |
| SKN14 | HEAVY | HEAVY | YES | X |  |  |  |  |
| SKN15 | HEAVY | HEAVY | YES | X |  |  |  | X |
| SKS01 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS02 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS03 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS04 | MODERATE | HEAVY | YES | X | X | X | X |  |
| SKS06 | HEAVY | HEAVY | YES | X |  |  |  |  |
| SKS10 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS11 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS12 | NOO | LIGHT | YES | X |  |  |  |  |
| SKS13 | NOO | MODERATE | YES | X |  |  |  |  |
| SKS14 | NOO | MODERATE | YES | X |  |  |  |  |
| SKS15 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS16 | NOO | HEAVY | YES | X |  |  |  |  |
| SKS17 | NOO | MODERATE | YES | X |  |  |  |  |
| SKS18 | HEAVY | HEAVY | YES | X | X | X |  |  |
| SMB06 |  | HEAVY | YES | X |  |  |  |  |
| SPR01 | NOO | MODERATE | YES | X |  |  |  |  |
| SPR02 | HEAVY | MODERATE | YES | X |  |  |  |  |
| SPR03 | NOO | LIGHT | YES | X |  |  |  |  |
| SPR04 | HEAVY | MODERATE | YES | X |  |  |  |  |
| SPR05 | HEAVY | NOO | NFT |  |  |  |  |  |
| SPR07 |  | MODERATE | YES | X |  |  |  |  |
| SPR09 |  | MODERATE | YES | X |  |  |  |  |
| SPR10 |  | LIGHT | YES | X |  |  |  |  |
| SPR11 | LIGHT | HEAVY | YES | X |  |  |  |  |
| SPR12 |  | HEAVY | YES | X |  |  |  |  |
| UDE16 | LIGHT | LIGHT | YES | X |  |  |  |  |
| WDE03 | MODERATE |  |  |  |  |  |  |  |
| UDW01 | NOO | HEAVY | YES | X |  |  |  |  |
| UDW04 | NOO | LIGHT | YES | X |  |  |  |  |
| UNK03 |  | LIGHT | YES | X |  |  |  |  |
| VLC01 |  | HEAVY | YES | X |  |  |  |  |
| VLC10a |  | LIGHT | YES | X |  |  |  |  |

|  |  |
| --- | --- |
| **DATES** | **OBSERVATIONS** |
| 20-23 June 2005: | NOAA survey teams documented remobilized oil from beach cleaning operations in Skan Bay (SKN10-11) and probably from beach cleaning operations in Hump Back Bay (~HMP10-12). |
| August-September 2005 | Scott Arnold, Alaska Department of Health and Social Services, reported elevated levels of total PAHs in blue mussels from various locations in Skan Bay, but not in other nearby bays |
| ~September 2005: | Mark Carls reported increase of oil in PEMD samplers at Skan Bay (SKN-14). |
| 21 October 2005 | Unnamed observer in civilian aircraft reported what appeared to be a sheen around thevessel. Coast Guard reported oil from Selendang in water and onshore around wreck (Spray Cape) and Skan Bay. |
| 24 October 2005 | Coast Guard reported seeing sheen and emulsified oil coming from the stern of the *Selendang Ayu*. |
| 25 October 2005 | Coast Guard observed a rainbow sheen burping up from around 350 yards from the vessel. |
| 1 December 2005: | Coast Guard/ADEC reported sheening from the vessel (POLREP 104). |
| 1 December 2005 | Dan Magone reported oil on about 200 feet of shoreline near the Selendang; “grass has distinctive droopy look….” |
| 3 December 2005 | Dan Magone reported “ribbon of oil sheen” in inner bay of “Lower Skan Bay”. |
| Feb or March 2006(?) | Seaduck crews reported sticky oil blobs on beach and oiled scaup. |

| **SEGMENT** | **SEGMENT LENGTH (km)** | **OILED LENGTH (km)** | **FINAL STATUS** | **DATE of STATUS DETERMINATION** |
| --- | --- | --- | --- | --- |
| BCK11 | 0.951 | 0.08 | End Point Reached | 6/8/06 |
| HMP06 | 0.463 | 0.08 | Natural Recovery | 6/6/06 |
| HMP11b | 0.300 | 0.12 | End Point Reached | 6/6/06 |
| KFP01 | 1.494 | 0.635 | Natural Recovery | 6/13/06 |
| KFP02 | 0.536 | 0.38 | End Point Reached | 6/12/06 |
| KFP03 | 0.239 | 0.03 | End Point Reached | 6/12/06 |
| KFP10a | 1.102 | 0.36 | End Point Reached | 6/12/06 |
| KMK26 | 0.265 | 0.02 | End Point Reached | 6/4/06 |
| KMK30 | 1.839 | 0.04 | End Point Reached | 6/4/06 |
| MKS13 | 1.507 | 0.02 | End Point Reached | 6/4/06 |
| MKS14 | 0.688 | 0.14 | Natural Recovery | 6/4/06 |
| MKS16 | 0.681 | 0.265 | Natural Recovery | 6/4/06 |
| MKS17 | 1.294 | 0.08 | End Point Reached | 6/4/06 |
| SKN05 | 0.676 | 0.6 | End Point Reached | 6/5/06 |
| SKN06 | 1.854 | 0.02 | End Point Reached | 6/5/06 |
| SKN08 | 0.128 | 0.082 | End Point Reached | 6/5/06 |
| SKN11 | 0.210 | 0.24 | End Point Reached | 6/5/06q |
| SKN12 | 1.172 | 0.025 | End Point Reached | 6/5/06 |
| SKN15 | 2.610 | 2.073 | Natural Recovery | 6/12/06 |
| SKS03 | 0.865 | 0.122 | Natural Recovery | 6/8/06 |
| SKS04 | 0.235 | 0.235 | End Point Reached | 6/8/06 |
| SKS06 | 0.439 | 0.04 | End Point Reached | 6/8/06 |
| SKS11c | 0.045 | 0.08 | End Point Reached | 6/12/06 |
| SKS18d,e,g | 3.610 | 0.354 | End Point Reached | 6/12/06 |
| SPR11a | 1.210 | 0.1 | Natural Recovery | 6/8/06 |
| SPR12 | 0.593 | 0.2 | End Point Reached | 6/8/06 |

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| --- | --- | --- | --- |
|  | **Incident Command Segment Code** | **General Location Name** | **Site of Auke Bay Hydrocarbon Monitoring Stations** |
| 1. | MKS 5 | Makushin Bay South (Glacier Valley Creek) | X |
| 2. | HMP 9 | Humpback Bay |  |
| 3. | HMP12 | Humpback Bay |  |
| 4. | PTN 3 | Portage Bay North |  |
| 5. | PTS 10 | Portage Bay South |  |
| 6. | SKN 4 | Skan North | X |
| 7. | SKN 14 | Skan North | X |
| 8. | SPR 3 | Spray Cape |  |
| 9. | PMN 20/21 | Pumicestone North | X |
| 10. | PMS 16 | Pumicestone South | X |

