[Shoreline evaluations, 1990].

LA-15 – LS-61

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SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION A (1 OF 5) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Stream mouth catalog no. 226-40-16783 and 226-40-16782.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth- spawning (7/10 to 8/31)
5T All bald eagle nests (3/1 to 6/1)
   Active bald eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: [Signature] DATE: 4/1/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 829 m
Subsurface Oil Observed: Yes___ No  X  Maximum Depth_______

RECOMMENDATIONS:
X___ No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup
____ Bioremediation
____ Tarmat: Breakup
____ Removal

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90
ADEC
EXXON
NOAA
USCG

FOSC: [Signature] DATE: 5-940
PWS ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry emigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
   - No disturbance of stream beds or banks unless authorized by ADF&G. No beach flushing into stream drainage.
   - No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Estuary Hatchery release (4/15 to 8/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/20 to 5/10)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site

1I Gill net area (8/7 to 9/31)
1J Purse seine area (7/21 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
   - For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
   - Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3H, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
   - Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
   - Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
   - Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
   - Active Bald Eagle nests (3/1 to 9/1)
   - Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
   - Tent sites (8/1 to 9/15)
   - Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

6Y Special use destination

7Z Subsistence area:
   - Salmon harvesting (5/1 to 9/30)

7HH Finfish harvesting

7II Deer harvesting (9/15 to 2/25)

7JJ Invertebrate harvesting
   - For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

PWS-CODE 4/10/90
FIELD SHORELINE COMMENT SHEET

EMENT ST | LA No | SUBDIVISION: A | DATE 3/5/93

USCG
NAME Ronald W. Hubbard | SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

TREATMENT SUGGESTED

ADEC
NAME J. Lynne Martin | SIGNATURE

☐ NO TREATMENT RECOMMENDED

COMMENTS

NO OIL OBSERVED

LAND MANAGER
NAME Patrick Seemann | SIGNATURE

☐ NO TREATMENT RECOMMENDED

COMMENTS

☐ TREATMENT SUGGESTED

REVISION NO. 3/21/93
SHORELINE OILING SUMMARY

DATE: 3/31/90
FROM: CORDEVA
TO: SCAT TEAM
P. 02

REVISION NO. 06/25/90

USCG HUMMARD
LAND REP SELANOFF
SUBDIVISION: A (1056)
M NO.: 16
TIDE LEVEL: -0.5 to +0.5
DATE: 3/31/90
TIME: 10:30 to 11:30

SUBDIVISION LENGTH: 866 m

MOUNDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
VEYED FROM: ☐ Foot ☐ Boat ☐ Helo
WORKING DIRECTION: _to

FACE SEDIMENTS: R 30% B 50% C 15% P 4% G 1% S - % M - % V - %
E: Lang 60% Hang 40% Vert - %
WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
CATEGORY LENGTH: W - m M - m N - m V - m NO 866 m

FACE OIL

OIL / FILM COLOR

IMPACTED ZONES

PIT OIL

PAVEMENT: H F S - sq. m by - cm

PATTIES / TARBALLS - BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED
DEBRIS

AMOUNT

SM MD LG

DEBRIS COLLECTED
☐ YES ☐ NO

TYPE -

Photographs:
Roll No.: SS-16-1
Frames: 1-11

SURFACE OIL

PIT

SUBSURFACE

OIL CHARACTER

OILED INTERVAL

BELOW OIL / FILM COLOR

PIT ZONE

ANALYSIS

SUBSURFACE

SEDIMENTS

10

X

- - -

X

PCG

40

X

- - -

X

PCD

30

X

- - -

X

SGPC

- - -

- - -

- - -

Upper intertidal zone covered with lichen, Laminaria Intertidal with green algae.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA15 Subdivision A - COBBLE BEACH Date (mo/day/yr) 3/21/80

(24 hr) 1730 (G) Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

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**MYTILUS**

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Photographs: Rolls SS-16-1
Frames 1-11

Wildlife Observations/ General Comments:
DEEP ON COBBLE BEACH, OTTER & SEALS OFFSHORE, BOTH DENSE & DIVERSE ON BOULDER/ROCK SECTIONS. NERIICYSTIS Kelp Bed Just Offshore.

Ecological Considerations:
GU, T44, 1B, TII
### SHORELINE ECOLOGICAL SUMMARY

Segment ST:* LA+5* Subdivision: A* Boulder+Bedrock* Date: 3/3/90

Time (24 hr): Off. 1130  Biologist: Tony Zamora

(A) Substrate type and % of segments:
- Bedrock (1)
- Boulder (2)
- Cobble (3)
- Pebble (4)
- Sand (5)
- Silt (6)

(B) Overall % cover of biota (% of segment):
- Dense
- Moderate
- Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Juveniles/adults (X) & new settlement (3)

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### Wildlife Observations/General Comments:
- Deer on cobble beach, otter & sealsions offshore.
- Biota dense & diverse on boulder/bedrock sections.
- Keep red just offshore.

### Ecological Considerations:
- Note: Jun, 7Th, 1B, 722
SHORELINE EVALUATION

SEGMENT ST/LA-15 SUBDIVISION B (2 OF 5) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Stream mouth catalog no, 226-40-16783 and 226-40-16782.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T  All bald eagle nests (3/1 to 6/1)
    Active bald eagle nests (3/1 to 9/1)
6U  Recreation: Tent sites (6/1 to 9/15)
7HH Finfish harvesting
7II  Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: __________________________ DATE: __4/17/90_________

OILING CATEGORIZATION:
Wide_169m: Medium_36 m: Narrow_21 m: V.Light_8 m: No Oil_0 m
Subsurface Oil Observed: Yes__X__ No____ Maximum Depth_60+ cm

RECOMMENDATIONS:
____No Treatment Recommended  ____Snare/Absorbent Booms
____Treatment Recommended  ____Oil Snares (pom poms)
____Manual Pickup  ____Absorbents (pads,rolls,etc)
____Bioremediation  ____Spot Washing:____Wands
____Tarmat: ____Breakup
    ____Removal  ____Other (see comments)

COMMENTS: Recommend removal of tarmats, manual pick up of oiled
vegetation and debris as shown on sketch map. Bioremediate areas
indicated on sketch map. Treatment activities should be conducted
between 6/1 and 7/10 based on above constraints.

TAG COMMENTS: BIOREMEDICATION MONITORING REQUIRED TO DETERMINE EFFECT

TAG APPROVAL DATE: 4/16/90
ADEC  AL HEGREN FOSC: _____________ DATE: __5-9-90_________
EXXON  ANDY TEMPLEL
NOAA  _____________
USCG  _____________

FURTHER TAG EVALUATION AT A LATER DATE
# PWS ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.

1C Salmon fry nursery area (4/31 to 7/31)

1D Esther Hatchery releases (4/15 to 8/1)

1E Main Bay Hatchery releases (4/20 to 5/10)

1F Sawmill Bay Hatchery releases (4/20 to 5/10)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

11 Gill net area (8/7 to 8/31)

1J Pute seine area (7/21 to 9/30)

1K Pute seine hook-off (7/20 to 9/30)

1L Set net sites (8/11 to 7/25)

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)

Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass.

Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 8/1)

Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only, maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U++ Reception: Tjet site (8/1 to 9/15)

6V Anchorage (8/1 to 9/15)

6W Forest Service cabin (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

7HH Finish harvesting

7II Deer harvesting (6/15 to 2/23)

7JJ Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: LA-015  SUBDIVISION: B  DATE 3/31/90

USCG NAME R. W. Hubbard  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Area heavy boader menace, remove oil film and spray below canoe track.

ADEC

NAME J. Lynn Martin  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

MECHANICAL CLEANUP SUGGESTED IN NORTH TO MIDDLE OF SEGMENT. FOLLOWED BY MANUAL CLEANUP OF ASPHALT AREA.

EXxon EVALUATION OF AREA: GOOD & VERY COMPLETE

LAND MANAGER

NAME Robert Spencer  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Because of the snow we were unable to survey the upland side zone, we do need to keep that in mind when we start the actual cleanup. The majority of the oil in this segment is subsurface so it going to take more than just spraying it down. The only means of clearing it I think is to have it moved (insand) with a bulldozer.
SHORELINE OILING SUMMARY

Ogil Reimer  
USCG Hubbard

M. Zamora  
Land Rep. Selanoff

X. Garcia  
ADEC Martin

TEAM NO.: 16
TIDE LEVEL: +0.5 to +4.0
DATE: 3/31/90

APR 01 1990

SURFACE OIL

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PAVEMENT: H F (30 sq. m) by 3 cm

PATTIES / TARBALLS ----- BAGS

NEAR SHORE SHEEN? NO
BR RW SL TL

OILED DEBRIS AMOUNT
Logs Y
Vegetation Y
Trash X
Debris X

DEBRIS COLLECTED
YES NO

TYPE

BAGS

Photographs:
Roll No. 55-16-1
Frames 12-23

SUBSURFACE OIL

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<td></td>
<td></td>
<td>PC</td>
<td></td>
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</tbody>
</table>

COMMENTS: Uppermost sedimentary strata perpendicular to shoreline - higher ridges are due
to more resistant bedrock layers - most of the beach is underlain with low angle
rock platform. Varying depths of sediment cover segment. Oil Penetration in
PIT appears to extend to either bedrock or bottom oiling not reached, this
thins out down the beach and dissipates in HIT. Most of the surface of
the segment is mantled with boulders. Surface of boulders have a film, however
sides and interstices areas have continuous coverage of mousse to depth.
Sub-surface distribution coincides with surface expression.

Page 1 of 2
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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**Comments**
**SHORELINE ECOLOGICAL SUMMARY**

**S**-1st ST/ **LAI5** Subdivision **B** Date (Mo/day/yr) **3/31/90**  
**Time (24 hr)** 1200 (am) **Biologist** TONY FAMIGA

(A) Substrate type and % of segments:  
1) Bedrock 40 2) Boulder 40 3) Cobble 15 4) Pebble 5 5) Sand 6 6) Silt __

(B) Overall % cover of biota (% of segment):  Dense __ Moderate X Low __

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X) , new settlement (3)

---

### BARNACLES

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**Wildlife Observations/ General Comments:**  
EAGLE, Cormorants, Annelid worms seen in mussle in U1 | X | UNDER COBBLE  

**Biological Considerations:**  
**L** **NEST, G** | **U,** **7** | **H,**
ECOLOGICAL MAP
LA-15B

Map Key: PWS-496c
Name: REIMER
Date: 4/11/90
Date Entered:

XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

ADEC Segment Length: 4817m

P3

226-40-16782

XXX Wide

LA-15/C
**ADDENDUM: SUBDIVISION CONSTRAINTS**

SEGMENT LA-15 SUBDIVISION B (2 of 5)

**WORK WINDOW**

| Manual Pickup Tarmat Removal | OPEN |
| Bioremediation               | WORK PRIOR TO 7/1 |

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

- **1K** Purse Seine Hook-off
  - Closed to bioremediation after 7/20. No constraint to manual pickup and tarmat removal.

- **1A,1B** Salmon Stream
  - **NO CONSTRAINT.** ADF&G catalogued anadromous stream (226-40-16782) is more than 100m from work area.

- **5T** Bald Eagle Nest
  - **NO CONSTRAINT.** USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.

- **7II** Subsistence: Deer Harvesting
  - Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.

- **7HH** Subsistence: Finfish Harvesting
  - No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/1.

**OTHER ECOLOGICAL CONSIDERATIONS**

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

**TAG APPROVAL DATE**

ADEC
EXXON
NOAA
USCG

FOSC

Prepared by

Date 6/20/90

FOSC

Date 6/10/90
WORK PLAN ADDENDUM

Segment LA15  Subdivision B  Dated 7/02/90

MODIFICATION

1. REASON FOR MODIFICATION

  - REQUEST FROM FIELD FOR MECHANICAL ASSISTANCE
    TO BE ALLOWED AS REQUIRED TO ACCESS MOUSE.

2. ADJUSTMENT TO WORK PLAN

  - MECHANICAL EQUIPMENT APPROVED TO RAKE AND ACCESS
    MOUSE AND SUBSURFACE OIL SHOULD MANUAL REMOVAL/ACCESS
    BE NOT FEASIBLE. SPOT WASHING AS REQUIRED.

ARCHAEOLOGICAL CONSTRAINT: Consultation and inspection with
an Exxon archaeologist is required prior to treatment.
Specific on-site monitoring requirements will be determined
at that time.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

SHPO APPROVAL NEEDED YES X  SHPO SIGNATURE Rick Deon Oden 7/2/90

TAG APPROVAL DATE 7/02/90

ADEC Ray Monce, P.A.
EXXON Amy Teal, A
NOAA Joseph Tuggle, C
USCG G.A. Reiter, C

FOSC DATE 6/Jul/90
WORK PLAN ADDENDUM

Segment LA 15 - B    Subdivision B    Dated 07/20/90

MODIFICATION

1. REASON FOR MODIFICATION

SECOND REQUEST FROM THE FIELD.

2. ADJUSTMENT TO WORK PLAN

MANUALLY REMOVE OF SEDIMENTS + MOUSSE IN AREA INDICATED ON ATTACHED SKETCH.

SHPO APPROVAL NEEDED YES ___    NO X ___

SHPO SIGNATURE ____________________________

TAG APPROVAL DATE 7/20/90

ADEC  J.D. Bauer    J.R. Perna

EXXON  Amos Tom    Fred

NOAA  Burt Worrett    B.D. Williams

USCG  G.A. Reiter    G.A. Reiter
LA-15 B WORK MODIFICATION MAP

MANUAL REMOVAL

Area covered by work modification request of 6-30-90

Above area of concentrated oil

Above area of concentrated oil

Above area of concentrated oil

Above area of concentrated oil

- Surface: Mud, silt, silt, pebbles
- Subsurface: Powd, gravel, coarse
- Entire area underlain by silt, silt, near-surface bedrock
- Most CP oiling resting on bedrock shelf
- All pits in MITZ except #s 2, 3, 4, 14 which are in MITZ

LA-15 B
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA-15  SUBDIVISION B  DATED 8/16/90

MODIFICATION CLASS I X  CLASS II  CLASS III

1. REASON FOR MODIFICATION
OIL IS LOCATED IN THE FRONT FACE OF THE STORM BERM AND BEHIND STORM BERM.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
EXTEND MECHANICAL WORK BEING DONE IN THE UPPER INTERTIDAL ZONE INTO THE STORM BERM EXPOSING OILED SEDIMENTS TO WAVE ACTION BY RAKE THEM INTO THE ACTIVE ZONES.

3. TIMING ISSUES
PULSE SEINE HOOK OFF AFTER 7/20
DEER HARVESTING AFTER 8/15
FINFISH HARVESTING AFTER 7/1

* Waived 8/1/90 for manual & mechanical work to cont. EXCEPT WITH CUC APPROVAL AND WITH CUC MONITOR PRESENT DURING APPLICATION

ADEC Peter D. Fontz
EXXON
USCG

LAND MANAGER (If field rep is on scene)

Leech Carlson, ADMR
SHORELINE EVALUATION

SEGMENT ST/LA-15 SUBDIVISION C (3 OF 5) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Stream mouth catalog no. 226-40-16783 and 226-40-16782.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All bald eagle nests (3/1 to 6/1)
Active bald eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: DATE: 4/23/90

OILING CATEGORIZATION:
Wide 81 m: Medium 0 m: Narrow 0 m: V. Light 58 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 70+ cm

RECOMMENDATIONS:
___ No Treatment Recommended ___ Snare/Absorbent Booms
X Treatment Recommended X Oil Snares (pom poms)
X Manual Pickup ___ Absorbents (pads, rolls, etc)
X Bioremediation X Spot Washing: X Wands
X Tarmat: __ Breakup ___ Beach Cleaner
X Removal X Other (see comments)

COMMENTS: Manually remove tarmat and mousse as indicated on sketch map. Bioremediation of areas of surface and subsurface oiling up to 100m of anadromous stream. Work between 6/1 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: USE MANUAL/MECHANICAL AGITATION/REMOVAL IN CONJUNCTION WITH SPOT WASH + OIL SNARES. PRIOR TO BIOREMEDIATION. FURTHER TAG EVALUATION LAY MAY

TAG APPROVAL DATE: 4/16/90
ADEC EXXON NOAA USCG

FOSC: DATE: 5-9-90
PWS ECOLOGICAL CONSTRAINTS

1A-1B
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C
Salmon fry nursery area (4/31 to 7/31)

1D
Esker hatchery release (4/15 to 6/1)

1E
Main Bay hatchery release (4/20 to 5/10)

1F
Sawmill Bay hatchery release (4/20 to 5/10)

1G
Cannery Creek hatchery release (4/21 to 6/1)

1H
Remote release site

1I
Gill net area (8/7 to 8/31)

1J
Purse seine area (7/21 to 9/30)

1K
Purse seine hook-off (7/20 to 9/30)

1L
Set net sites (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M
Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unrooted intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P
3O, 3Q
Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R
Seabird colony (5/1 to 9/1)
Restrict all activity to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S
Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T
All bald eagle nests (3/1 to 6/1)
Active bald eagle nests (3/1 to 9/1)
Restrict all traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U
Recreation:
Tent sites (6/1 to 9/15)

6V
Anchorage (6/1 to 9/15)

6W
Forest Service cabins (6/1 to 9/15)

6X
Lodge (8/1 to 9/15)

6Y
Special use destination

7Z
Subsistence area:
Salmon harvesting (5/1 to 9/30)

7H-H
Finfish harvesting

7I
Deer harvesting (8/15 to 2/28)

7JJ
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT STI  CA-15  SUBDIVISION:  DATE 1-APR-90

NAME  R. W. Hubbard  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

1. Suggest combing solution to remove sheet of rocky
2. Request manual removal of most of sand type exotic weed

ADEC
NAME  J. Lynn Martin  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

MECHANICAL & MANUAL REMOVAL OF SUBSURFACE & SURFACE
however active stream should be a consideration.

MECHANICAL RECOMMENDATIONS: TILING & DREDGE TECHNIQUE

LAND MANAGER
NAME  Petrala Sturgeon  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

Comments
SHORELINE OILING SUMMARY

OG Reiner USCG Hubbard SEGMENT ST/ 4-1-85
BIO Zamora LAND REP Seligoff (CHENEKA) SUBDIVISION C (30FT)
EXXON Garcia ADEC MARTIN TIME OF: 10:40/10:40 DATE 4-1-90
TEAM NO.: 16 TIDE LEVEL: -4.0 to 4.0
EST. SUBDIVISION LENGTH: 200 m
LAND REP: Sun Clouds Fog Rain Snow
SUBDIVISION
C

OIL (ENGHT:
H

DATE
1-1-90

TIME:
10-40

TIDE:
-4.0 to 4.0

REVIEWED
W
DATE
4-4-90

SLOPE:
Lang % Hang % Vert %

WAVE EXPOSURE:
Low Med High

OIL CATEGORY:
Lang % Hang % Vert %

SURFACE SEDIMENTS:
% A % B % C % P % G % S % M % V %

SURVEYED FROM:
Foot Boat Helo
WORKING DIRECTION: E to W

SURFACE OIL

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PAVEMENT: H F G 24 % 5 cm

PATTIES / TARBALLS BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS

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Logs Vegetation Trash Debris

# BAGS

Phoographs:

Roll No. SS-14-1 4
Frames 30-37, 1-10

SUBSURFACE OIL

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COMMENTS
Pocket beach with rock cliff on both ends
oil Character consists of surface stain on Boulder/Cliff Beach
> 25-30 m wide over 60% of Beach, Broken coat on larger boulders
and rock cliff sections. Considerable oil at depth was found
indicated by distribution of pits - The subsurface oil appears
in coincidence with surface distribution.
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COMMENTS

REVIEWED: __________  DATE: 4-4-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA15 Subdivision C Date (mo/day/yr) 4/1/90

Time (24 hr) 09:25 on 1100 off Biologist TONY RAMORA

(1) Substrate type and % of segments:
   (1) Bedrock 10% (2) Boulder 15% (3) Cobble 10% (4) Pebble 10% (5) Sand 20% (6) Silt 25%

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles / adults (X), new settlement (3)

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Wildlife Observations/General Comments:
- Dense Fucus on rock outcrops flanking beach, Nereocystis kelp bed just offshore of rock outcrop on west side, dense mussel beds on east side of site - in sand between corals. Diverse abundant Amphipods under cobble in mid zone. Diverse algae on boulder/rock on west
- Low zone not surveyed during survey.
- Noted: 2 otters, deer tracks, 2 ravens
- Coated barnacles on bedrock in UI: 50% mortality of barnacles
- 95% mortality of Cithamalus
- A few (bare) spots observed on asphalt coat.
This map not to scale. Photo locations and other features refer to geologist map of site.
XXXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LA-15 SUBDIVISION C (3 of 5)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Bioremediation</th>
<th>Spot Washing</th>
<th>Other Approved Treatment</th>
<th>Manual/Mechanical Agitation/Raking</th>
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<tr>
<td>OPEN</td>
<td>WORK PRIOR TO 7/1</td>
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ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>1A,1B</th>
<th>Salmon Stream</th>
<th>NO CONSTRAINT. ADF&amp;G catalogued anadromous streams (226-40-16782 and 226-40-16783) are more than 100m from the work area.</th>
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</thead>
<tbody>
<tr>
<td>1K</td>
<td>Purse Seine Hook-off</td>
<td>Closed to bioremediation, spot washing, other approved treatment, and manual/mechanical agitation/raking after 7/20. No constraint to manual pickup and tarmat removal.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site.</td>
</tr>
<tr>
<td>7HH</td>
<td>Subsistence: Finfish Harvesting</td>
<td>Closed to bioremediation spot washing, other approved treatment and manual/mechanical agitation/raking after 7/1. No constraint to manual pickup and tarmat removal.</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation, spot washing, other approved treatment, and manual/mechanical agitation/raking after 8/15. No constraint to manual pickup and tarmat removal.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-40-16782) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC: _____________________________  Date: 7/24/90

Date: 6/12/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-15 STREAM NO: 226-40-16782 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two anadromous streams in LA-15: 226-40-16782, 226-40-16783 (in Subdivision C)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-7 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
9EE Set aside
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. There is one and possibly two bald eagle nests within 400 M of stream 226-40-16782. See ecology map. Subject stream is located within Subdivision C (3 of 5).

SHPO SIGNATURE: Date: 5/10/90

Subsurface Oil Observed: Yes X No Maximum Depth 45+ cm

RECOMMENDATIONS:

___No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat Removal

X Snare/Absorbent Booms
X Oil Snares (pom poms)
X Absorbents (pads, rolls, etc)
X Spot Washing: X Wands
X Beach Cleaner
* X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pickup of mousse patties, 3) manual tilling of storm berm down to MITZ, 4) spot washing using sorbents, 5) bioremediation of tilled and washed area and other areas shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints after approval of USFWS regarding eagle nest and ADF&G regarding tilling and bioremediation of stream banks.

TAG COMMENTS: MANUAL TILLING PRIOR TO BIO IN AREAS OF TEST PITS 2 + 6 (STORM BERM). MANUAL RAKING OF REMAINDER OF AREA WITH SUBSURFACE OIL AS INDICATED PRIOR TO BIO.

FOSC: D. Rose DATE: 5-15-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK.
PWS, SEWARD AND HOMER ECOCLOGICAL CONSTRAINTS

1A Salmon stream mouth - by outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beech flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: AOF&G John Morison 267-2324

1C Salmon fry nursery area (4/3 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sewmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release sites
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E AOF&G Larry Peltz 424-3214 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-and-line (7/20 to 9/30)
1L Set net area (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal eelgrass and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235 ADF&G Don CaHkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 600m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377 ADF&G Tom Roth 267-2206

5T* All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Recreation:
Text sites (6/1 to 9/15)
6V Anchorage 6/1 to 9/15
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7W Finfish harvesting
7I Deer harvesting (9/15 to 2/28)
7J Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST LA-016 SUBDIVISION: 226-00-10528 DATE 4-20-90
2.26-90-16782

USCG
NAME: CWO2 Kerwin L. Dreher SIGNATURE: CWO2 K. L. Dreher

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

LAND MANAGER
NAME: Rick Gustin SIGNATURE: Richard Gustin

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

It appears there is a large relatively thick oil film along subsurface oil on both sides of the stream (appears to be either venting, or the residue from the algal bloom). This in our opinion needs to be filled and

REVISION NO. 03/21/90
SHORELINE OILING SUMMARY (ANAD)

OG C. LARSON USCG 2ND K.C WE SEGMENT ST/ LA-015
BIO. R. L. CLECHLOW LAND REP.
EXXON DAILY NOW 83 ADGS 2K KANOSH-ADAMS UMPATH TIME 11-14 10/15
TEAM NO. 14 TIDE LEVEL KMX PT DATE 4-20-90
EST. SUBDIVISION LENGTH: 40 m
UPLANDS DESCRIPTION: ☐Grass ☐Forest ☐Rock
SURVEYED FROM: ☐Tide ☐Boat ☐Halo
SURFACE SEDIMENTS: R 10 % B 10 % C 40 % P 40 % G % S % M %
SLOPE: Lang % Hang % Vent % WAVE EXPOSURE: ☐Low ☐Med ☐High
OIL CATEGORY LENGTH: W m M 15 m N m V 25 m NO m

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PAVEMENT N F&m by 2 a
PATTIES / TARBALLS BAGS
NEAR SHORE SHEEN? NO BR RW CD TL

OILED DEBRIS AMOUNT
Logs ☐ SM MD LG
Vegetation ☐ ☐ ☐
Trash ☐ ☐ ☐
Debris ☐ ☐ ☐

Did you collect DEBRIS < ☐ YES ☐ NO

Photographs:
Roll No.
Frames

SUBSURFACE OIL

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</table>

COMMENTS: NOTED OIL STAIN SPOTTED AT SITE. UPPER STREAM BOUNDARY NEXT TO STREAM MOUTH WAS AN OIL LAYER OF DARK BROWN MOUSSE 5 CM IN DEPTH. PART OF IT CONTINUES UPTO STREAM MOUTH AND UNDER BEACH DRIFT LOGS. PIT No. 2 HAD LIGHT SHEEN PULBERATING THRU SEDIMENTS. SILVER SHEEN WAS OBSERVED IN LITZ NEXT TO STREAM DISCHARGE.

REVIEWED: D. W. DATE: 4-24-90
### Subsurface Oil (Continued)

<table>
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<tr>
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**Comments:** No Data
**ADPEC MULTI-ASSESSMENT DATA FORM**

1 **SURVEY TYPE**: ES ( ) ES T3 AVS SHA WMS PTA
2 **REGION**: PWS ( ) NP, CI ( ) K, AP
3 **METHOD**: Aerial ( ) Ground ( ) Base ( )
4 **DATE**: 1/20/90
5 **START TIME**: 1200
6 **STOP TIME**: 1300
7 **SECTN #:** LA-16
8 **STATION #:**
9 **X-UNIT:***
10 **Y-UNIT:***
11 **LAT.:***
12 **SOURCE:** ( ) Lena
13 **LOCATION:** S A-3 Lathache 76
14 **DESCRIPTION:**

---

**EXTENT OF OIL**

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<tr>
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<th>Shoreline</th>
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<th>Catalaged Dried, Fish Shad</th>
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**SURFACE THICKNESS**

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<tr>
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**AERIAL IMAGE**

- Vegetation: 25%
- Water: 75%

**PLANT COMMUNITY**

- Beach ( ) Lagoon ( ) Marsh ( )

**WAVE EXPOSURE**

- High ( ) Moderate ( ) Low ( )

**SUBSTRATE TYPE**

- Bedrock ( ) Boulder ( ) Coral ( )
- Gravel ( ) Sand ( ) Mud/Silt ( )

**OIL TYPE**

- Petroleum ( ) Marine Tar ( ) Asphalt ( ) Organic ( )

**OILED DEBRIS**

- ( )

**SHORELINE TYPE**

- Headland ( ) Low-lying Rocks ( ) Beach ( )

**ANOMALOUS FISH PRESENT?**

- ( )

**ANOMALOUS FISH OBSERVATION**

- Species: Aerial ( ) Ground ( )

**COMMENTS**

- 75% of area on south side of stream - beach within the
  mid-intertidal is oiled. Debris on beach is 25 cm
  thickly with petroleum oil

- Thin bands of black oil on streams edge in path seen well
  as upper stream beam bends.
**46 PHOTOLOG**

**3A OIL DISTRIBUTION DIAGRAM**

- Oil distribution and flow paths indicated.
- Various layers and volumes marked.
- Sample taken from specific locations.

**FRAME(S)**

- Description of the area affected.
- Recommendations for treatment.

**DESCRIPTION**

- Low breach area of subsurface oil zone across entire of wash/lockup oil.
- Water to be kept at 90-95° temperature on top.
- Clean diesel or steam water with sides of die.
- Short time paddling to remove and halted debris (logs etc.)
- Mercurialize and train to enclose the plume.
- Rivers water from lower and upper areas to clean with base.
- Water at a lower temperature.

**Sample taken**

- Photo frame 5 and shot direction.
ADFAQ Multi-Assessment Data Form

1. Survey Type: ES 55 55 TO TVIE SCA NNE SPTA
2. Region: FCF, CI, LAF
3. Method: Aerial/Ground Base
4. Date: 4/20/80
5. Start Time: 11:50
7. Station #: 1A-015
8. Station #: 10 TIDE HT AT SURVEY: 1.48'
9. K-Units: -
10. Stat Area: 20 USCG Quad: Seward A-3
11. Lat: 01
12. Source: Map, Loran
13. Location: NE Latouche
14. Description: E. Of Sleepy Bay

Extent of Oil

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36. Catalog #: 226-60-9728
37. Catalog #: 226-60-9728
38. Catalog #: 226-60-9728
39. Catalog #: 226-60-9728
40. Catalog #: 226-60-9728
41. Catalog #: 226-60-9728
42. Catalog #: 226-60-9728
43. Catalog #: 226-60-9728
44. Catalog #: 226-60-9728

Coments: Based on the 10 pits our group dug, it is my judgement that a lens of oil extends through the zone of interest. This lens is exposed at the storm berm and the lower intertidal and exhibits a brown coloration and is not visible. The lens is visible in the stream channel and the lower intertidal.
**Oil Distribution Diagram**

**Legend**
- **Oil Lens**
- **Tarry, Moosy Lens**
- **0-25 cm Light Oil**
- **0-15 cm Deep Heavy Tar**
- **Heavy Oil to 25 cm**

**Notes**
- Sample taken from photo frame # and shot direction.

**Comments**
- Lens of oil exposed irregularly along both banks of channel. Debris under locks along storm缝.

**Recommendations**
- Remove debris from storm缝.
- Manually remove oil from stream channel (channel 1 mobile and bread at mouth, 2 bay oil is yet on either side of current channel).
Recommendation:

1. Shore removal of moose paddles/tow mats in upper/middle/lower storm bars and any elsewhere found.

2. Remove any severely oiled logs in jam over creek.

3. Pull down storm bars (upper 2) and wash with steam or hot water in addition to cold water deluge system.

4. Absorbant off stream while being thin to prevent remolding.

5. Tilt wash both sides of stream banks when oiled lens occurs.

6. Tilt wash oiled tongue which sheens in center stream.

7. Rip up lower & middle storm bars with tracked cat and rock ripper to bring subsurface sand gravel and easily toisurface and treat with steam or hot water with cold deluge.

8. No bio remediation recommended.

9. Burn oil and collect oil with skimmers as necessary during washing.

Comments by Ken Critchlow:

I agree with ADFG's recommendation, except that bio remediation should be used as last step. KRC
SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION D (4 OF 5) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Stream mouth catalog no. 226-40-16783 and 226-40-16782.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All bald eagle nests (3/1 to 6/1)
Active bald eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: DATE: 4/17/90

OILING CATEGORIZATION:
Wide _56 m: Medium 0 m: Narrow 0 m: V.Light 255 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 50 + cm

RECOMMENDATIONS:
X No Treatment Recommended X Snare/Absorbent Booms
X Treatment Recommended X Oil Snares (pom poms)
X Manual Pickup X Absorbents (pads, rolls, etc)
X Bioremediation X Spot Washing: X Wands
X Tarmat: X Breakup X Beach Cleaner
X Removal X Other (see comments)

COMMENTS: Removal of tar mat as shown on sketch map. No bioremediation due to proximity of surface oil to anadromous stream (<100m). Work between 6/1 and 7/10 based on eagle nest and anadromous stream constraints.

TAG COMMENTS: ADO Bioremediation clarification by AFSC PRIOR TO USE

TAG APPROVAL DATE: DATE: 5/7/90
ADEC FOSC: NOAA USCG

RECOMMENDATIONS not approved pending resolution of VRS concerns about salmon stream as resolved.
PWS ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Estuary Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sewmill Bay Hatchery release (4/20 to 5/10)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (8/7 to 8/31)
1J Purse seine area (7/21 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net site (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unaired intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
6V Tent sites (5/1 to 9/15)
6W Anchorage (5/1 to 9/15)
6X Forest Service cabins (5/1 to 9/15)
6Y Lodge (5/1 to 9/15)
6Z Special use destination

7Z Subsistence area:
7HH Salmon harvesting (5/1 to 9/30)
7HJ Finfish harvesting
7E Deer harvesting (8/15 to 2/26)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 L 15   SUBDIVISION:    DATE 4/1/90

USCG NAME: B. M. Elder SIGNATURE

☐ NO TREATMENT RECOMMENDED   TREATMENT SUGGESTED

COMMENTS

1. Light surface wash down.

ADEC

NAME: J. Lynn Martin SIGNATURE

☐ NO TREATMENT RECOMMENDED   TREATMENT SUGGESTED

COMMENTS

MECHANICAL & MANUAL REMOVAL OF SUB/SURFACE OIL.

MECHANICAT TECHNIQUES: TICING & HOT WATER WASH

LAND MANAGER

NAME: Patrick Seaborg SIGNATURE

☐ NO TREATMENT RECOMMENDED   TREATMENT SUGGESTED

COMMENTS

I suggest the worth half be looked over more carefully because it is among the particular type of beach we gather our seafood - octopus, snail & goudets etc.
**SHORELINE OILING SUMMARY**

OG REIMER USCG HUBBARD
BIO ZAMORA LAND REP SELANDOFF SEGMENT ST/ LA 15
XXON GARCIA ADEC MARTIN ( ) SUBDIVISION D (4 of 5)
TEAM NO.: 16 TIDE LEVEL: 0.9 Date 4/1/90
EST. SUBDIVISION LENGTH: 450 m
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: B to N
SURFACE SEDIMENTS: ☐ 10 % ☐ 50 % ☐ C 35 % ☐ P 5 % ☐ G 5 % ☐ S 5 % ☐ M 5 % ☐ V 5 %
SLOPE: Lang 60 % Hang 40 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W/ Q9 m M - m N - m VL 3.5 m NO 2 m

**SURFACE OIL**

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**SUBSURFACE OIL**

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**COMMENTS**

Irregular section of rocky cliff, platform and pocket beaches, because of poor access over much of this sub-segment much was surveyed by Helo. Beach surveyed on foot consisted of boulder and cobble, a broken to patchy band of surface stain covered most of the upper mid tidal zone. Subsurface oil confirmed to the surface distribution except for oil found in upper tidal zone just pit 2 and 5.

**PAVEMENT:** H F ☐ 30 sq. m by 4 cm

**NEAR SHORE SHEEN?** ☐

**Photographs:**

Roll No. 44-16-2 Frames 11 - 23

**DEBRIS COLLECTED**

- Log
- Vegetation
- Trash
- Debris

**TYPE:**

- #BAGS

**REVIEWS:**

[Initial] Date 4/4/90

Oil appears to continue from Pit 2 to 5 at depth.
## Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
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**Comments**

**Reviewed:** [Signature] Date: 4-4-90
Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L; juveniles/adults (X), new settlement (3))

BARNACLES

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MYTILUS

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TROPOIDS

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Wildlife Observations/General Comments:
- Site encompasses small cobble, reach and look stretch of rock/boulder tim.
- Has dense populations of algae, barnacles, mussels.
- Seen: Otter, small dolphins (dalls?), 2 eagles - 1 adult & 1 juven.
- Nereocystis keep beds off of rocky sections.
- Thick filamentous algae on cobble beach in mid zone.

Ecological Considerations:

THH 7/18
The remainder of this subsegment was surveyed by helicopter - sporadic patches and drop lines were observed on rock cliffs.
The remainder was surveyed and drop line
ECOLOGICAL MAP

LA-15D

XXX Wide
// Medium
--- Narrow
TTTT Very Light
0000 No Oil

Map Key: PWS-496e
Name: REIMER
Date: 4/1/90
Data Entered:

ADEC Segment Length: 4517m

0 100 200 300 METERS
**ADDENDUM: SUBDIVISION CONSTRAINTS**

**SEGMENT LA-15 SUBDIVISION D (4 of 5)**

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
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</thead>
<tbody>
<tr>
<td><strong>Tarmat Removal</strong></td>
</tr>
<tr>
<td><strong>Bioremediation</strong></td>
</tr>
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</table>

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A,1B Salmon Stream</td>
<td>ADF&amp;G catalogued streams (226-40-16783 and 226-40-16782) are more than 100m from the work site. No constraint to tarmat removal and bioremediation.</td>
</tr>
<tr>
<td>5T Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision D work site.</td>
</tr>
<tr>
<td>7HH Subsistence: Finfish Harvesting</td>
<td>Closed to bioremediation after 7/1. No constraint to tarmat removal.</td>
</tr>
<tr>
<td>7II Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation after 8/15. No constraint to tarmat removal.</td>
</tr>
</tbody>
</table>

**OTHER ECOLOGICAL CONSIDERATIONS**

Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.
SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION E (5 OF 5) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Stream mouth catalog no. 226-40-16783 and 226-40-16782.
1A Salmon stream mouth- fry outmigration (3/1 to 5/15)
1B Salmon stream mouth- spawning (7/10 to 8/31)
5T All bald eagle nests (3/1 to 6/1)
Active bald eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/1)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE:

OILING CATEGORIZATION:
Wide 48 m: Medium 0 m: Narrow 0 m: V.Light 1894 m: No Oil 148 m
Subsurface Oil Observed: Yes X No Maximum Depth 50 + cm

RECOMMENDATIONS:

--- No Treatment Recommended
X Treatment Recommended
--- Manual Pickup
X Bioremediation
--- Tarmat: Breakup
--- Removal

Snare/Absorbent Booms
Oil Snares (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
Other (see comments)

COMMENTS: Recommend bioremediation of area of subsurface oil found at landing site shown on attached sketch map. Work between 6/1 and 7/10 based on eagle/anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC KE KEISHA PETT IF FOSC: DATE: 5-4-80
EXXON ANDY.. DATE: CVR Rep to be present
NOAA
USCG
PWS ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Estuary Hatchery release (4/15 to 8/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/20 to 5/10)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/21 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (4/11 to 7/25)
   For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
   Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass.
   Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabin (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (9/15 to 2/28)
7JJ Invertebrate harvesting
   For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ SUBDIVISION: DATE 1/11/96

USCG NAME: Roland A. Hubbard SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

1. Mix equal amounts of salt and baking soda and toss with oily areas to help break up oil.
2. Use a mixture of water solution to clean shallow oil stains.

ADEC
NAME: J. Lynn Martin SIGNATURE: J. Lynn Martin

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

NA TREATMENT SUGGESTED FOR SURFACE OIL, DUE TO THE FACT THAT IT'S ONLY LITTLE STAINS.

SUBSURFACE OIL COULD BE MECHANICALLY CLEANED UP USING TILLING TECHNIQUE FOR AGITATION PURPOSES.

LAND MANAGER
NAME: Patrick Scarrow SIGNATURE: Patrick Scarrow

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

Ref. to ADEC Comment.
SHORELINE OILING SUMMARY

OG Reiner USCG Hubbard
BIO RAMORA LAND REP S. Planert (Chenega) SUBDIVISION E 15 OF 5
EXXON/ARCILLA ADEC MARTIN

TEAM NO: 16 TIDE LEVEL: 0.0 to 1.5 DATE 4/11/90
LOCT SUBDIVISION LENGTH: 260.01 m

ST. SUBDIVISION LENGTH: 260.01 m

Sun Clouds Fog Rain Snow

UPLANDS DESCRIPTION: [ ] Grass [ ] Forest [ ] Rock

SURVEYED FROM: [ ] Foot [ ] Boat [ ] Helo WORKING DIRECTION: N to S

SURFACE SEDIMENTS: [ ] R. 80% [ ] B. 15% [ ] C. 3% [ ] P. 2% [ ] G. 0% [ ] S. 0% [ ] M. 0% [ ] V. 0%

SLOPE: [ ] Long [ ] Hang [ ] Vertical [ ] MALL

OIL CATEGORY: [ ] LENGTH:

ST. SUBDIVISION LENGTH:

LENGTH:

SURFACE OIL

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PAVEMENT: H F S sq. m by cm

PATTIES/TARBALLS BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT

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Photographs:
Roll No: 55-16-2
Frames: 24-29

SUBSURFACE OIL

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<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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COMMESTS
Long rocky coastline with exposed Ross cliff and platform. To platform
Seaside are often weathered with broken and larger blocks. This subsegment
was surveyed mostly by air with the exception of the sites below
on the mtn. A sub surface layer of oil was found on a small beach
beach (beach). The remnants of the segment have partially covered
dirtic coat or stain, cup lines and splashes (every light)

REVIEWED: [Signature] DATE: 4-4-90

Page 1 of 1
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST LA 15**  
**Subdivision** E  
**Date (mo / day / yr)** 4/1/90

**Time (24 hr)**  
**Biologist** TONY MACA

(A) **Substrate type and % of segments:**  
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) **Overall % cover of biota (% of segment):**  
Dense Moderate Low

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**  
(upper-U; mid-M; low tidal-L)  
juveniles / adults (X) , new settlement (O)

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**Wildlife Observations/ General Comments:**

- Long site encompassing ~90% bedrock/boulder w/dense biota and 10% cobble beach.
- Rock areas had dense & diverse alga.
- Cobble beaches were typical and upper zones were devoid of life.
- One point near landed on was dense with mussels in shell hash, tide pools (healthy), and dense biota generally.
- Keep beds offshore of rocky zones
- Wildlife seen: Seals, Grebes,

**ECOLOGICAL CONSIDERATIONS:** 7/24/73 141 7/27 4/18
SEGMENT ST/LA-15
SUBDIVISION E
DATE 4/1/90

CHECKLIST
- Arrow
- Slope
- Oily Mud
- Width
- Length
- Cover
- Subaqueous Character
- SWPLA WL
- SRI
- Profile Location(s)
- Photo(s)
- Site Location(s)
- Photo Location(s)

LEGEND
1
- Pit - No Subsurface Oil
2
- Pit - Subsurface Oil

SKETCH MAP

The entire length of this subsegment has splashes, drip lines sporadically distributed along rock cliff and large boulders.

This subsegment was surveyed by helicopter due to very rough rocky coast and limited air access.

Oil Character Length (ft): AP — PO — CV — DT — ST — MS — PT — TB — FL — NO — 160 ft
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-15 SUBDIVISION E (5 of 5)

WORK WINDOW

Bioremediation WORK PRIOR TO 7/1

EXEMPT STUDY SITES AP-11812 - DO NOT REMOVAL STAKES FROM BACK OF INTERDICTED ZONE

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K Purse Seine Hook-off Closed to bioremediation after 7/20.
1A,1B Salmon Stream NO CONSTRAINT. ADF&G catalogued stream 226-40-16782 is more than 100m from the work area.
5T Bald Eagle Nest NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision E work site.
7HH Subsistence: Finfish Harvesting Closed to bioremediation after 7/1.
7II Subsistence: Deer Harvesting Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restive boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoilied biota and substrate.

FOSCO

Prepared by

Date 6/7/90

Date 6/12/90
ECOLOGY MAP
SEGMENT LA-15

- Seabird Colony
- Active Eagle Nest
- Inactive Eagle Nest

Anadromous Stream
(226-40-16782)

Anadromous Stream
(226-40-16783)

WORK AREA

LA-15
LA-16
LA-19
LA-20
LA-18
LA-17
LA-31

METERS

EXXON
EXXON Company USA
Map Key: PKG-LA-15
June 04, 1990
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16782
SEGMENT LA-15 SUBDIVISION E

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
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<tr>
<td>Tarmat Removal</td>
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<td>Spot Washing</td>
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<td>Other Approved Treatment</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A, 1B Salmon Stream
ADF&G catalogued anadromous stream (226-40-16782) is in Subdivision E. This subdivision is closed to bioremediation, spot washing, manual tilling, and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, spot washing, manual tilling, and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, spot washing, manual tilling, and other approved treatment more than 100m from stream. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest
USFWS 6/1/90 map indicates an active nest in Subdivision E. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling and other approved treatment more than 400m from active nest.

7HH Subsistence:
Finfish Harvesting
Closed to bioremediation, spot washing, manual tilling, and other approved treatment after 7/1. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-15E
FOR ADDITIONAL CONSTRAINT INFORMATION.
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16782

SEGMENT LA-15 SUBDIVISION XE

WORK WINDOW

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<td>Other Approved Treatment</td>
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</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream  
ADF&G catalogued anadromous stream (226-40-16782) is in Subdivision C. This subdivision is closed to bioremediation, spot washing, manual tilling, and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, spot washing, manual tilling, and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, spot washing, manual tilling, and other approved treatment more than 100m from stream. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest  
USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling and other approved treatment more than 400m from active nest.

7HH Subsistence:  
Finfish Harvesting  
Closed to bioremediation, spot washing, manual tilling, and other approved treatment after 7/1. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-15C FOR ADDITIONAL CONSTRAINT INFORMATION.

Date 6/6/90

Prepared by  
Date 6/12/90
SHORELINE EVALUATION

SEGMENT ST/ LA-16     SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1   All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: _____________________ DATE: 4/28/90

OILING CATEGORIZATION:
Wide 207 m: Medium 31 m: Narrow 147 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes    No Maximum Depth 15 cm

RECOMMENDATIONS:

____ No Treatment Recommended
X Treatment Recommended
____ Manual Pickup
X Bioremediation
____ Tarmat: Removal

Snare/Absorbent Booms
X Oil Snares (pom poms)
____ Absorbents (pads, rolls, etc)
X Spot Washing: X Wands
____ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommended treatment includes spot washing with snare booms to contain sheen and oil followed by bioremediation. Work should be conducted after 6/1 and with USFWS approval based on eagle constraints.

TAG COMMENTS: ________________________________________________________________

TAG APPROVAL DATE: 4/26/90
ADEC  John Raven  JD Wilbur
EXXON  James Yost  Galen Yost
NOAA  James Petree  James Petree
USCG  Kenneth Klos  Kenneth Klos
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C  Salmon fry nursery area (4/31 to 7/31)
1D  Esther Hatchery release (4/15 to 6/1)
1E  Main Bay Hatchery release (4/20 to 5/10)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
1G  Cannery Creek Hatchery release (4/21 to 6/1)
1H  Remote release site
1I  Gill net area (5/7 to 8/31)
1J  Purse seine area (7/20 to 9/30)
1K  Purse seine hook-off (7/20 to 9/30)
1L  Set net sites (5/11 to 7/25)
   For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M  Herring spawning (4/1 to 6/15)
   Restrict boat traffic to essential minimum. Avoid damage to unceded intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P  Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q  Harbor seal and sea lion molting (9/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R  Seabird colony (5/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S  Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic.

5T  All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U  Recreation:
   Tent sites (8/1 to 9/15)
   Anchorage (8/1 to 9/15)
6W  Forest Service cabins (8/1 to 9/15)
6X  Lodge (8/1 to 9/15)
6Y  Special use destination

7Z  Subsistence area:
   Salmon harvesting (5/1 to 9/30)
   Finfish harvesting
   Deer harvesting (8/15 to 2/28)
   Invertebrate harvesting
   For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1 LA-16  SUBDIVISION:  DATE 4/10/80

USCG NAME R. Hubbard  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

1. Hot/cold water flush to remove oil coat.

ADEC
NAME J. Lynn Martin  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH OF AREA FOLLOWED BY BIOREMEDICATION. WOULD SUGGEST USE OF OMNI BARGE IN AREA DUE TO THE SHARP JAGGED, VERTICAL SHINGLE ROCK SURFACE.

LAND MANAGER
NAME Patrick Selman  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

WASH DOWN & BIOREMEDICATE.
SHORELINE OILING SUMMARY

<table>
<thead>
<tr>
<th>TEAM NO.: 46</th>
<th>TIME 09:50 to 10:45</th>
</tr>
</thead>
</table>

EST. SUBDIVISION LENGTH: 3.52 m

SURVEYED FROM: Foot, Boat, Helo

SLOPE: Long 20%, Hang 20%, Vert 5%

AVG DATE: 10/10/90

OIL CATEGORY LENGTH: W 1.72 m M 3.79 m N 89 m

SURFACE OIL

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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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PAVEMENT: H F 8 — sq m by — sq m

NEAR SHORE SHEEN? ☐ BR RW SL TL

OILED DEBRIS AMOUNT

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<th>LOGS</th>
<th>BR</th>
<th>MD</th>
<th>LG</th>
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DEBRIS COLLECTED ☐ YES ☐ NO

PHOTOGRAPHS:

Rail No. ST-16-9 19
Frame 33-57

SUBSURFACE OIL

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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<th>SUBSURFACE SEDIMENTS</th>
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* Oil in pit 1 = 5 cm deep mud constitute subsurface oil.

COMMENTS: Rocky shoreline with a mouth of angular boulder along tideline and fringing, two small pocket eddy/boulevard beaches. The entire segment is oiled with the higher concentration along the dune and interior 5.0 km band of 80-90% coverage and separate pooled oil in crags and around boulders. The oil distribution is wider on the lower slope bands areas and narrower along the rocky eddy where no oiling change to a coating that maintains the same distribution.

Page 1 of 6

REVIEWED: GM DATE 4/12/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST, LA Subdivision - - - Date (mo/day/yr) 4/10/90

Time (24 hr) 0900-1045 Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 55 Low 5

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):

juveniles / adults (X) , new settlement (3)

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<th>Sparse</th>
<th>Rare</th>
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Wildlife Observations/General Comments: OTTER CARCLASS FOUND - NO VISBILE OIL
- NEAR COMPLETE MUSSEL COVERAGE IN MZ
- MUSSELS ON ROCKS NEAR POSSIBLE TREATMENT AREAS
- BARNACLE SPOT NOTED ON OIL COAT ON ROCK FACE

Ecological Considerations:

7II,

- NO EAGLE NEST WAS SEEN BUT 3 EAGLES WERE SEEN IN TREE AT HEAD OF BAY. EAGLE "PELLETS AND... POSSIBLE EAGLE SHIT WAS FOUND NEAR OTTER CARCLASS, INDICATES EAGLE FEEDING AREA
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-16 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation
Spot Washing
Other Approved Treatment

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unölled biota and substrate.
SHORELINE EVALUATION

SEGMENT ST/ LA-17  SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ___________________________ DATE: 5/8/90

OILING CATEGORIZATION:
Wide 157 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes __ No X Maximum Depth____

RECOMMENDATIONS:
____ No Treatment Recommended  ____ Snare/Absorbent Booms
____ Treatment Recommended  ____ Oil Snare (pom poms)
____ Manual Pickup  ____ Absorbents (pads, rolls, etc)
____ Bioremediation  ____ Spot Washing: X Wands
____ Tarmat: ____ Removal  ____ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of pooled oil in areas shown on attached sketch map followed by bioremediation,
2) bioremediation only of other areas shown on map. 3) spot washing with wands. Work should be conducted with approval of USFWS regarding eagle nest constraints.

TAG COMMENTS: ________________________________________________________________

TAG APPROVAL DATE: 4/25/90
ADEC ExxOn NOAA USCG  

FOSC: __________ DATE: 5/12/90
CVC Rep to be on site.
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A  
Salmon stream mouth - fry outmigration  (3/1 to 5/15)

1B  
Salmon stream mouth - spawning  (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C  
Salmon fry nursery area  (4/31 to 7/31)

1D  
Esther Hatchery releases  (4/15 to 6/1)

1E  
Main Bay Hatchery releases  (4/20 to 5/10)

1F  
Seward Bay Hatchery releases  (4/15 to 6/1)

1G  
Cannery Creek Hatchery releases  (4/21 to 6/1)

1H  
Remote release site

1I  
Gill net area  (6/7 to 8/31)

1J  
Purse seine area  (7/20 to 9/30)

1K  
Purse seine hook-off  (7/20 to 9/30)

1L  
Set net areas  (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M  
Herring spawning  (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P  
Harbor seal and sea lion pupping  (5/15 to 7/1)

3O, 3Q  
Harbor seal and sea lion molting  (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R  
Seabird colony  (5/1 to 8/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

5S  
Shorebird/waterfowl concentration  (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T  
All Bald Eagle nests  (3/1 to 8/1)
Active Bald Eagle nests  (3/1 to 8/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 8/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U  
Recreation:  
Tent sites  (6/1 to 9/15)

6V  
Anchorages  (6/1 to 9/15)

6W  
Forest Service cabins  (6/1 to 9/15)

6X  
Lodge  (6/1 to 9/15)

6Y  
Special use destination

7Z  
Subsistence areas:  
Salmon harvesting  (5/1 to 9/30)

7HH  
Finfish harvesting

7I  
Deer harvesting  (9/15 to 2/28)

7JJ  
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST, LA-17 SUBDIVISION: _______________ DATE 4/10/90

USCG NAME: R. Hubbard SIGNATURE: _______________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

1. I concur with comment stated by Robert Rep.

ADEC NAME: J. Lynn Martin SIGNATURE: _______________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH OF AREA, FOLLOWED BY BIOREMEDIATION. WOULD SUGGEST USE OF OMN/ARGE TOW ROPE DUE TO VERTICAL SHINING ROCK SURFACE.

LAND MANAGER NAME: Patrick Scannell SIGNATURE: _______________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I would suggest manual removal before of some of the product and oil before any attempt to that wash this area, because the concern is so massive.
SHORELINE OILING SUMMARY

TEAM NO.: 16
TIDE LEVEL: 0 to 4
DATE: 4/10/90

SURFACE OIL

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PAVEMENT: H F S ______ sq.m by ______ m

PATTIES / TARBALLS ______ BAGS
NEAR SHORE SHEEN? ______
BR ______ RW ______ SL ______ TL ______

OILED DEBRIS

- Logs
- Vegetation
- Trash
- Debris
DEBRIS COLLECTED

- YES
- NO

TYPE______

#BAGS ______

Photographs:

- Roll No. ST-16-8
- Frames ______

SUBSURFACE OIL

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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
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<th>BELOW</th>
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COMMENTS: Boulder beach with numerous rock outcrops and backshore rock cliffs.

The entire segment has a wide oiling character in the form of a coating on, around and under boulders (60-80% coverage), 10-20 cm band. Also associated with this spreading is patchy pooled oil in cracks and crevices in rocks and around boulders. A broken coating (50% coverage) is found along the west cliffs and boulders in to 125 ft.

Page 1 of 6

REVIEWED JPH DATE 4/16/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ LA 17
Subdivision
Date (mo/day/yr) 4/10/90
Time (24 hr) 09.50 Ap Biology Tony Zamora

(A) Substrate type and % of segments:
1) Bedrock 20
2) Boulder 50
3) Cobble 20
4) Pebble 4
5) Sand 8
6) Silt

(B) Overall % cover of biota (% of segment): Dense 90
Moderate 10
Low 1

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
Juveniles/adults (X), new settlement (B)

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</table>

Wildlife Observations/General Comments:
- Productive 4/ 10
- High # of barnacle spat in M2. High mortality of adults noted.
- Mussels were all on rock outcrop
- Abundant Diadema

Ecological Considerations:
SEGMENT ST/ LA-17
SUBDIVISION A
DATE 4/10/90

CHECKLIST
- Artes
- Approx. Depth
- Sub Strata
- Oil Dist.
- Width
- Length
- X-Over
- Subsurface Character
- Depth
- Location(s)
- Color(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 ▲
فل - No Subsurface Oil

2 ▲
فل - Subsurface Oil

CT/C Contact/Cut-Off
CT/B Broken Distribution
CT/P Patchy Distribution
CT/S Spaced Distribution

Oiled Vegetation

Oil Character Length (m): AP ○ PO 120 CV 158 CT 80 ST MS FT TB FL NO
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LA-17 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
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</thead>
<tbody>
<tr>
<td>Bioremediation Spot Washing</td>
<td>OPEN</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest
NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

711 Subsistence: Deer Harvesting
No constraint to manual pickup and spot washing. Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to uncilled biota and substrate.

FOSC DATE 6-10-90

Prepared by: P.P. Phillips Date: 6/10/90
SHORELINE EVALUATION

SEGMENT ST/LA-18 (REVISED) SUBDIVISION A (1 OF 1) DATE 4/2/90 (REVISED) 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
#226-40-16780 (Ps, 12/89)

Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

SHPO SIGNATURE: ___________________________ DATE: _____________

OILING CATEGORIZATION:

Wide 449m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 30 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30 cm

RECOMMENDATIONS:

_____ No Treatment Recommended  _____ Snare/Absorbent Booms
_____ Treatment Recommended  _____ Oil Snares (pom poms)
X Manual Pickup  _____ Absorbents (pads, rolls, etc)
X Bioremediation  X Spot Washing: hand Wands
X Tarmat Removal  _____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommended treatment includes: 1) manual removal of tarmat, 2) manual pick up of mousse and pooled oil, 3) spot wash as required and 4) bioremediate areas of coat and cover as indicated on attached sketch map. Work between 5/15 and 7/10 due to anadromous stream constraints.

TAG COMMENTS: 

TAG APPROVAL DATE: 5/17/90
ADEC Art Weinner Art Weinner
EXXON Mary Oin Mary Oin
NOAA Gary Porter Gary Porter
USCG G.A. Heichel G.A. Heichel

By has repeatedly failed to provide their written comments, even after several
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (5/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morton 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Pelitz 424-3214

1D Gill net area (6/7 to 8/31)
1E Set net area (7/20 to 9/30)
1F Purse seine hook-off (7/20 to 9/30)
1G Purse seine (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Pelitz 424-3214

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unclosed intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3225

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q Harbor seal and sea lion molting (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulout. No application of Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 736-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 736-3377
ADF&G Tom Rathy 267-2206

5T All Bald Eagle nests (5/1 to 6/1) Active Bald Eagle nests (5/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 736-3377

6U Recreation:
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)

Excursion boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or Inpol application which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
Note: This is a Revised Segment

The boundary on the computer generated maps was incorrectly positioned between these two segments. The original SSAT reports reflect the incorrect boundaries. The attached revised SSAT reports have been prepared by the original SSAT team members and reflects an adjustment of boundary position only and not a change of observations. All information on the original SSAT reports are included on the revised reports, however some information was moved from one segment to the other as necessary. Sketch maps, percentages and measurements have been adjusted accordingly.
SHORELINE OILING SUMMARY

Revised 4/27/90

SEGMENT ST/ L A-18

TIME/ DATE 10:30 / 4 / 2 / 90

TEAM NO.: 1

TIDE LEVEL: + 1.35' to -0

UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock ☒ Snow

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo

WORKING DIRECTION: North to South

SURFACE SEDIMENTS: ☐ Rock ☐ Sand ☐ Silt ☐ Organic ☒ Clay ☐ Clayey Sand

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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</table>

PAVEMENT: H F ☒ 70 sq. m by 5 cm

PATTIES / TARBALLS ☒ 0 BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS AMOUNT DEBRIS COLLECTED TYPE

Logs ☒ 0 YES ☒ NO

Vegetation ☒ 0 YES ☒ NO

Trash ☒ 0 YES ☒ NO

Debris ☒ 0 YES ☒ NO

#BAGS

Photographs:

Roll No. 57163
Frames 11.22, 27.29

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>OILED DEBRIS</th>
<th>AMOUNT</th>
<th>DEBRIS COLLECTED TYPE</th>
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<td>PSG-C</td>
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COMMENTS: Shingle beach - boulder, cobble, lag deposits of xenine, cobble, granule substrate, focused material at north end of segment with angular blocks?; Pebbles, Cobble, Scattered boulders to the south end by stream. Band of oil 12-50m wide over entire segment, except for small runoff stream at the north end of the segment, and longer stream at south end. Oil is coating or covering finer pebbles, granules, cobbles, surface mantle of boulders are generally clean; however, there is some core and coat on the sides of boulders.
### SHORELINE OILING SUMMARY (PAGE 2 of 2)

SEGMENT ST/ LA-18 SUBDIVISION A

#### SUBSURFACE OIL (CONTINUED)

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<tr>
<th>PIT NO.</th>
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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (CM-CN)</th>
<th>OILED INTERVAL (CM-CN)</th>
<th>OIL/FILM COLOR</th>
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<td>PG-C</td>
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**COMMENTS**

Near finer surface sediments, and pooled oil in cracks and crevices between rocks and boulders.

(Note Aerial Picture: ST-16-3 (1-10) Sleepy Bay la-16, 17, 18, 19, 20)
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ LA 18 Subdivision ___________ Date (mo / day / yr ) 4/2/90

Time ( 24 hr ) 12:45 OF = Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: ( upper-U; mid-M; low tidal-L ); juveniles / adults (X), new settlement (3)

<table>
<thead>
<tr>
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<th>Sparse</th>
<th>Rare</th>
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</table>

Wildlife Observations/ General Comments:

- Low zone was not exposed during survey.
- North end of site is much more productive - Its lower energy.
- Filamentous green algae on mid & low zones, dense amphipods under cap; gastropods were: Almaceids & Littorines, no Nucella found, nor drilli mytilus shells.
- Wildlife: 1 Adult Eagle, 1 Juvenile Eagle, 2 Ravens, fish skeleton, dead otter tail & vertebra found.
- Low mortality of Mytilus though some have tar splatters.
Photo location map

LA-18

Zone of densest biota

1 - Photograph
2 - Pit location
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-18 SUBDIVISION A (1 of 1)

**WORK WINDOW**

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>WORK 5/15 to 7/10</td>
</tr>
<tr>
<td>Bioremediation More Than 100m From Stream</td>
<td>WORK PRIOR TO 8/15</td>
</tr>
</tbody>
</table>

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-40-16780) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup.

711 Subsistence: Deer Harvesting

Closed to bioremediation after 8/15. No constraint to manual pickup.

**OTHER ECOLOGICAL CONSIDERATIONS**

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum. No flushing of pollutants or sediments into stream drainage; do not allow input to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unooled biota and substrate.

FOSC  

Date 6-20-90

Prepared by

Date 6/19/90
Segment LA 018
Stream 226-40-16620
Sleepy Bay

Ecological Summary

This stream has steep, unconsolidated banks
with a considerable amount of remaining buried
and surface oil. Cobble and boulders near
stream mouth are more or less barren except for
a film of green algae. A mature community
including mussels, barnacles, Fucus, Bangia,
Ule, Enteromorpha, etc., exists on MTZ
bedrock about 60 m west of stream. Some of
the barnacles and mussels are coated with oil, but
most are alive, and their size indicates they
are more than a year old. There are no
ecological constraints re: intertidal biota as
per recommended cleanup measures.

Michael Fawcett
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-18  STREAM NO: 226-40-16780  DATE  4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
6U  Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. There are no ecological constraints re: intertidal biota as per recommended cleanup measures.

SHPO SIGNATURE:  DATE:  5/11/90
Subsurface Oil Observed:  Yes  No  Maximum Depth 45+cm

RECOMMENDATIONS:

_____ No Treatment Recommended  _____ Snare/Absorbent Booms
_____ Treatment Recommended   _____ Oil Snares (pom poms)
_____ Manual Pickup           _____ Absorbents (pads, rolls, etc)
_____ Bioremediation          _____ Spot Washing:  X  Wands
X  Tarmat:  Breakup            X  Spot Washing:  X  Wands
X  Removal                   X  Spot Washing:  X  Wands

_____ Beach Cleaner
_____ Other (see comments)

COMMENTS:  Recommended treatment includes 1) manual removal of patties and vegetation, 2) mechanically till areas as indicated on attached sketch, 3) spot wash, and 4) bioremediate after tilling. Line stream bed and waterline with pom pom boom during mechanical work. Work should be conducted between 5/15 and 7/10 and with ADF&G approval of tilling and bioremediation of stream banks.

TAG COMMENTS:  Manually Rake Surface Oiled Sediments Away from the Stream, Particularly Where Banks Are Steep as Indicated on Sketch.
Manually Remove Tarmat on East Bank of Stream.

TAG APPROVAL DATE:  5/10/90
ADEC  Art Wexler  Art Wexler  EXXON  Andy Tett  Andy Tett
NOAA  Bruce Wescott  Bruce Wescott  USCG  D. D. Rome  D. D. Rome
FOSC:  ___  DATE:  5/16/90
Notify CUC 24 hrs. in advance of work.
Salmon stream mouth - fry outmigration (5/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or ininpel application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G or PWS Aquarium for consultation for confirmation and authorization.

AGENCY CONTACT PERSON: AOF&G Larry Peltz 424-3214

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or ininpel application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: AOF&G John Morison 267-2324

1D Estero Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sewall Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or ininpel application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquarium. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: AOF&G Larry Peltz 424-3214

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-up (7/20 to 9/30)
1L Set net areas (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net areas are present (1L) restrict boat operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or ininpel application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncolded intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or ininpel application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of ininpel within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5T Bald eagle nests (3/1 to 6/1)
5U Active Bald eagle nests (3/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentrations (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Rothen 267-2206

5W Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Subsistence area: Deer harvesting (9/15 to 2/28)
7J Subsistence area: Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of ininpel which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 14A 018  SUBDIVISION: 16780  DATE 4/22/90

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. MANUAL CLEAN-UP: remove + bag, mousse + asphalt and oily debris length of stream to fallen log

2. Bioremediation right side bank.

3. CAUTION!!! HOT WATER WASH RIGHT BANK (looking ONSHORE) [THIS IS POSSIBLE REMOVAL OPTION — NOT NECESSARILY SUGGESTED]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

REFER TO ADFG ANADSCAT OBSERVATION AND RECOMMENDATIONS SUMMARY FOR THIS DATE.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

22 April 1990

ASC No. 226-40-16780

Segment LA-018 (Sleepy Bay)

Observations

This site was very heavily oiled last year and remains a heavily impacted site. Nearby deposits of mobile oil are a source of chronic reoiling of the stream channel. Within the upper intertidal portion of the channel, both banks have bands of recently (< 5 days) deposited oil and oily debris. Along the low-mid-intertidal east bank of the channel are relatively recent heavy surface deposits of mousse.

A band of oiled substrate crosses the stream channel in the upper intertidal zone. Cascading oiled gravels and cobbles cover the western upper-intertidal bank and the adjacent submerged portion of the stream channel. Multiple pits east of the channel did not reveal significant quantities of oil adjacent to the stream. However, the upper- and mid-intertidal portions of the beach west of the channel contain large amounts of buried oil. This pattern is consistent with the sites of oiled gravel removal conducted last year (oiled gravel was removed east of the channel but not west of the channel).

The level of substrate oiling increases west from the stream. An extremely heavy deposit of mobile oil begins approximately 50 meters from the channel. This deposit is a likely source for the chronic re-oiling of the stream channel.

Although mostly covered by snow, limited observations indicate that the storm berm on either side of the channel contain significant amounts of oil and oily debris. Heavily stained cobbles and boulders are densely distributed throughout the upper- and mid-intertidal zones.

Treatment Recommendations

Nearby sources of chronic re-oiling must be thoroughly treated prior to cleaning the immediate stream area. All surface mousse and tar deposits on and near the stream bank and within the stream channel should be manually removed. The oil deposit west of the channel should be hot washed, mechanically tilled, and hot washed again. This would be a very appropriate location to apply mechanical gravel washing techniques, should they become available.
## Shoreline Oilking Summary

### OD: William Reid

**USCG** McMahon, Segment St/LA 018

**BO: Michael Farce**

**Land Rep: T.J. Crowe** ADFG Mike Wagner

**EXXON: Gus Garcia**

**Team No.: 15**

**Tide Level:** 7.5 ft

**Est. Subdivision Length:** 240 m

- **Sun**
- **Clouds**
- **Fog**
- **Rain**
- **Snow**

**Uplands Description:**
- **Grass**
- **Forest**
- **Rock**

**Surveyed From:**
- **Foot**
- **Boat**
- **Helo**

**Surface Sediments:**
- **B 10% C 65% P 25% G**
- **% M % V**

**Slope:**
- **% B 35% H**
- **% Hang 20% Vert**

**Wave Exposure:**
- **Low**
- **Med**
- **Hi**

**Oil Category Length:**
- **W**
- **M**
- **B 20 m N 50 m V**
- **m NO**

### Surface Oil

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oil/Film Color</th>
<th>Impacted Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Pavement</td>
<td>POOL</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pool</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cover</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Stain</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mousse</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
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</tr>
<tr>
<td>Film</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>No oil</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

### Pavement

- **H F S**
- **0 sq m by 0**

### Patties/Tarballs

- **0**

### Near shore sheen

- **No**
- **BR**
- **RW**
- **SL**

### Oiled Debris

- **Yes**
- **NO**

### Photographs

- **Roll No.**
- **Frames**

### Subsurface Oil

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Debris Removal (0-30)</th>
<th>Below</th>
<th>Oil/Film Color</th>
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<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
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<td>A0</td>
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</tr>
<tr>
<td>3</td>
<td>50</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>A0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>6</td>
<td>50</td>
<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
</tbody>
</table>

**Comments**

**Reviewed:** 4-24
### Shoreline Oiling Summary (Page 2)

**Segment ST. LA-18, Stream:** 15.80 ft.

**226-40-16780**

#### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oily Film Color</th>
<th>Pit Zone</th>
<th>Sheen (YN)</th>
<th>Surface Subsurface Sediment</th>
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<tbody>
<tr>
<td>7</td>
<td>15</td>
<td>X</td>
<td>0-10</td>
<td>X</td>
<td>X</td>
<td>Y</td>
<td>P/C</td>
</tr>
<tr>
<td>8</td>
<td>30</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>V</td>
<td>B/C</td>
</tr>
<tr>
<td>9</td>
<td>95</td>
<td>X</td>
<td>0-45</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>P/C/C</td>
</tr>
</tbody>
</table>

**Comments**

* Oiled Interval < 5 cm in Pits 1, 2, 6, 7, 9 does not constitute subsurface.
DATE: 4/22/90
START TIME: 1430
STOP TIME: 1605
SEGMENT #: LA-018
STATION #: 226-040-16780
LAT: ______
LONG: ______
SOURCES: Map, Loran
LOCATION: Sleepy Bay, North End, Latouche
DESCRIPTION:

EXTENT OF OIL

SHORELINE STREAM

L 100 150 75 150 3 10
W 150 150 3 10

CATALOGED AWAG. FISH SIGHTED
CATALOG #: 226-040-16780
STREAM NAME: Sleepy Bay
OIL IN STREAM BED
OIL ON STREAM BANKS
OIL OR BEACH ADJACENT TO MOUTH OF STREAM (within 50 meters)
OIL WITHIN 1 MILE OF STREAM

OIL TYPE: Pooled, Mousse, Tar, Asphalt, Tar, Streak
OILED DEBRIS: Y
SHORELINE TYPE: Headland, Low-lying Rocks, Beach, Cove
WAVE EXPOSURE: High, Moderate, Low
SUBSTRATE TYPE: Bedrock, Boulder, 20, Cable, 40
Gravel 40, Sand, Mud/Slime

NOTES: Very heavily impacted site with very recent oiling. Both banks of the channel in the upper injection zone have been oiled in the past 5 days. Source of oil likely to be heavily oiled substrates (100 mt. West of channel). Oiled substrates in 10 mt. band across stream.

In mid and upper intermittent zone to west of channel, where oil penetrates deeply into substrate, recommend hot water wash - tilling - hot water wash. Although the heaviest oil in the stream is outside the anadromous fish stream zone, it is a probable source of the oil which continuously enters the site.

This area must be treated quickly and thoroughly.

I agree with recommendations.

Heavy stain on surface cobble and boulders throughout intermittent zone.

Extremely heavy oiling on and between large boulders - mobile oil: Probable source of recent re-oiling of stream channel.

Deeply buried oil throughout shaded zone (hot water wash, till, hot water wash).

Dense (manual mouse removal) mats: Surface to 10 cm min.

Oiled debris in storm sewer (manual removal).

Oiled material in storm sewer (manual removal).

Recent surface oiling of stream banks (manual removal).

Mouse/tar coating.
MANUALLY REMOVE PARTIES & OILED VEGETATION

MECHANICALLY FILL TO EXPOSE OILED GRAVELS/SEGMENTS

SPOT WASH & BROADCAST

MANUAL PICKUP OF TARMAT

CUT STREAM BED WITH AM/AM DURING WORK

OIL CHARACTER LENGTH (in): AP -- PO -- CV -- CP -- P1 -- TD -- FL -- HO

SPAT WASH + RIN
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16780

SEGMENT LA-18 SUBDIVISION A

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot Washing</td>
<td>Work Prior to 8/15</td>
</tr>
<tr>
<td>Other Approved Treatment</td>
<td>Work Prior to 8/15</td>
</tr>
<tr>
<td>Bioremediation</td>
<td>ADF&amp;G Monitor Req.</td>
</tr>
<tr>
<td>Manual Raking</td>
<td></td>
</tr>
<tr>
<td>Mechanical Tilling</td>
<td></td>
</tr>
</tbody>
</table>

* EXXON'1 STUDY SITE # AP-18 - DO NOT REMOVE STAKES FROM BACK OF INTERDIMAL ZONE

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A.1B Salmon Stream

This subdivision is closed to bioremediation, manual raking, and mechanical tilling less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, manual raking, and mechanical tilling are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, manual raking and mechanical tilling more than 100m from stream. No constraint to manual pickup, tarmat removal, spot washing and other approved treatment.

711 Subsistence: Deer Harvesting

Closed to bioremediation, manual raking, mechanical tilling, spot washing, and other approved treatment after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Irpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unollled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-18A FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC [Signature] Date 6-10-90

Prepared by [Signature] Date 6/10/40
SHORELINE EVALUATION

SEGMENT ST/LA-19 (REVISED) SUBDIVISION A (1 OF 1) DATE 4/2/90
4/27/90 (REVISED)

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiied biota and substrate. No additional constraints.

SHPO SIGNATURE: K. Parker DATE: 5/18/90

OILING CATEGORIZATION:
Wide 149 m: Medium 0 m: Narrow 20 m: V. Light 17 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15cm

RECOMMENDATIONS:
--- No Treatment Recommended --- Snare/Absorbent Booms
X Treatment Recommended --- Oil Snares (pom poms)
X Manual Pickup --- Absorbents (pads, rolls, etc)
X Bioremediation X Spot Washing: X Wands
X Tarmat Removal --- Beach Cleaner
--- Other (see comments) --- Trash

COMMENTS: Recommended treatment includes: 1) manual removal of pavement and pooled oil, spot wash if not accessible, 2) bioremediate continuous and broken coat in UITZ and MITZ as indicated on attached sketch map. Work before 8/15 based on constraints.

TAG COMMENTS: Monitor to assess COGS

TAG APPROVAL DATE: 5/17/90.
ADEC Art Weimer Art Weimer FOSC:
EXXON
NOAA
USCG

DATE: 6-14-90
CVG Hand manager to be present during cleanup
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to or at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Pettz 424-3214

Esther Hatchery release (4/15 to 6/15)
Main Bay Hatchery release (4/20 to 6/15)
Sawmill Bay Hatchery release (4/15 to 6/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to or at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Pettz 424-3214

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. Avoid damage to unseeded intertidal and subtidal algae and seagrass. Plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unseeded intertidal and subtidal algae and seagrass. Plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal and 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 6/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/26)
Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or in situ application which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350
Note: This is a Revised Segment

The boundary on the computer generated maps was incorrectly positioned between these two segments. The original SSAT reports reflect the incorrect boundaries. The attached revised SSAT reports have been prepared by the original SSAT team members and reflects an adjustment of boundary position only and not a change of observations. All information on the original SSAT reports are included on the revised reports, however some information was moved from one segment to the other as necessary. Sketch maps, percentages and measurements have been adjusted accordingly.

[Signature]

[Signature]

[Marked: LA-18 -> LA-19 Revised]
SHORELINE OILING SUMMARY

OG Reimer USCG Hubbard SEGMENT ST/LA-19
BIO Zamora LAND REP Selanoff (CUC) SUBDIVISION A
XXON Garcia ADEK Martin
TEAM NO. 16 TIDE LEVEL: -4.0 to -1.5 DATE 4/4/90
EST. SUBDIVISION LENGTH: 174 m

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>POOLED</td>
<td>X</td>
<td>V</td>
<td>O</td>
</tr>
<tr>
<td>COVER</td>
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<tr>
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<tr>
<td>TARBALLS</td>
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<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
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</tr>
</tbody>
</table>

PAVEMENT: H F 5 32 sq.m by 5 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL
OILED DEBRIS AMOUNT
Logs SM MD LG
Vegetation
Trash X
Debris
Photographs:
Roll No. 51-163
Frames ZS - 264 30 31

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>OILED INTERVAL</th>
<th>UNDER OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>1</td>
<td>15</td>
<td>5-15 X</td>
<td>X</td>
<td>X</td>
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</table>

COMMENTS: Cobble, boulder armor over pebble, granular, cobble substrate. Numerous rock outcrops throughout the segment. Oil distribution is fairly continuous over the whole segment. Finer sediments are coated in most areas to 3-5 cm. Surface boulders, cobbles and rocks have a discontinuity by the segment (44 m), and pooled oil is coming around larger blocks. Snow cover.

Reviewed: DATE 4/30/90

Page 1 of 2
LA-19
Revised (4/27/90)
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST LA 19 Subdivision _______________ Date (mo/day/yr) ____________

Time (24 hr) 1440 off Biologist _______________ TONY ZAMORA

(A) Substrate type and % of segments:
   (1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense____ Moderate____ Low____

(C) Density, substrate preference (by number from A, above), &
   vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
   juveniles/adults (X), new settlement (3)

<table>
<thead>
<tr>
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Wildlife Observations/ General Comments:

- Only uppermost margin of low zone exposed.
- Dense biota on boulders at west end and on rock outcrop.
- Upper zone has trace filamentous green alga which becomes thick in mid zone.
- Diverse community on boulders at west end - gunnels, palmaeae, leptothamnus, leathesides, littorina, chiton, halosaccion, acmaeids, scyphobranchae, sheen observed on tide pools.
- 100% mortality of oil coated barnacles in high zone.
- Wildlife - deer tracks, eagles.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LA-19 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
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<tr>
<td>Tarmat Removal</td>
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<td>Bioremediation</td>
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<td>Spot Washing</td>
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<tr>
<td>Other Approved Treatment</td>
<td>WORK PRIOR TO 8/15</td>
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</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

711 Subsistence: Deer Harvesting  Closed to bioremediation, spot washing, and other approved treatment after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiiled biota and substrate.

FOSC

Prepared by

Date 7/1/00

Date 6/4/90
SHORELINE EVALUATION

SEGMENT ST/ LA-20 SUBDIVISION A (1 OF 4) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: __________________________ DATE: 5/22/90

OILING CATEGORIZATION:
Wide 244 m: Medium 78 m: Narrow 0 m: V.Light 0 m: No Oil 41 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:
_____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: X Removal

_____ Snare/Absorbent Booms
_____ Oil Snares (pom poms)
_____ Absorbents (pads, rolls, etc)
_____ Wands
_____ Spot Washing: Wands
_____ Beach Cleaner
X* Other (see comments)

COMMENTS: Recommended treatment includes 1) reassessment of oiling conditions immediately prior to treatment, 2) removal of tarmats and oiled debris, 3) mechanical relocation of UITZ sediments to MITZ followed by bioremediation. Work should be conducted after 6/1 and with permission of USFWS due to eagle nesting constraint.

TAG COMMENTS:

__________________________________________

TAG APPROVAL DATE: 5/18/90
ADEC Art Weinert Art Weinert
EXXON
NOAA
USCG
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Escher Hatchery release (4/15 to 8/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 8/1)
1G Cannery Creek Hatchery release (4/21 to 8/1)
1H Remote release sites
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 8/15)
Restrict boat traffic to essential minimum. Avoid damage to unaltered intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T Active Bald Eagle nests (3/1 to 6/1)
Restrict all traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7JJ Deer harvesting (8/15 to 2/26)
7JJ Invertebrates harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LA-20  SUBDIVISION: A  DATE 4/2/90

USCG  NAME  Richard X. Hubbard  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

ADEC  NAME  J. Lynn Martin  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

LAND MANAGER  NAME  Patrick Scammell  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Regardless of the changes that are taking place, the hole will be here for a long time if we do not intervene, because it is embedded so deep.
Field Shoreline: Comments LA-20A

ADEC

J. Lynn Martin J. Lynn Brya

Agree with Exxon ops. recommendation for re-assessment of area at a later date, due to movement of storm born on beach.

On 4-2-90 the team conducted survey of LA-20A, noted a heavy bank of subsurface oil in the UI to storm born oil. Consisted of thick, mousse mixed with kelp. Test pits were dug and revealed that the oil started about 15 cm. down and extended < 40 cm.

On 4-6-90 the V landed on LA-20 A to unload gear and finish the rest of segment LA-20. Noted that storm born had moved down to the lower part of the UI, 

Subsurface test of 4-2-90 was now visible on surface which suggests area needs re-assessment at a later date to determine beach characteristics and oil penetration.
**SHORELINE OILING SUMMARY**

**SEGMENT:** LA - 20  
**DATE:** 4/2/90  
**TIME:** 14:45  
**TEAM NO.:** 16  
**TIDE LEVEL:** +1.76 m  
**UPLANDS DESCRIPTION:** Sun, Clouds  
**SURVEYED FROM:** Feet, Boat  
**WORKING DIRECTION:** S to N  
**SURFACE SEDIMENTS:** R 60%, B 20%, C 20%, P 10%  
**SLOPE:** Long  
**WAVE EXPOSURE:** Low  
**OIL CATEGORY LENGTH:** W 200 m M 60 m N 40 m V 40 m  
**OIL DISTRIBUTION:** Film Color

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</table>

**NEAR SHORE SHEEN?** No  
**BAGS** 0

**OILED DEBRIS**  
- Logs  
- Vegetation  
- Trash  
- Debris  

**DEBRIS COLLECTED**  
- YES  
- NO

**AMOUNT**

### SURFACE OIL DESCRIPTION

- Moderate slope high energy beach  
- Surface sediments are in the pebble, cobble size range @ the South end of the segment, but coarse to boulders toward the North end.  
- Rocks, Boulders, sand and scattered cobble found in the sub-surface.  
- Surface oil was found at the North end in the CSS, associated with the active storm term.  
- The majority of this oil is mixed with Kelp, sand, pebbles and cobble, covering an area 120m x 34 m.  
- The Subsurface mousse is mixed with organics, Kelp and finer sediments.
## Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED INTERVAL (cm cm)</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<th>SUBSURFACE SEDIMENTS</th>
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<td>10-35X</td>
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### Comments

[Review date: 4/9/90]
FILAMENTOUS GREEN ALGAE, Oligochaete worms under cobble

LA-20-A
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA ZO Subdivision ___________ A ___________ Date (mo / day / yr ) 4/2/90

Time (24 hr ) 1552 off Scientist Tony Zamora

(A) Substrate type and % of segments:
   (1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles / adults (X), new settlement (3)

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Wildlife Observational/General Comments:
- High energy cell, little life
- Low zone unexposed
- Most op site is cobble/pebble, # cobble, at west end in mid zone, has filamentous green algae coat.
- Under cobble in mid zone, dense, oligochaetes.
- Wildlife: Pacific Starfish (Mediterranean), Dead Otter - Full carcass (skin & bones), flesh missing around face only, no oil visible on coat.

Ecological Considerations: 711.
### ADDENDUM: SUBDIVISION CONSTRAINTS

**SEGMENT LA-20 SUBDIVISION A (1 of 4)**

### WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
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<tbody>
<tr>
<td>Tarmat Removal</td>
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<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 8/15</td>
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<tr>
<td>Mechanical Relocation</td>
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### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Time Constraint</th>
<th>Details</th>
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<tbody>
<tr>
<td>5T Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.</td>
</tr>
<tr>
<td>7ii Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation and mechanical relocation after 8/15. No constraint to manual pickup and tarmat removal.</td>
</tr>
</tbody>
</table>

### OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC **D Draheim** Date 6/6/90

Prepared by **F Phillips** Date 6/22/90
WORK PLAN ADDENDUM

SEGMENT LA-20       SUBDIVISION A       DATED 20 Jul 1990

MODIFICATION

1. REASON FOR MODIFICATION

Reassessment called for in original work order indicated need for specific detailed work plan.

2. ADJUSTMENT TO WORK PLAN

SEE ATTACHED WORK PLAN

SHPO APPROVAL NEEDED YES _______ NO X

SHPO SIGNATURE ________________

TAG APPROVAL DATE ____________

ADEC SEE ATTACHED

EXXON LETTER

NOAA _________________________

USCG _________________________

FOSC: ____________ DATE 7-31-90

Ensure all work is conducted in such a manner as to result in minimum impact to the environment.
July 20, 1990

TO: Admiral D.E. Ciancaglini

FROM: Technical Advisory Group

In reviewing and assessing the proposed work plan modification for the buried lense in the super intertidal zone at LA20 A, we cannot reach a consensus as to the preferred treatment method. Exxon has proposed a treatment method as outlined in the attached work plan modification. The USCG, NOAA and Exxon representatives support the treatment program proposed as technically sound and the preferred option. However, the state representatives disapprove of the approach and request excavation and removal of the oiled sediments (high OR and OP) prior to relocation of remaining sediments. Therefore, due to the impass we forward to you both positions and the proposed program for your resolution.

TAG

EXXON - Andy Teal
ADEC - John Bauer
NOAA - Burl Wescott
USCG - Gary Reiter
The following modification to the existing work plan has been developed to deal with a subsurface oil lens discovered in the SUITZ during the storm berm relocation. This lens of OP/ Mousse sediments is patchy and extends laterally along the SUITZ between the storm swash line and the storm berm (see attach sketches). A team of SCAT geologist visited the site on July 15 their findings provided the basis for these recommendations.

The recommended treatment plan resulting from this site evaluation is as follows:

1. Using a bulldozer, blade the cleaner surface material from the area shown in Figure 4 to the prescribed relocation zone also illustrated in Figure 5. This should be conducted for all those areas specified in Figure 6. The material should be spread as thinly as possible with in this zone.

2. Apply Customblen to this entire area.

3. Following surface material relocation, recover any exposed surface mousse or pooled oil using sorbents. When blotting of the free oil has been accomplished relocation the oiled lens as shown in Figure 5 to the relocation zone indicated and apply Customblen.

4. Recover as much free oil (mousse/pooled oil) as possible.

5. String oil snare booms across the relocation zone and below the relocation zone to trap as much oil as possible. Leave booms in place and monitor.

6. If feasible manually/mechanically/hydrologically agitate the oiled sediments during the rising tide to enhance oil removal. Recover floating oil with snares. Skirted boom will be placed offshore of work area.

7. Apply Inipol to all oiled sediments.
BANK CUT DUE TO STORM BERM RELOCATION

Mechanically Relocated Storm Berm Material at time of Survey

Approx. 15 cm thick Lens of Mousse (MS/OP & MS/OR)

Berm Location after Storm of 14 July 90

Proposed Relocation Zone

Seaweed Fucus Debris (Wrack Line)

SLEEPY BAY

* NOTE: VERTICAL EXAGGERATION

IDEALIZED CROSS SECTION
LA020-A
Figure 4

DRAFT
Step 1
Relocation of top 'clean' layer

Step 2
Relocation of mousse lens

BANK CUT DUE TO STORM BERM RELOCATION

STORM SWASH LINE

MEAN HIGH TIDE

Boom Location after Storm of 14 July 90

Boon Drift Logs, Fucus Debris (Wreck Line)

Proposed Relocation Zone (10 meters)

Proposed Relocation Zone (7 meters)

7m

PROPOSED RELOCATION PLAN
LA020-A

Figure 5

DRAFT
Approx. vegetation

Remove top 6 inches and relocate to 10m relocation zone, then remove mousse lens and relocate to 7m wide relocation zone.

Pit with No Mousse

Pit with MS/OR & depth below surface in cm

Pit with MS/OR & depth below surface in cm

Approx. Low Water

Mean High Tide

RELOCATION ZONE MAP
LA020-A

Figure 6
SEGMENT ST/ LA-20 SUBDIVISION B (2 OF 4) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles D. Hunter DATE: 4/28/90

OILING CATEGORIZATION:
Wide 286 m: Medium 0 m: Narrow 0 m: V.Light 24 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 40+ cm

RECOMMENDATIONS:
____ No Treatment Recommended ___ Snare/Absorbent Booms
X Treatment Recommended ___ Oil Snares (pom poms)
X Manual Pickup ___ Absorbents (pads, rolls, etc)
X Bioremediation ___ Spot Washing: X Wands
X Tarmat: X Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS: Recommended treatment includes 1) spot washing of small areas with pooled oil, 2) bioremediation of areas shown on attached sketch map, 3) manual pick up of oiled debris and 4) manual removal of tarmats as shown on map. Work should be conducted after 6/1 and with approval of USFWS due to eagle nests.

TAG COMMENTS: Monitor to Assets Suit oiling treatment

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAKER FOSC: DATE: 5/12/90
EXXON AMY PANDEY USCG
NOAA Zane Petersen

CVC Rep to be on scene.
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
   No bioremediation or other chemical application within 100 m of stream. Contact ADF&G Habitat Division prior
   to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (8/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
   For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
   Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal algae and seagrass.
   Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (6/15 to 8/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400 m. Aircraft to maintain 800 m
   horizontal and 300 m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 800 m. Aircraft to maintain 800 m horizontal,
   300 m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 400 m. 3/1 to 6/1. Air approach and takeoff
   from and to seaward only; maintain 800 m horizontal, 300 m vertical distance from nests. Contact USFWS
   prior to treatment for confirmation of dates.

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (9/15 to 2/28)
7JJ Invertebrate harvesting
   For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/1 LA-20 SUBDIVISION: 8 DATE 4-6-90

USCG NAME: REBECCA HECKER SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

ADEC NAME: J. LYNN MARTIN SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY, COMPLETE & THOROUGH

AGREE WITH EXXON OPS RECOMMENDATION FOR HOT CUSHIONING OF SMALL AREAS FOLLOWED BY BIOREMEDIATION & MANUAL REMOVAL OF TAR MAT AREAS

LAND MANAGER
NAME: CHRISTE SCHWARTZ SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

REVISION NO. 09/24/99
SHORELINE OILING SUMMARY

OG requester: USCG Hubbard
BIO Zavala
ECCON. Casella
ADEC Martin
TEAM NO.: 11
TIME: 10:15:00
DATE: 4/6/90
EST. SUBDIVISION LENGTH: 360 m
UPLANDS DESCRIPTION: Grass Forest Rock Sand
SURVEYED FROM: Foot Boot Helicopter
WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 3% B 78% C 15% S 6% G 0% S 8% M 0% V 0%
SLOPE: Lang 150% Hang 20% Vert 0%
WAVE EXPOSURE: Low Med High
OIL CATEGORY LENGTH: W 320 m M 320 m N 320 m V 0 m

SURFACE OIL

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PAVEMENT: H F 82 sq m by 10 cm
PATTIES/TARBALLS 0 BAGS
NEAR SHORESHEEN NO BR RW SL TL

OILED DEBRIS AMOUNT

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DEBRIS COLLECTED TYPE 0

BAGS 0

Photographs:
Roll No: 100 5
Frames 1-11

SUBSURFACE OIL

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COMMENTS

Coarse sediment near the beach, cobble and boulders along the south end, grading into angular boulders to the north. The majority of the sub-tidal is covered with debris.

Oil covers on boulders and most intertidal surface sediments, patches pooled at bottom. Percentage presents near the 45%.

The storm wave at this beach is strong along the entire segment with accumulations of oiled debris and logs within the sub-tidal.

Page 1 of 6

REVIEWED JH DATE 4/9/90
SEGMENT ST/ LA-B0

SUBDIVISION B

DATE 4/6/60

CHECKLIST

☑ Power
☑ Approx. Scale
☑ Spill/Rob Break
☑ OIl Dist.
☑ Main
☑ Length
☑ Cover
☑ Schematic Character
☑ Est. HW/AWL
☑ SSL
☑ Profile Location(s)
☑ Spills
☑ Pit Location(s)
☑ Photo Location(s)

LEGEND

1A
PT - No Subsurface Oil

2A
PT - Subsurface Oil

CT/C
Central Distribution

CT/B
Broken Distribution

CT/P
Penny Distribution

CT/S
Splashed Distribution

Chief Vegetation

- Photo location, direction, and number

OIL CHARACTER LENGTH (m): AP 22 PD 290 CV 320 GT 30 ST 30 MB 0 PT 0 TB 0 FL 0 NO 0
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST LA 20**

**Subdivision:** B  
**Date (mo/day/yr):** 4/6/70

**Time (24 hr):** 1430  
**OffBiologist:** TONY ZAMORA

(A) **Substrate type and % of segments:**

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<th>(2) Boulder</th>
<th>(3) Cobble</th>
<th>(4) Pebble</th>
<th>(5) Sand</th>
<th>(6) Sta-</th>
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(B) **Overall % cover of biota (% of segment):**

- Dense: 1
- Moderate: 2
- Low: 5

(C) **Density, substrate preference (by number from A, above):**

- Vertical zonation of major taxa: upper-U; mid-M; low tidal-L;
- Juveniles/adults (X), new settlement (G)

**BARNACLES**

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<th>Rare</th>
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**MYTILUS**

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**GASTROPODS**

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**FUCUS**

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**Wildlife Observations/General Comments:**

- Only top of mid zone exposed during survey.
- Fresh water, Zostera. Not anomalous. Grass above beach is old.
- Filamentous green algal coats large cobble, and boulders in mid zone. LG. amount of drift laminarian kelp may indicate red in LI. Oligochates dense under cobble/boulder.

- 99% Mortality of oil coated barnacles on bedrock.
- Few barnacle spat seen on asphalt coat.
- Otter carcass found. Skin & bones, slavaged, appears similar to carcass found here 2 days previous. Though more "wavy-battered" wildlife: (1) eagle seen.

---
SHORELINE EVALUATION

SEGMENT ST/LA-20 SUBDIVISION C (3 OF 4) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ST-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Han DATE: 4/28/90

OILING CATEGORIZATION:
Wide 677 m; Medium 238 m; Narrow 0 m; V. Light 0 m; No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

X No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: X Removal

Snare/Absorbent Booms
Oil Snare (pom-poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
* Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and 2) set up a series of sections on this very coarse (predominantly boulders) shoreline that can be used to assess the relative effectiveness and efficiency of available techniques for this shoreline type: for example:
- Pre-soak with lifting agent and flush
- Hot-water flush plus pom-poms
- Staked pom-poms alone
The results would then be evaluated to determine if there is a practical and useful technique for dealing with this type of shoreline that then could be applied elsewhere in the Sound. Work should be conducted after 6/1 and/or with approval from USFWS regarding eagle nests.

TAG COMMENTS: Manual pickup of tarmat, oil and debris - trash - vegetation. Spot wash use snarcs to recover as much oil as possible. Snare and absorbent booms to provide sheening, followed by bioremediation.

TAG APPROVAL DATE: 4/26/90
ADEC J. D. Brown
EXXON A. K. Godfrey
NOAA C. H. Peterson
USCG K. C. Keating
FOSC: DATE: 5-12-90

Do not Remove - CVC Rep to on scene.
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Ester Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sewmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
Tent sites (6/1 to 9/15)
6V Anchorage (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Chinook salmon
7I Deer harvesting (6/15 to 2/28)
7J Invertebrate harvesting
For Codes 7Z through 7J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 4A-20  SUBDIVISION:  DATE 4/9/90

NAME  WILHELM  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

1. I recommend the area a hot or cold flush to eradicate oil substances found are not cleared by nature.

ADEC  NAME  J. LYNN MARTIN  SIGNATURE  J. LYNN MARTIN

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

☐ AGREE WITH EXXON OPS. REPORT FOR A HOT WASH IN AREA BUT I WOULD RECOMMEND A COLD WATER FLUSH TO GO ALONG WITH THIS. MANUALLY REMOVING WILL HAVE TO BE PREPARED IN TARPED AREAS OF AREAS OILED UNDER DRIFTWOOD. NIP TIDAL NEED TO BE COOKED AF AFTERSNOW MELT.

LAND MANAGER  NAME  PATRICK SEAMAN  SIGNATURE  PATRICK SEAMAN

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

☐ DEFINITELY NEEDS TREATMENT. BECAUSE IT IS INHIBITING WILDLIFE, BY BERT. HAVEN'T SEEN SIGNS OF MORTALITY LATELY. WE ARE OOS FOR DEER. ALSO BECAUSE THIS IS WHERE WE DO A LOT OF SUSTAINABLE FOOD.
SHORELINE OILING SUMMARY

SEGMENT ST/ LA - 240

BIO. Zanone

EXXON Corp.

ADEC Martin

TEAM NO.: 110

TIDE LEVEL: +5 to +4

DATE 4/6/90

EST. SUBDIVISION LENGTH: 190 m

SURVEYED FROM: Foot

SURFACE SEDIMENTS: Rock

SLOPE: Long 40 % Hang 5 % Vert 0 %

OIL CATEGORY LENGTH: W 250 m M 350 m N 0 m VL 0 m NO 80 m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<th>PATTIES / TARBALLS</th>
<th>NEAR SHORE SHEEN?</th>
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OILED DEBRIS AMOUNT

Debris Collected

Yes No

NEAR SHORE SHEEN? No BR RW SL TL

Pavement: H F B 0 sq. m by 0 m

PAVEMENT: H F B 0 sq. m by 0 m

Photographs:

Roll No: ST- (6-5)

Frames: 12 - 27

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED DEBRIS</th>
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<td>20</td>
<td>X</td>
<td>5 - 20</td>
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</table>

COMMENTS: Predominantly a cobble/boulder beach with occasional rock outcrops.

This section of beach is covered with a sand/mud blanket, in patchy bands of coating 15 - 20 cm wide, considerable pooling of oil is found around boulders. 50% percentage distributed are near 20% in the sand half of the segment, increases to 95% in the gravel section, and then decreases to 85% - 95% along the north and around the point.
### SHORELINE OILING SUMMARY (PAGE 2 of 2)

**SEGMENT ST/ LA-AD SUBDIVISION C**

### SUBSURFACE OIL (CONTINUED)

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
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<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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### COMMENTS

Reviewed by [Signature] Date: 4/7/90
SHORELINE ECOLOGICAL SUMMARY

Segment LA-20 Subdivision C Date (mo/day/yr) 4/0/90
Time (24 hr) 1450 on Biologist TONY ZAMORA

(A) Substrate type and % of segments:
1) Bedrock  (2) Boulder  (3) Cobble  (4) Pebble  (5) Sand  (6) Still

(B) Overall % cover of biota (% of segment): Dense (0) Moderate (5) Low (5)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

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Photographs:
Roll No. ST-16.5 Frame 12-27

Wildlife Observations/ General Comments:
- Low zone unexposed during survey
- Approx. 50% of mussels are juvenile (>2 cm)
- Crabs above beach are old - new growth seen.
- Biota on this subdivision becomes denser as we walk west into bay!
- Wild Life: 2 sea lions, 7 murrels, deer tracks, otter, common eel, eagle
  - Tidepools in boulders have deer, bald eagle, similar hermit crabs, limpets, isopods,
  - Anthopleura elegans, rhodapeda, small crabs.
- Patterns of phytoplankon in mid zone. Large amount of drift laminaria
- Ecological Considerations: 7/21/93
- Based on biota in low zone of adjacent subdivision at galapagos.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LA-20 SUBDIVISION C (3 of 4)

WORK WINDOW

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<tr>
<td>Spot Washing</td>
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<tr>
<td>Other Approved Treatment</td>
<td>WORK PRIOR TO 8/15</td>
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</table>

*Access approved with small boat and crew.

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T  Bald Eagle Nest
NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 6/15/90 by Mike Luke indicates an active nest 150 yds inland from shore, with ridge crest blocking most of work area. Access approved with small boat and crew.

7II Subsistence: Deer Harvesting
Closed to other approved treatment after 8/15. No constraint to manual pickup, tarmat removal, and spot washing.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC [Signature]  Date 6/10/90
Prepared by [Signature]  Date 6/20/90
Active eagle nest found 615/150 Mike Lake USBWS survey. Access permitted with small boat and crew. Rely on crest to east blocks most of work area.
SHORELINE EVALUATION

SEGMENT ST/ LA-20 SUBDIVISION D (4 OF 4) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-2 All bald eagle nests (3/1 to 6/1) – Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles D. S. DATE: 4/2/90

OILING CATEGORIZATION:
Wide 392 m: Medium 112 m: Narrow 0 m: V. Light 0 m: No Oil 22 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:

--- No Treatment Recommended Snare/Absorbent Booms
X Treatment Recommended Oil Snares (pop poms)
X Manual Pickup Absorbents (pads, rolls, etc)
X Bioremediation Spot Washing: Wands
--- Tarmat: Removal Beach Cleaner
--- X Tarmat: Removal Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) burn logs oiled greater than 10%, 3) bioremediation of area shown on sketch map. Work should be conducted after 6/1 and/or with approval of USFWS regarding eagle nests.

TAG COMMENTS: Monitors to assess need to burn logs also check suit for additional oiling.

TAG APPROVAL DATE: 4/26/90
ADEC Exxon NOAA USCG

FOSC: XCV DATE: 5-9-90

TAG APPROVAL DATE: 4/26/90
ADEC Exxon NOAA USCG

FOSC: XCV DATE: 5-9-90

TAG APPROVAL DATE: 4/26/90
ADEC Exxon NOAA USCG

FOSC: XCV DATE: 5-9-90

TAG APPROVAL DATE: 4/26/90
ADEC Exxon NOAA USCG

FOSC: XCV DATE: 5-9-90

TAG APPROVAL DATE: 4/26/90
ADEC Exxon NOAA USCG

FOSC: XCV DATE: 5-9-90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)

Estuarine Hatchery release (4/15 to 6/1)

Main Bay Hatchery release (4/20 to 5/10)

Sawmill Bay Hatchery release (4/15 to 6/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release site

Gill net area (6/7 to 6/31)

Purse seine area (7/20 to 9/30)

Purse seine hook-off (7/20 to 9/30)

Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 3/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

Shorebird/ waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only, maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:
- Tent sites (6/1 to 9/15)
- Anchorages (6/1 to 9/15)
- Forest Service cabins (6/1 to 9/15)
- Lodge (6/1 to 9/15)
- Special use destination

Subsistence area:
- Salmon harvesting (5/1 to 9/30)
- Finfish harvesting
- Deer harvesting (8/15 to 2/25)
- Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIEL SHORELINE COMMENT SHEET

SEGMENT ST  2A-20  SUBDIVISION:  D  DATE  4/6/90

USCG
NAME  Randolph W. Kenney  SIGNATURE  Randolph W. Kenney

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

1. Mild oil debris cover large section of the area. I consider a light and shallow oil to lift the oil off a surface.

ADEC
NAME  J. Lynn Martin  SIGNATURE  J. Lynn Martin

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

AGREE WITH EXXON ORI. RECOMMENDATION FOR BIOREMEDIATION & CLEANUP OF OILY DEBRIS.
HOWEVER I WOULD SUGGEST A COLD WATER FLUSH OVER AREA WITH CONTAINMENT FOR A PERIOD NO LESS THAN TWO WEEKS TO FREE MOBILE OIL ON BEACH.
SNOW IN SUPER-TIDAL RICHARD AT LATER DATE.

LAND MANAGER
NAME  Patrick Scouler  SIGNATURE  Patrick Scouler

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

Oil was touch on the average 5% to 15% wet oil on surface on this segment. It was needed to be cleaned. The area oil for a few feet in small area a long period of time.
**SHORELINE OILING SUMMARY**

**SEGMENT NO.: 60-20**  
**TEAM NO.: 16**  
**DATE: 4/6/90**  
**TIME: 8:30 AM**

**UPLANDS DESCRIPTION:**  
- Grass  
- Forest  
- Rock  
- Snow

**SURFACE SEDIMENTS:**  
- R  
- S  
- B  
- A  
- C  
- D  
- E  
- F  
- G  
- H  
- I  
- J  
- K  
- L  
- M  
- N  
- O  
- P  
- Q  
- C  
- S  
- A  
- R  
- V  
- W  
- X  
- Y  
- Z

**OIL CATEGORY LENGTH:**  
- W  
- M  
- N  
- Q  
- M  
- P  
- Q  
- M  
- Q  
- M

**SURFACE OIL**

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**Pavement:**  
- H  
- F  
- S  
- C  
- Sm  
- MD  
- LG

**PAVEMENT:**  
- Oiled

**OILED DEBRIS AMOUNT:**  
- Logs  
- Vegetation  
- Trash  
- Debris  

**Debris Collected:**  
- Yes  
- No

**Subsurface Oils**

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
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**Comments:**  
- Cull/boulder beach, back shore covered with snow.
- Oil averages 5 cm thick along almost entire area. Patchy average found E  
  toward end of segment near headland and again in the middle of sub-segment  
  near shore. To west of this segment, thin broken (10%) averages on  
  boulder/cull and underlying fine sediments. To only thin section is a  
  small run off stream (12 m) wide.
OG: Rsmn
SEGMENT ST/LA-20/L
SUBDIVISION D - Prop 2
DATE 4/6/90

CHECKLIST
- A Arrow
- Approx. Scale
- Tack/Sub Soil
- Oil Obl. Width
- Length
- % Cover
- Substrate Character
- Est. HWE/WD
- SSL
- Profile Location(s)
- Pt Location(s)
- Photo Location(s)

LEGEND
1 A
- Pit: No Subsurface Oil
2 A
- Pit: Subsurface Oil
CFC
- Contractual Discrepancy
CFB
- Broken Distribution
CT/P
- Patches/Plains
CT/S
- Spotted Distribution

Oil Vegetation
1 =
- Photo location, direction, and number

Oil Character Length (ft): AP-PO-O-CV-150-CT-O-ST-O-MB-O-PT-O-TB-O-FL-O-NO-O
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST / LA 20**  
**Subdivision**  
**Date (mo / day / yr)** 4/6/90

**Time (24 hr)** 12:00 PM  
**Biologist** TONY SAMORA

(A) **Substrate type and % of segments:**

1. Bedrock  
2. Boulder  
3. Cobble  
4. Pebble  
5. Sand  
6. Salt

(B) **Overall % cover of biota (% of segment):**

- Dense 50
- Moderate 25
- Low 25

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**

#### BARNACLES

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**Wildlife Observations/ General Comments:**

- Only upper margin of low zone exposed.
- Wildlife: 2 otters, 2 sealions, 3 eagles.
- Overall coverage of Mytilus on boulders is sparse - but in dense patches.
- In low zone: Palmaria, Fucus, Lepas, Isopods, Amphipods, Cunners, Kelp, Eelgrass, Ramberta, Patocarpus, Petrolcelus.
- Gastropod egg cases found on Bedrock in U-I

**Ecological Considerations:** 755.77
ARCHEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 554-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

Closed to manual pickup, bioremediation, and oiled log burning. USFWS bald eagle impact assessment conducted on 6/15/90 by Mike Luke indicates an active nest within 400m of the work area.

7II Subsistence: Deer Harvesting

Closed to bioremediation and log burning after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.
Active Eagle nest found 6/15/90 USFWS Survey, Mike Luke.
SHORELINE EVALUATION
SEGMENT ST/ LA-21 SUBDIVISION A (1 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADFG anadromous streams no. 226-40-16774, 16776.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subdivision A - 1 eagle nest; 2 more eagle nests within 400 m of subdivision A.

SHPO SIGNATURE: DATE: 4/23/90

OILING CATEGORIZATION:
Wide 215 m: Medium 483 m: Narrow 51 m: V.Light 442 m: No Oil 161 m
Subsurface Oil Observed: Yes X No  Maximum Depth 30+ cm

RECOMMENDATIONS:
X Treatment Recommended  X Oil Snares (pom poms)
X Manual Pickup  Absorbents (pads, rolls, etc)
X Bioremediation  Spot Washing: W Wands
Tarmat: Breakup  Beach Cleaner
Removal  Other (see comments)

COMMENTS: Recommended treatment includes 1) pick up all oiled vegetation and debris, 2) Spot wash area "A" using snares and pom poms to control sheening, 3) bioremediate areas shown on attached sketch map but not within 100 m of anadromous fish stream. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints, after approval of USFWS regarding eagle nest.

TAG COMMENTS: Monitor to assess suitability.

TAG APPROVAL DATE: 4/23/90

ADEC  L  EXXON  FOSC: DATE: 5/15/90
NOAA  L  USCG

NOTICE: CRE 2 weeks in advance of work.
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 5/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 5/1)
1G Cannery Creek Hatchery release (4/21 to 5/1)
1H Remote release site
1I Gill net area (5/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

1M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5T Atlantic White Pelican (3/1 to 6/1)
Active Atlantic White Pelican nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
Tent sites (6/1 to 9/15)
Anchorages (6/1 to 9/15)
6V Forest Service cabins (6/1 to 9/15)
6W Lodge (6/1 to 9/15)
6X Special use destination
6Y
7Z Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
7H Deer harvesting (5/15 to 2/28)
7I Invertebrate harvesting
7JJ For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

EGMENT ST / LA-21     SUBDIVISION: A     DATE 8/4/07/00

USCG NAME R. HALLERD     SIGNATURE

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

1. I suggest a good oil removing solution to flush oil spot from waters.

ADEC NAME J. LYNN MARTIN     SIGNATURE J. Lynn Martin

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH IN AREA "A" (SEE ATTACHED MAP) FOLLOWED BY BIOREMEDIATION. I ALSO AGREE THAT AREA "B" (SEE ATTACHED MAP) SHOULD BE A SPOT BIOREMEDIATED HOWEVER I WOULD SUGGEST MANUAL REMOVAL OF POOLED AREAS BEFORE THIS ACQUIRES.

LAND MANAGER

NAME PATRICK SELANOFF     SIGNATURE

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

ALL THE OIL SPOTS & DEBRIS WILL HAVE TO BE MANUALLY REMOVED BEFORE WASH DOWN OR BIOREMEDIATION.
# SHORELINE OILING SUMMARY

**OG Reimer**  USCG Hubbard  SEGMENT ST/ LA 21

**BIO Zampa**  LAND REP Salanoff (CVS)  SUBDIVISION A

**EXXON Gasin**  ADEC Mattie  TIME 15:30 10/16:46

**TEAM NO.:**  1  **TIDE LEVEL:**  +1  **DATE:**  4/17/90

**EST. SUBDIVISION LENGTH:**  1415 m  **UPLANDS DESCRIPTION:**  ☑ Grass  ☐ Forest  ☐ Rock  ☑ Snow

**SURVEYED FROM:**  ☑ Foot  ☐ Boat  ☐ Holo  **WORKING DIRECTION:**  North to South  

**SURFACE SEDIMENTS:**  R  ☑  B  ☑  C  ☑  P  ☑  G  ☐  S  ☑  M  ☐  V  ☐

**SLOPE:**  Lang  ☑  % Hang  ☑  % Vert  ☑

**WAVE EXPOSURE:**  ☑ Low  ☐ Med  ☑ High

**OIL CATEGORY LENGTH:**  W 225 m  M 575 m  N 80 m  V 475 m  NO 175 m

---

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
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<tr>
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<td>COVER</td>
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<td>STAIN</td>
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<td>PATTIES</td>
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<td>TARBALLS</td>
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</table>

**PAVEMENT:**  H F S    0 sq. m by 0 cm

**NEAR SHORE SHEEN?**  NO BR RW SL TL

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<thead>
<tr>
<th>OILED DEBRIS</th>
<th>AMOUNT</th>
<th>DEBRIS COLLECTED</th>
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<td>Logs</td>
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<td>Vegetation</td>
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<td>Trash</td>
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<tr>
<td>Debris</td>
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**TYPE:**  0  

**#BAGS:**  0

Photographs:
## SHORELINE OILING SUMMARY

**PAGE 2 of 2**

**SEGMENT ST/ A**

**SUBDIVISION A**

### SUBSURFACE OIL (CONTINUED)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
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### COMMENTS

[Signature]

REVIEWED: [Signature] DATE: 4/12/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/LA 21  Date (mo/day/yr) 4/7/90

Subdivision A  Time (24 hr) 16:45 off biologist TONY ZAMORA

(A) Substrate type and % of segments:

- Bedrock [1]
- Boulder [2]
- Cobble [4]
- Pebble [7]
- Sand [5]
- Silt [6]

(B) Overall % cover of biota (% of segment):

- Dense [5]
- Moderate [9]
- Low [25]

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

- Juveniles / adults (x)
- New settlement (3)

**BARNACLES**

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Wildlife Observations/General Comments:
- OBSERVED: 2 OTTERS, 2 SEA LIONS, DEER / DEER & EAGLES, GULLS, FOUND DEAD OTTER - DECOMPOSED, NO VISIBLE OIL.
- GRASSES ABOVE BEACH ARE OIL COATED.
- SCATTERED STEPPE VULTURES KEEP OFFSHORE.

Ecological Considerations:
- FJLAMENTOUS GREEN COVERS COBBLE IN UT & MZ
LAZI - H

PHOTO LOCATIONS

LIKELY AJAD STREAM

RUNOFF (NOT AJAD)
ADDENDUM: SUBDIVISION CONSTRAINTS

-SEGMENT LA-21 SUBDIVISION A (1 of 2)

WORK WINDOW

<table>
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<tr>
<th>Manual Pickup</th>
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<tr>
<td>Bioremediation</td>
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<td>Spot Washing</td>
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<td>Other Approved Treatment</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. ADF&G catalogued anadromous streams (226-40-16776 and 16774) are more than 100m from work areas.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

7II Subsistence: Deer Harvesting

Closed to bioremediation, spot washing and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC G.A. Reiter DATE 6/10/90

For Original: DATE 6/10/90
ECOLOGY MAP
SEGMENT LA-21
SUBDIVISION A (1 of 2)

TREATMENT AREA

ANADROMOUS STREAM
226-40-16776

ANADROMOUS STREAM
226-40-16774

Seabird Colony
Active Eagle Nest
Inactive Eagle Nest

Eagle survey by Mike Lockhart 5/2/90
SHORELINE EVALUATION

SEGMENT ST/ LA-21 SUBDIVISION B (2 OF 2) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADFG anadromous streams no. 226-40-16774, 16776.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subdivision B - two anadromous streams present; 2 eagle nests and one more eagle nest within 400m of subdivision B.

SHPO SIGNATURE: __________________________ DATE: 4/23/90

OILING CATEGORIZATION:

Wide 142 m: Medium 636 m: Narrow 90 m: V. Light 70 m: No Oil 769 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 45+ cm

RECOMMENDATIONS:

______ No Treatment Recommended    ______ Snare/Absorbent Booms
X  Treatment Recommended    __________ Oil Snares (pom poms)
X  Manual Pickup    ______ Absorbents (pads, rolls, etc)
X  Bioremediation    ______ Spot Washing: X Wands
_____ Tarmat: ______ Breakup    _______ Beach Cleaner
_____ Removal    ________ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map, but not within 100m of anadromous fish stream. Work should be conducted between 6/1 and 7/10 after approval of USFWS regarding eagle nest. Streams to be surveyed during ANAD SEAR.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: 4/13/90
ADEC    FOSC:
EXXON    DATE: 5-16-90
NOAA
USCG    NOTING CVC 24 HRS. IN ADVANCE OF WORK
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C
Salmon fry nursery area (4/31 to 7/31)

1D
Esther Hatchery release (4/15 to 6/1)

1E
Main Bay Hatchery release (4/20 to 5/10)

1F
Sawmill Bay Hatchery release (4/15 to 6/1)

1G
Cannery Creek Hatchery release (4/21 to 6/1)

1H
Remote release site

1I
Gill net area (6/7 to 8/31)

1J
Purse seine area (7/20 to 9/30)

1K
Purse seine hook-off (7/20 to 9/30)

1L
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M
Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P
Harbor seal and sea lion pupping (5/15 to 7/1)

3Q
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R
Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S
Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T
All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U
Recreation:
Tent sites (6/1 to 9/15)

6V
Anchorage (6/1 to 9/15)

6W
Forest Service cabins (6/1 to 9/15)

6X
Lodge (6/1 to 9/15)

6Y
Special use destination

7Z
Subsistence area: Salmon harvesting (5/1 to 9/30)

7HH
Finfish harvesting

7II
Deer harvesting (6/15 to 2/28)

7JJ
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT # LA-21  SUBDIVISION: B         DATE 4/07/90

USCG NAME  R. Hubbard     SIGNATURE  [Signature]

☐ NO TREATMENT RECOMMENDED      [ ] TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED      [ ] TREATMENT SUGGESTED

ADEC NAME  J. Lynn Martin     SIGNATURE  [Signature]

COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR SPOTTED BIOREMEDITION OF AREA "B" (SEE ATTACHED MAP) AND MANUAL REMOVAL OF SMALL POOLED AREAS. AREA "A" (SEE ATTACHED MAP) SHOULD BE REVIEWED FURTHER BY ANAD SCAFF DUE TO THE BROKEN OIL COVER THAT ACCUMULATES ON THE NORTH SIDE OF THE STREAM.

LAND MANAGER

NAME  [Signature]      SIGNATURE  [Signature]

☐ NO TREATMENT RECOMMENDED      [ ] TREATMENT SUGGESTED

COMMENTS
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SHORELINE OILING SUMMARY

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EST. SUBDIVISION LENGTH: /'4J'l m
11!:1 Sun 0 Clouds 0 Fog [J·Raln Cl Snow
UPLANDS DESCRIPTION: Iii Grass is ForiSI 1iJ Rock
sxuw
SURVEYED FROM: 18Focc [JSoat [J Helo
WORK'~ING~O~IA:O:E:o:C=.TI~ON~:-Med'=~-~to-:$==---~,--SUAFACE SEDIMENTS: R 2. % S 0 o "• C so 'lfo P .2~ % G 0 % S~% M 0 % V 0
%
SLOPE : Lang 1~ o/e Hang · '2. % Vert
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WAVE EXPOSURE: 1:J Low IS!I Med [J High
OIL CATEGORY LENGTH: W !f)Q
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MOUSSE
PATTIES

Vtgelllllon

DEBRIS COLLECTeD
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Trash

TYPE,_..o;O_ _

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Photographs:

TARBALLS

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NO OIL

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SUBSURFACE OIL
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**SHORELINE OILING SUMMARY (PAGE 2 of 2)**

**SEGMENT ST/LA-2a**  **SUBDIVISION B**

## SUBSURFACE OIL (CONTINUED)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>OILED INTERVAL BELOW</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>SUBSURFACE SEDIMENTS</th>
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</tbody>
</table>

**COMMENTS**
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ LA 21 Subdivision B Date (mo/day/yr) 4/7/90
Time (24 hr) 1825 Off Biologist TONY ZAMORA

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 20 Low 20

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
juvenile/adults (X), new settlement (3)

<table>
<thead>
<tr>
<th>Barnacles</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td>1U 1M 1L</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 U 1M 1L</td>
<td>6</td>
<td>6</td>
<td>6</td>
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<table>
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<td>2 U 1M 1L</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>2 U 1M 1L</td>
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<table>
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<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 U 1M 1L</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>Not Present</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
- OBSERVED 1 OTTER, 2 GULLS, FOUND DEAD OTTER.
- LARGE AMPHIBIANS IN MI.
- EGGS: CURRELLA, NOCELLA, UNID FISH (ON 3L IN MI)

Ecological Considerations: 7II, 1A/B, 755

- CURRELLA UNDER COBBLE IN LI.
- LI: ALARIA, PALMARIA, ULVA, PARISHONIA, NOCELLA CAN

Photographs: Roll No. ST-16-4
Frames 24-360
SEGMENT ST/LA-21
SUBDIVISION B
DATE 4/7/90

CHECKLIST
- Arrows
- Approx Scale
- Seg Sub sand
- Oil Diagram
- Total Length
- % Cover
- Substrate Character
- Est. HMLWL
- B/S
- Profile Location(s)
- Photo(s)
- Acid Location(s)
- Photo Location(s)

LEGEND
1. P - No Surface Oil
2. A - Subsurface Oil

CT/C - Continuous Distribution
CT/P - Pseudo Distribution
CT/S - Selective Distribution

Oil Character - Location, direction, and number

Oil Character Length (cm): AP PO CV 365 CT 200 ST 65 MS PT TB FL 140 NO 503
DATE 4/7/90

CHECKLIST

- Area
- Approx. Scale
- Seg/Sub Emery
- Oil Dist.
- Vegeta
- Length
- % Cover
- Substrate Character
- E. H., L., W., L.
- Photo Location(s)
- Page(s)
- Plot/Monitor Location(s)
- Photo Location(s)

LEGEND

1 •

P1 - No Subsurface Oil

2 •
P1 - Subsurface Oil

CT/C
Continuous Distribution

CT/S
Broken Distribution

CT/P
Patchy Distribution

CT/R
Splashed Distribution

Cited Vegetation

1 •

Photo locations, direction, and number

Oil Character Length (m): AP PO CV 365 CT 200 ST 65 MS PT TB FL 110 NO 503
ARCHEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream  ADF&G catalogued anadromous streams (226-40-16776 and 16774) are in this subdivision. This subdivision is closed to bioremediation and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and other approved treatment more than 100m from stream. No constraint to manual pickup and spot washing.

5T Bald Eagle Nest  NO CONSTRAINT. USFWS bald eagle Impact assessment completed on 5/12/90 by Mike Lockhart indicates no active nests within 400m of the work area.

7II Subsistence: Deer Harvesting  Closed to bioremediation and other approved treatment after 8/15. No constraint to manual pickup and spot washing.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unloved biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NOS. 226-40-16776 & 225-40-16774) FOR ADDITIONAL CONSTRAINT INFORMATION
Incorporates information from USFWS bald eagle survey 5/13/90.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT INT/ LA-21  STREAM NO: 226-40-16774  DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Subject stream and 226-40-16676, Ps, 12/89 also located within Subdivision B.

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream located within Subdivision B.

SHPO SIGNATURE: ______________________ DATE: 5/10/90

Subsurface Oil Observed: Yes X No  Maximum Depth 35 cm

RECOMMENDATIONS:

_____ No Treatment Recommended  _____ Snare/Absorbent Booms
_____ Treatment Recommended  _____ Oil Snares (pom poms)
_____ Manual Pickup  _____ Absorbents (pads, rolls, etc)
_____ Bioremediation  _____ Spot Washing: _____ Wands
_____ Tarmat Removal  _____ Beach Cleaner

_____ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and 2) bioremediation of areas with subsurface oil shown on attached sketch map. Work should be conducted between 6/1 and 7/10 with approval of ADF&G regarding bioremediation of stream banks.

TAG APPROVAL DATE: 5/10/90

ADEC: L. A. Weber
EEXXON: A. M. Allen
NOAA: D. O. Paull
USCG: D. D. Rome

TAG COMMENTS: __________________________________________________________________________

FOSC:  DATE: 5-18-90
NOTIFY CVC 2 yrs. in advance of work
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beech flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1B Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release 4/15 to 6/15
1E Main Bay Hatchery release 4/20 to 6/15
1F Sawmill Bay Hatchery release 4/15 to 6/1
1G Cannery Creek Hatchery release 4/21 to 6/1
Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214 1D 1F 1G
PWS Aquaculture Association John McMillian or Bruce Suzamoto 424-7511

2L Gill net area 6/7 to 8/31
2J Purse seine area 7/20 to 9/30
2K Purse seine hook-off 7/20 to 9/30
2L Set net sites 6/11 to 7/25
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (2L) restrict beach operations to essential minimum as authorized by ADF&G. Plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

2M Herring spawning 4/1 to 6/15
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unveilled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

3N, 3P Harbor seal and sea lion pupping 5/15 to 7/1
3Q Harbor seal and sea lion moulting 8/15 to 9/15
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in situ within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235 ADF&G Don Calkins 267-2403

5R Seabird colony 5/1 to 9/1
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377

5S Shorebird/waterfowl concentration 4/1 to 5/15
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377 ADF&G Tom Rothey 267-2206

5T All Bald Eagle nests 3/1 to 6/1
Active Bald Eagle nests 3/1 to 9/1
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377

6U Recreation: Tent sites 6/1 to 9/15
6V Anchorage 6/1 to 9/15
6W Forest Service cabin 6/1 to 9/15
6X Lodge 6/1 to 9/15
6Y Special use destination

7Z Subsistence area: Salmon harvesting 5/1 to 6/30
7H Deer harvesting 8/15 to 2/28
7I Norwegian harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in situ which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Feil 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST LA 021 SUBDIVISION: 16774 DATE 4/20/90

USCG NAME CWZV J. MCMATH SIGNATURE J. McMath

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

1. APPROX. A 10 X 20M ZONE ADJACENT TO RIGHT SIDE OF
STREAM (LOOKING DOWNSTREAM), 4-6CM DEEP NEAR PIT #1 TO BE
REMOVED AND BAGGED.

2. THE OUTER PORTION OF THE ABOVE, APPROX ALL EXCEPT
A 2 FOOT BUFFER TO BE BIOREMEDIATED.

ADATG NAME MICHAEL WIEDMANN SIGNATURE M. Wiedmann

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

NOTES: OIL PENETRATION MAY BE DEEPER THAN THE 4-6
CM STATED ABOVE. ONE PIT REVEALED OIL FROM THE
SURFACE TO 35CM. ALL OILED MATERIAL, REGARDLESS OF
DEPTH OF PENETRATION, SHOULD BE MANUALLY REMOVED,
BAGGED, AND TAKEN FROM SITE. ATTENTION MUST BE
PAID TO THE BERM IMMEDIATELY ADJACENT TO THE
SURFACE OIL. CURRENTLY AS A LAYER OF 35CM OF CLEAN
MATERIAL IN THIS BERM COVERS A LENS OF OIL.

LAND MANAGER
NAME NO TREATMENT RECOMMENDED
SIGNATURE

AS THIS BERM APPEARS UNSTABLE, IT WILL BY THE
TIME TREATMENT BEGINS AT THIS SITE SIGNIFICANT
PORTIONS OF THE OIL AT THIS SITE MAY BE BURIED.
Observations. A deposit of heavy oil penetrates the substrate immediately adjacent to the upper-mid intertidal portion of the stream. This area has a surface armor of large cobbles overlying small gravels. A high tide berm may be advancing over this oil deposit. Tar from this deposit is exposed in the stream channel along the southwest bank and is leaking sheen into the stream. Tarry/mousy oil penetrates the sediment approximately 4 cm at the present stream bank. Oil penetration may be deeper further from the stream.

Treatment Recommendations. The complete layer of oiled substrate within this deposit should be manually removed, bagged, and taken from the site for safe disposal. Four-wheelers should be used to facilitate removal of material from beach. Excavation should begin on the side of the patch most distant from the stream channel. Clean material from the adjacent berm should be backfilled into the excavated area soon after oiled material is removed. In no circumstances should clean material be deposited over any remaining oiled substrate. Immediately after removal of the oiled substrate adjacent to the stream, boulders from the opposite shore (see ADF&G Multi-Assessment Data Form diagram for general location) should be placed along the bank to prevent migration of the channel into the treated area. All activities must occur between 15 May and 15 July, 1990.

Observations. Only lightly stained logs in storm berm.

Treatment Recommendations. If future observations do not reveal significant quantities of buried oil, no treatment is recommended.
SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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OIL / FILM COLOR: X = Yes

SURFACE OIL

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<th>OILED DEBRIS</th>
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<th>DEBRIS TYPE</th>
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<td>Logs</td>
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<td>Vegetation</td>
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OILED SHEEN: X = Yes

PIT DEPTH: Cm

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<th>PIT DEPTH (CM)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
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<td>5</td>
<td>30</td>
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COMMENTS

REVIEWED: SW DATE: 4/25/86
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil/Film Color</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Notes</th>
<th>Surface Subsurface Sediment</th>
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<tr>
<td>7</td>
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<tr>
<td>8</td>
<td>25</td>
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<td></td>
<td></td>
<td>x</td>
<td>N</td>
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<td>G/P/C</td>
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**Comments**
ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS 500 TS AY SCH NMFS PTA

METHOD: Aerial Ground

2 REGION: P4S XP CL KAP

3 DATE: 4/20/90

4 START TIME: 1:00

5 STOP TIME: 1:36

6 SECRET #: CA-021

7 STATION #: 10 TIDE HT AT SURVEY: 1.72'

8 K-UNIT:_________ END Stack Flood Stack

9 STAY AREA:_________ 20 USCQ Quadrant:

10 LAT:_________ 11 LONG:_________

12 SOURCE: Map Lore

13 LOCATION: N.W. LATOUCHES IS.

14 DESCRIPTION:_________

EXTENT OF OIL

36 CATALOGED OIL: FISH STREAM Y N

37 CATALOG #: 22-10-16774

38 STREAM NAME:_________

39 OIL IN STREAM BED Y N

40 OIL ON STREAM BANKS Y N

41 OIL ON BEACH ADJACENT TO MOUTH Y N (within 30 meters)

42 OIL WITHIN 1 MILE OF STREAM Y N

43 ANADROMOUS FISH PRESENT Y N

44 ANADROMOUS FISH OBSERVATION

45 OIL SPILL CONTROL

46 OIL SPILL CONTROL

27 SURFACE COVERAGE

<table>
<thead>
<tr>
<th>L</th>
<th>N</th>
<th>Y</th>
</tr>
</thead>
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<tr>
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<tr>
<td>75</td>
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28 SURFACE THICKNESS

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1 mm</td>
</tr>
<tr>
<td>2 mm</td>
</tr>
<tr>
<td>0.5 cm</td>
</tr>
</tbody>
</table>

30 OVERALL OIL IMPACT Y L N

31 OIL TYPE: Pooled

32 OILY DEBRIS Y N

33 SHORELINE TYPE: Headland Lying Rocks Beach Cove

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock Boulder Sand Cobble Gravel Sand Medium

Coveted: Patch of oiled substrate immediately adjacent to SW Bank of Stream. Depth of penetration to 35 cm. Thick ash surface layer 4-10 cm thick. Suggested treatment: manual removal of thick surface contamination, replacement of heavy rip-rap adjacent to channel. To preserve channel integrity.
48 OIL DISTRIBUTION DIAGRAM

Oiled zone extends into stream channel as drawn. Recommend that dense surface layer (varying thickness from 4 to 10 cm) be manually removed. To prevent migration of channel, small boulders from opposite bank (see diagram) should be placed along channel margin in place of removed material. This tongue should measure approximately 10 feet wide.
Ecologist's Summary
Segment LA 21
Stream 226-40-16774

The stream mouth lies on a cobble/dounder beach, unstable, with sparse biota. A zone area on west side of stream had a fairly heavy covering of weathered tar-asphalt extending to the stream bank. Disturbing sediment at stream edge produced sheen on water. Manual cleanup and possibly bioremediation suggested. No ecological constraints on cleanup methods are indicated owing to poorly developed community (mainly a film of green algae) that exists on the unstable sediments at this site.

Michael Fawcett
Upper points document limits of fish surveys and usually not the extent of fish habitat.
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16774

SEGMENT LA-21 SUBDIVISION B

WORK WINDOW

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmac Removal</td>
<td>OPEN</td>
</tr>
<tr>
<td>Bioremediation: More Than 100m From Stream</td>
<td>OPEN</td>
</tr>
<tr>
<td>Bioremediation: Less Than 100m From Stream</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B  Salmon Stream

ADF&G catalogued anadromous streams (226-40-16774 and -16776) are in Subdivision B. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmac removal.

5T  Bald Eagle Nest

NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/12/90 by Mike Lockhart indicates no active nests within 400m of the work area.

7ii  Subsistence: Deer Harvesting

Closed to bioremediation after 8/15. No constraint to tarmac removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM LA-21B FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC [Signature] DATE 6/10/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21 STREAM NO: 226-40-16776 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: "" DATE: __/__/90

Subsurface Oil Observed: Yes  No X  Maximum Depth_____

RECOMMENDATIONS:

X  No Treatment Recommended  ___  Spike/Absorbent Booms
____  Treatment Recommended  ____  Oil Snare (pom poms)
____  Manual Pickup  ____  Absorbents (pads, rolls, etc)
____  Bioremediation  ____  Spot Washing: Wands
____  Tarmat Removal  ____  Beach Cleaner
____  Other (see comments)

COMMENTS:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

TAG COMMENTS:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

TAG APPROVAL DATE: 5/7/90

ADEC  EXXON  NOAA  USCG  FOSC: _______ DATE: 5/18/90

[Signatures]
Salmon stream mouth - try outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/15 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery (4/1 to 6/1)
1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

1I Gill net area (8/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook and ferry (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When net set sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

ADF&G Tom Roth 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only: maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

6U Recreation: Tent sites (8/1 to 9/15)

6V Anchorage sites (8/1 to 9/15)

6W Forest Service cabin (6/1 to 9/15)

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

7H-H Deer harvesting

7I I Invertebrate harvesting

7JJ Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fell 267-2359
Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

20 April 1990

ASC # 226-40-16785
Segment LA-031

Observations: Very light stain on surface armor observed more than 50 yards north of stream. One partially oiled drift log observed on storm berm south of stream. No buried oil observed in test pits. No other visible signs of significant quantities of buried oil.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16788
Segment LA-029

Observations: Scattered stained surface cobbles and boulders found throughout anadromous fish stream zone. One out of four test pits revealed a layer of buried mousse 5 to 10 cm thick underneath 10 cm of clean substrate. Results from other pits indicate that this mousse layer was restricted to a small area.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16776
Segment LA-021

Observations: Stain and some light tar and light mousse scattered through anadromous fish stream zone. No significant quantities of buried oil observed.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: LA 021  SUBDIVISION: 16776  DATE: 4/20/90

USCG NAME:  Wm. R. Miller  SIGNATURE:  [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS: 

ADFG NAME:  Michael Wicker  SIGNATURE:  [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS: 

LAND MANAGER
NAME:  [Name]  SIGNATURE:  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS: 

REVISION NO. 02/01/90
**SHORELINE OILING SUMMARY**

**DATE:** 2/01/90

**TEAM NO.:** 15

**TIME:** 10:20

**EST. SUBDIVISION LENGTH:** 40 m

**TIDE LEVEL:** +1 ft

**DATE:** 2/01/90

**UPLANDS DESCRIPTION:**

- **Grass**
- **Forest**

**SURVEYED FROM:**

- **Foot**
- **Boat**
- **Helicopter**

**SURFACE SEDIMENTS:**

- **R:** %
- **B:** %
- **C:** %
- **S:** %
- **M:** %
- **V:** %

**SLOPE:**

- **Lang:** %
- **Hang:** %
- **Vert:** %

**WAVE EXPOSURE:**

- **Low**
- **Med**
- **Hi**

**OIL CATEGORY LENGTH:**

- **W:** m
- **M:** m
- **N:** m

**PAVEMENT**

- **H:** %
- **F:** %
- **S:** %

**METERS BY:**

- **0**

**PAVEMENT**

- **H:** %
- **F:** %
- **S:** %

**METERS BY:**

- **0**

**NEAR SHORE SHEEN:**

- **NO**

**BR RW SL**

**OILED DEBRIS**

- **SM**
- **MD**
- **LO**

**DEBRIS TYPE:**

- **YES**

**N**

**Photographs:**

- Roll No.
- Frames

**COMMENTS**

---

### SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>Coat</td>
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<tr>
<td>Mousse</td>
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<tr>
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<tr>
<td>Tarballs</td>
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**OIL CATEGORY**

- **W:** m
- **M:** m
- **N:** m

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### SUBSURFACE OIL

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<td>G/P</td>
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</table>

**COMMENTS**

---

**REVIEWED**

**DATE:** 4-26-
ADPEC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: [ ] AERIAL [ ] GROUND

2 REGION: [ ] KP [ ] CH [ ] AP

3 DATE: 4/20/90

4 START TIME: 1605

5 STOP TIME: 1615

6 SEDIMENT #: 1A-021

7 STATION #: TIDE HT AT SURVEY: 1.74'

8 X-UNIT: [ ] DRAIN [ ] FLOOD

9 STAT AREA: 20 USGS QUAD:

10 LAT: 20

11 LONG:

12 SOURCE: [ ] Map [ ] Loran

13 LOCATION: N.W. LATOUCHE IS.

14 DESCRIPTION:

EXTENT OF OIL

27 SURFACE COVERAGE

L V N % O N

28 SURFACE THICKNESS

29 PENETRATION

30 OIL IMPACT:

31 OIL TYPES:

32 OILED DEBRIS

33 SHORELINE TYPES:

34 WAVE EXPOSURE:

35 SUBSTRATE TYPES:

COMMENTS:
Slight stain on scattered boulders.

Cobbles no oil observed in upper 35 cm. Luxobright
algae growth in lower intestinal - few grapples
observed - one dead petrel carcass - not fresh.
Thin film on bottom of some boulders.

TREATMENT RECOMMENDED:

10/49
Ecologist's Summary
Segment 1A 21
Stream 226-90-16776

The stream mouth lies on a long boulder/cobble beach, unstable, with sparse biota. Oil stains scattered among cobbles and pebbles in VTZ. No cleanup recommended.

A.H. Ferrell
SHORELINE EVALUATION

SEGMENT ST/ LA-23 _______ SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Near Sawmill Bay hatchery (1F) - 4/20 to 5/10; Deer harvesting (7II) - 8/15 to 2/28; Salmon stream fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31. Avoid disturbance of stream or adjacent substrate; Contact ADF&G Habitat Division prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid unnecessary disturbance of substrate and biota. See attached Ecological Constraint Sheet.

SHPO SIGNATURE: ____________________ DATE: 4/1/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 15 m: No Oil 350 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

RECOMMENDATIONS:
_____ No Treatment Recommended
X ___ Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
X ___ Tarmat: ______ Breakup
X ___ Removal
_____ Snare/Absorbent Booms
_____ Oil Snares (pom poms)
_____ Absorbents (pads, rolls, etc)
_____ Spot Washing: _____ Wands
_____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommend manual pick up of oil spill related debris (pom-pom) and removal of tarmat as shown on attached sketch map. Treatment activities should be conducted from 5/15 to 7/10 based on above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90
ADEC
EXXON
NOAA
USCG

FOSC: _______ DATE: 5-9-90

[Signature]
[Signature]
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 11-23 SUBDIVISION: __________________________ DATE 1-4-90

USCG
NAME: Randolph W. Hubbard SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Ref: Land manager comments:

ADEC
NAME: J. Lynn Martin SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

MANUAL REMOVAL OF ASPHALT PAVEMENT AND DEBRIS.

LAND MANAGER (CHENECA)
NAME: Patrick Seamen SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I recommend to have this segment be examined again at a later date, because when I talked to a Deckhand off the boat "GLACIER" he told Hubbard & T. that when they pulled their cam up on to the beach there was a sheen of oil around the boat, also on depothing the beach with the helicopter, I noticed two patches of mouse mats approx 500 meters by 100 meters.

Kelp with suspected shark

11-30 offshore
**SHORELINE OILING SUMMARY**

**OG** Reimer
**BIO** Zamora
**EXXON** Garcia

**USCG** Hubbard
**LAND REPS** Eyland
**ADEC** Martin

**SEGMENTS**

**TIME:** 5:20 to 15:52

**TEAM NO.:** 1

**TIDE LEVEL:** +4.0 to +5.0

**DATE:** 4/1/90

**EST. SUBDIVISION LENGTH:** 385 m

**UPLANDS DESCRIPTION:**
- Grass
- Forest
- Rock

**SURVEYED FROM:**
- Foot
- Boat
- Helo

**SURFACE SEDIMENTS:**
- R
- B
- O
- C
- P
- G
- S
- M
- N
- V
- L

**SLOPE:**
- Lang
- Hang
- Vert

**WAVE EXPOSURE:**
- Low
- Med
- High

**OIL CATEGORY LENGTH:**
- W - m
- M - m
- N - m

**SURFACE OIL**

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<thead>
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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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**PAVEMENT:**
- F
- S

**PATTIES/TARBALLS**

**NEAR SHORE SHEEN?**
- No

**SUBSURFACE OIL**

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**COMMENTS**

Pebble, cobble, boulder beach north of the Lagoon Fuel dump. Considerable
mud was material in the lagoon. The remains of an ore loading dock associated
with an old copper mine. The northern section of the beach is underlaid with
rock platform which is seen at the end of the segment forming a small point.
The only oil found on this section was a small 5m x 3m patch of hard
residue on cobble and boulders.

**REVIEWED:**

**DATE:** 4-3-90
SKETCH MAP

1. 2 - Pompons
2. Plastic bag filled with pompons
3. Small patch of handassault

LEGEND

1. Pl - No Subsurface Oil
2. Pl - Subsurface Oil

- Concession Distribution
- Broken Distribution
- Patchy Distribution
- Splattered Distribution

- Oiled Vegetation

- Photo location, direction, and number

Old Character Length (in): AP S PO CV CT ST MS PT TB FL NO 386
# SHORELINE ECOLOGICAL SUMMARY

**Segment ST/LA 23** Subdivision - - - - - - Date (mo/day/yr) 4/1/80

**Time (24 hr) 1432** Biologist TONY Zapora

## (A) Substrate type and % of segments:
- (1) Bedrock 10
- (2) Boulder 62
- (3) Cobble 46
- (4) Pebble 56
- (5) Sand 0
- (6) Slit 0

## (B) Overall % cover of biota (% of segment):
- Dense 0
- Moderate 0
- Low 0

## (C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

### BARNACLES

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### MYTILUS

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### FUCUS

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</table>

**Wildlife Observations/ General Comments:**

- LOW ZONE NOT EXPOSED DURING SURVEY
- LITTLE BIOTA HERE EXCEPT FOR ROCK OUTCROP AT EDGE
- DEER TRACKS (SEVERAL) WERE SEEN, DEER SKELETON (FRESH) WAS FOUND, SEABIRDS EMMING (CREBES?)
- ECOLOGICAL CONSIDERATIONS:
  - FII, 72, 5T (THOUGH NONE WERE SEEN)
- CULTURAL RESOURCE AS LAPOCHE TOWNSITE? BOTTLE FOUND DATED 1877
PWS ECOLOGICAL CONSTRAINTS

1B
Salmon stream mouth - fry outmigration (5/1 to 8/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C
Salmon fry nursery area (4/31 to 7/31)

1D
Estart Hatchery release (4/15 to 6/1)

1E
Main Bay Hatchery release (4/20 to 5/10)

1F
Sawmill Bay Hatchery release (4/20 to 5/10)

1G
Cannery Creek Hatchery release (4/21 to 6/1)

1H
Remote release site

1I
Gill net area (6/7 to 6/31)

1J
Purse seine area (7/21 to 9/30)

1K
Purse seine hook-off (7/20 to 9/30)

1L
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M
Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unseeded intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.

3N, 3P
Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R
Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800 m horizontal, 300 m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S
Seabird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T
All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U
Recreation:
Tent sites (6/1 to 9/15)
Anchorages (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

7Z
Subsistence area:
Salmon harvesting (5/1 to 9/30)

7HH
Finfish harvesting

ZZ
Deer harvesting (5/15 to 2/28)

7JJ
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-23 A STREAM NO: 226-40-16772 DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE:DATE: 5/7/90
Subsurface Oil Observed: Yes No X Maximum Depth_____

RECOMMENDATIONS:

X No Treatment Recommended Snare/Absorbent Booms
_____ Treatment Recommended Oil Snare (pom poms)
_____ Manual Pickup Absorbents (pads, rolls, etc)
_____ Bioremediation Spot Washing: Wands
_____ Tarmat Removal Beach Cleaner

COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE: 5/7/90
ADEC Act William Matheman
EXXON
NOAA
USCG

FOSC: DATE: 5-18-90

C.A. Beeler C.A. Beeler
Salmon stream mouth - try outmigration (3/1 to 5/15)

Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels. Such as hot water wash or inipool application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

Salmon fry nursery areas (4/21 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipool application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

Esther Hatchery release (4/15 to 8/15)

Main Bay Hatchery release (4/20 to 8/15)

Sawmill Bay Hatchery release (4/15 to 6/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release sites

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipool application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

Gill net area (6/7 to 8/31)

Purse seine area (7/2 to 9/30)

Purse seine hook-off (7/20 to 9/30)

Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (11) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncollected intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (8/15 to 6/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235

ADF&G Don Calkins 267-2403

Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

ADF&G Tom Polby 267-2206

All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbances to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

Recreation:

Tent sites (6/1 to 9/15)

Anchorages (6/1 to 9/15)

Forest Service cabins (6/1 to 9/15)

Lodge (6/1 to 9/15)

Special use destination

Subsistence areas: Salmon harvesting (5/1 to 9/30)

Finfish harvesting

Duck harvesting (9/15 to 2/28)

Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipool which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
Observations. A deposit of heavy oil penetrates the substrate immediately adjacent to the upper-mid intertidal portion of the stream. This area has a surface armor of large cobble overlying small gravels. A high tide berm may be advancing over this oil deposit. Tar from this deposit is exposed in the stream channel along the southwest bank and is leaking sheen into the stream. Tarry/moussy oil penetrates the sediment approximately 4 cm at the present stream bank. Oil penetration may be deeper further from the stream.

Treatment Recommendations. The complete layer of oiled substrate within this deposit should be manually removed, bagged, and taken from the site for safe disposal. Four-wheelers should be used to facilitate removal of material from beach. Excavation should begin on the side of the patch most distant from the stream channel. Clean material from the adjacent berm should be backfilled into the excavated area soon after oiled material is removed. In no circumstances should clean material be deposited over any remaining oiled substrate. Immediately after removal of the oiled substrate adjacent to the stream, boulders from the opposite shore (see ADF&G Multi-Assessment Data Form diagram for general location) should be placed along the bank to prevent migration of the channel into the treated area. All activities must occur between 15 May and 15 July, 1990.

Observations. Only lightly stained logs in storm berm.

Treatment Recommendations. If future observations do not reveal significant quantities of buried oil, no treatment is recommended.
SHORELINE OILING SUMMARY

SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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OILED DEBRIS | AMOUNT |
Logs          |         |
Vegetation    |         |
Trash         |         |
Debris         |         |

Photographs:

Roll No._
Frames__

NEAR SHORE SHEEN? NO BN RW SL 1

PATTIES / TARBALLS 0 BA

PAVEMENT H F 8 0 sq. m by _

Did You Call DEBRIS _

Yes . _
No . _

TYPE _

SUBSURFACE OIL

NO PITS

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<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>BAGS</th>
<th>SURFACE OIL</th>
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COMMENTS

REVIEWED _ DATE _
**ADPAC Multi-Assessment Data Form**

1. **Survey Type:** SS 5S 10S AVE SOME MORE PTA 1007 2304 11 1.7
2. **Method:** Aerial Ground
3. **Date:** 4/2/99
4. **Start Time:** 1800
5. **Stop Time:** 1820
6. **Segment:** 160-23
7. **Station:** N/A
8. **X-Unit:** N/A
9. **Y-Unit:** N/A
10. **X-Area:** N/A
11. **Latitude:**
12. **Longitude:**
13. **Source:** Map
14. **Location:**
15. **Description:**

### Extent of Oil

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**27 Surface Coverage**

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**28 Surface Thickness**

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**29 Penetration**

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**30 Overall Oil Impact:** L H N

**31 Oil Type:** Pooled Mousse Tar Asphalt Sticky Solid

**32 Oiled Beach:**

**33 Shoreline Type:** Handland Low-lying Banks Beach Cove

**34 Wave Exposure:** High Moderate Low

**35 Substrate Type:** Bedrock Boulder Gravel Sand Mud/all

**36 Anadromous Fish Present?** Y

**37 Catalog #:** 226-40-16772

**38 Stream Name:** N/A

**39 Oil in Stream Bed:** Y

**40 Oil on Stream Bank:** Y

**41 Oil on Beach Adjacent to Mouth:** Y (within 50 meters)

**42 Oil Within 1 Mile of Stream:** Y

**43 Oiled Derelict:** Y

**44 Anadromous Fish Observation:**

<table>
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<tr>
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<th>Aerial</th>
<th>Ground</th>
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</thead>
</table>

**Comments:** Very light. Only sign of oil is stain on logs where this stream cuts through storm drain. No treatment recommended.
Ecologist's Summary
Segment LA-23
Stream # 226-90-16722

4/20/90
Michael Fawcett

No oil was found at this site except for a few light splatters on drift logs. One mature eagle in tree. No cleanup recommended.

M F Fawcett
SHORELINE EVALUATION

SEGMENT ST/ LA-24 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 94 m: Narrow 69 m: V.Light 0 m: No Oil 725 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended X Snare/Absorbent Booms
X Treatment Recommended X Oil Snares (pom poms)
X Manual Pickup X Absorbents (pads, rolls, etc)
X Bioremediation X Spot Washing: Wands
X Tarmat: Breakup X Beach Cleaner
X Removal X Other (see comments)

COMMENTS: Recommend removal of tarmats and manual pick up of mousse patties as shown on sketch map. Work should be conducted between 6/1 and 7/10 to avoid fry outmigration and salmon spawning constraints, and hatchery release constraints. Work may begin 5/1 with approval from ADF&G.

TAG COMMENTS: ________________________________

TAG APPROVAL DATE: 4/17/90
ADEC AT WEINER
EXXON AMY TAY
NOAA BRIAN WATERS
USCG KENNETH VERMICHER

FOSC: [Signature] DATE: 5-9-90

CIVILIAN REP TO BE PRESENT
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C Salmon fry nursery area (4/31 to 7/31)
1D Main Bay Hatchery release (4/15 to 6/1)
1E Sawmill Bay Hatchery release (4/15 to 6/1)
1F Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Gill net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncollected intertidal and subtidal algal and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 6/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
6V Tents sites (8/1 to 9/15)
6W Anchorages (8/1 to 9/15)
6X Forest Service cabins (8/1 to 9/15)
6Y Lodge (8/1 to 9/15)
6Y Special use destination

7Z Subsistence area:
7H Subsistence harvesting (5/1 to 9/30)
7HH Finfish harvesting
7J Subsistence harvesting (8/15 to 2/28)
7 JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chanega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 6A-24  SUBDIVISION:  DATE 4-1-90

☐ USCG NAME  R. W. Hubbard  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. Light tilling to disrupt surface sedi

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

ADEC NAME  J. Lynn Martin  SIGNATURE

MANUAL REMOVAL OF TANKS
MECHANICAL CLEANUP OF SUBSURFACE MOUSSE + TILING OF FILM FOR AGITATION

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

LAND MANAGER NAME  Patrick CHENEGA  SIGNATURE

Ref. to ADEC comment

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

REVISION NO. 02/21/90
SHORELINE OILING SUMMARY

**TEAM NO.:** 1
**TIDE LEVEL:** +2.1 to +4.0
**DATE:** 4/1/90

**EST. SUBDIVISION LENGTH:** 4.94 m
**UPLANDS DESCRIPTION:** Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

**SURVEYED FROM:** ☐ Foot ☐ Boat ☐ Helo

**SURFACE SEDIMENTS:** R 10% B - % C - % P 60% G 20% S 10% M 0% V
**SLOPE:** Lang 90% Hang 10% Vert %
**WAVE EXPOSURE:** Low ☐ Med ☐ High

**OIL CATEGORY LENGTH:** W - m M 40 m N /O m VL - m NO 4.44 m

**PAVEMENT:** H F ☐ 10 sq. m by 3 cm
**PATTIES / TARBALLS:** 3 BAGS
**NEAR SHORE SHEEN?** ☐ BR RW SL TL

**OILED DEBRIS**
- Logs
- Vegetation
- Trash
- Debris

**Debris Collected**
- YES ☐ NO ☐

**OILED AMOUNT**

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil / Film Color</th>
<th>Pit Zone</th>
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</thead>
<tbody>
<tr>
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**COMMENTS**
This segment consists of a wide beach and tidal flat associated with a freshwater stream. The southern border of the segment is bordered by a short length of rock cliff. The north-facing shoreline in front of the cliff forms a small cove where deposition from oil, a brown film covers the upper 2-3 m wide band of patchy asphalt pavement is found at the base of rock and rubble.

No oiled oil was found.

Page 1 of 2

**REVIEWED:** [Signature] **DATE:** 4-3-90
## Subsurface Oil (Continued)

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**Comments**
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / LA 24
Subdivision - Date (mo / day / yr) 4/1/90

**Time (24 hr) 14:00 Biologist TONY ZAMORA**

(A) Substrate type and % of segments:
1. Bedrock (0)
2. Boulder - (3)
3. Cobble - (4)
4. Pebble - (5)
5. Sand - (6)
6. Silt - (0)

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

### BARNACLES

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### GASTROPODS

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**Wildlife Observations/ General Comments:**
- Low zone not exposed during survey
- Little biota here except for the rock outcrop at edge
- Barnacles on large (>5cm) pebbles in mid zone

**Ecological Considerations:**
- Anatomous stream, (7-11)
- LA-24 not on list
- Add 1A, 1B, 1F
- This site is a cultural resource(?) as the La Touche

Photographs:
Roll No. 55-16-2
Frames 30-34
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-24 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. The stream in this subdivision is not an ADF&G catalogued anadromous stream.

1F Sawmill Bay Hatchery Release

No constraint to manual pickup and tarmat removal.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal.

7Z Subsistence: Salmon Harvesting

No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

MAY 29 1990

TAG APPROVAL DATE 5/29/90

ADEC ART WEIMER

EXXON A. G. WELLS

NOAA SUBSIDIARY

USCG CA-KR

Prepared By: Andrew Myrle

Date 5/28/90
SHORELINE EVALUATION

SEGMENT ST/ LA-25 SUBDIVISION A (1 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-4 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2131 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended Snare/Absorbent Booms
____ Treatment Recommended Oil Snares (pom poms)
____ Manual Pickup Absorbents (pads, rolls, etc)
____ Bioremediation Spot Washing: Wands
____ Tarmat: Breakup Beach Cleaner
____ Removal Other (see comments)

COMMENTS:


TAG COMMENTS:


TAG APPROVAL DATE: 4/21/90
ADEC [Signature] DATE: 5/12/90

FOSC: [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth: fry outmigration (3/1 to 5/15)
1B Salmon stream mouth: spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
   No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to
treatment for permits.
1C Salmon fry nursery area (4/31 to 7/31)
1D Estuary Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
   For Codes 1G through 1L contact ADF&G for specific dates, locations and constraints.
2J Herring spawning (4/1 to 6/15)
   Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass.
   Contact ADF&G for specific dates and locations.
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion motling (6/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m
   horizontal and 300m vertical distance from haulouts.
5R Seabird colony (5/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 600m. Aircraft to maintain 800m horizontal, 300m
   vertical distance. Contact ADF&G and USFWS prior to treatment.
5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic.
5T All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from
   and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to
treatment for confirmation of dates.
6U Recreation:
   Tent sites (6/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7JI Deer harvesting (2/15 to 2/26)
7JJ Invertebrate harvesting
   For Codes 7Z through 7JJ contact ADF&G and Chonega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-25 SUBDIVISION: A DATE 4/2/90

NAME GARY SHIGENAKA SIGNATURE Gary Shigemaki

□ NO TREATMENT RECOMMENDED □ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION WAS A RELATIVELY LENGTHY SECTION THAT INCLUDED BOULDER BEACHES ABUTTING SCREE AND STEEP BANKS ALONG THE NORTHERN PORTION, TO TREE ROCKY FACES ALONG THE SOUTHERN PORTION. EASILY DETERIORATING WEATHER PRELIMTED SAFE BEACH LANDINGS AND SO SUBDIVISION WAS SURVEYED BY BOAT. WEATHERED STAIN WAS OBSERVED ON ISOLATED SEAWARD FACING BOULDERS.

SURVEY WAS DISCONTINUED DUE TO WEATHER CONDITIONS, PRIMARILY BUILDING SEAS.

NAME John Hoey SIGNATURE

□ NO TREATMENT RECOMMENDED □ TREATMENT SUGGESTED

COMMENTS

Due to weather 3' seas and difficult access, we were only able to survey approx. 1/2 of segment. Survey was from shore, due to splash stains observed.

Recessed southern portion of segment be surveyed from helicopter as beach is lower due to 5-6' wave energy problems with access from shore on most days.

NAME R. A. MCMURRAY SIGNATURE Pete O. Muncie

□ NO TREATMENT RECOMMENDED □ TREATMENT SUGGESTED

COMMENTS

I PARTICIPATED IN THE SEGMENT EVALUATION OF THIS SEGMENT AND WILL REPORT BACK TO CPC.
**SURFACE OIL**

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**SUBSURFACE OIL**

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<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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**COMMENTS**

No pits were made due to unaccessibility of beach segment was surveyed from the Zodiac (boat). No oil was observed from the boat in this subdivision with the exception of a few CVS 2-3cm stains on the exposed boulders in the HEZ2 towards the southern end of the subdivision.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST1, ABD25**  
**Subdivision** A  
**Date (mo/day/yr)** 4/2/90  

**Time (24 hr)** 16:10 hrs  
**Biologist** Ambrose  

(A) Substrate type and % of segments:  
(1) Bedrock 5  
(2) Boulder 65  
(3) Cobble 25  
(4) Pebble 5  
(5) Sand -  
(6) Silt -  

(B) Overall % cover of biota (% of segment): Dense 20  
Moderate 20  
Low 60  

(C) Density, substrate preference (by number from A, above), &  
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):  
juveniles/adults (X), new settlement (3)  

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| GASTROPODS |       |          |        |      |
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**Photographs:**  
**Roll No.**  
**Frames**

**Wildlife Observations/General Comments:**  
*Eagles (see below), 3 others, 2 seals, 25 cormorants,  
4 murres, 4 crabs, 3 herring ducks, 1 merganser, 5 gulls. Very dense Nereocystis bed  
off shore. Moderate to dense cover in narrow bands in the mid/low intertidal, with  
cover denser towards south end of island. Towards 5 end of segment, mussel form  
ecological considerations: a dense band in mid-littoral.*  

**Ecological Considerations:**  
7KH, 7II, 1I3, 5T-2: 9 mature bald eagles & 1 immature eagle seen, but  
no nests.

*Note: 60% part of this segment surveyed by boat, farther from shore than usual.*
SHORELINE EVALUATION

SEGMENT ST/ LA-25 SUBDIVISION B (2 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-4 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
11 Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/2/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3976 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended Snare/Absorbent Booms
____ Treatment Recommended Oil Snare (pom poms)
____ Manual Pickup Absorbents (pads, rolls, etc)
____ Bioremediation Spot Washing: Wands
____ Tarmat: Breakup Beach Cleaner
____ Removal Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC [Signature] FOSC: [Signature] DATE: 5-12-90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (5/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio-remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C Salmon fry nursery area (4/31 to 7/31)
1D Farwell Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L, contact ADF&G for specific dates, locations and constraints.
2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unouiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
5T All Bald Eagle nests (2/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U Recreation:
Tent sites (6/1 to 9/15)
Anchorage (8/1 to 9/15)
6V Forest Service cabin (6/1 to 9/15)
6W Lodge (6/1 to 9/15)
6Y Special use destination
7Z Subsistence area:
Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7EH Deer harvesting (9/15 to 2/28)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ, contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST/LA-25  SUBDIVISION:  B  DATE 4/9/90

NOAA
NAME GARY SHIGENAKA  SIGNATURE  G. Shigenaka

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
SUBDIVISION consisted of the remainder of the segment not surveyed on 4/2 because of deteriorating weather conditions. Despite ideal weather today during continuation of the segment (clear, light winds) surf conditions precluded any possibility of beach landings. As a result, subdivison was surveyed from the inflatable. No oiling was observed. Five deer were observed on the beach at the southern end, and several eagles were sighted along the shore.

ADEC
NAME  John Hayes  SIGNATURE  J. Hayes

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Landslide on segment was observed from skiff due to high swell. Rocky shoreline was observed from open bow. No oiling was observed from skiff.

The beach is a high energy one normally shoalless shore. The two stubs I splatter were being weathered with wave action.

LAND MANAGER
NAME  __________________________________  SIGNATURE  __________________________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Land manager was not present, due to weather delays.
**SHORELINE OILING SUMMARY**

OG: Mike Foger  
NOA: Gary Shigemura  
SEGMENT: LA-25

BIO: Richard Ambrose  
LAND REP: Jan G. Barker  
EXXON: L.C. Keller  
DATE: 4/1/90

TEAM NO.: 11  
TIDE LEVEL: 0.9 to 4.2

EST. SUBDIVISION LENGTH: 5464 m  
LAND DESCRIPTION: ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo  
SURFACE SEDIMENTS: ☐ Grass ☐ Forest ☐ Rock  
SURFACE DESCRIPTION: ☐ Surf ☐ Rock ☐ Cliff ☐ Beach

SLOPE: Lang 20% Hang 10% Ven 30%  
WAVE EXPOSURE: ☐ Low ☐ Med ☐ High

OIL CATEGORY LENGTH: W m M m N m V m

---

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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### SUBSURFACE OIL

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**COMMENTS**  
No pits were excavated due to the inaccessibility of the shore zone. No oil was observed in this area. The shore zone consists of Rocky headlands with a few pocket cobble/boulder beaches.
SHORELINE ECOLOGICAL SUMMARY

Segment ST / LA025 Subdivision  B
Date (mo/day/yr)  4/9/90

Time (24 hr)  0915 hrs  Biologist  Ambrose

(A) Substrate type and % of segments:
(1) Bedrock  (2) Boulder  (3) Cobble  (4) Pebble  (5) Sand  (6) Silt

(B) Overall % cover of biota (% of segment): Dense  30  Moderate  20  Low  50

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles / adults (X), new settlement (O)

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| FUCUS       |       |          |        |      |
| 1U 1M 1L    | 2     | 2        | 2      | 2    |
| 3 3 3 3     | 2     | 2        | 2      | 2    |
| 4 4 4 4     | 2     | 2        | 2      | 2    |
| 5 5 5 5     | 2     | 2        | 2      | 2    |
| 6 6 6 6     | 2     | 2        | 2      | 2    |

Wildlife Observations/ General Comments: 1 otter, 1 deer, 5 cormorants, 3 Harlequin ducks,
18 gulls, 5 Osprey, eagles see below.

Ecological Considerations:

THH, STI, ST2: 4 eagles seen. In the first pair, one was immature and the other
appeared to be part-way between immature and mature. A second
pair of mature bald eagles flies by the first pair.
XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

LA-25

ADEC Segment Length: 6167m

Map Key: PWS-431b
Name: Mike Foset
Date: 4/9/90
Date Entered:

PWS 431A
SEGMENT ST/LA-26  SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Gill net area (II) - 6/7 to 8/31; and purse seine area (IJ) - 7/20 to 9/20; deer harvest (III) - 8/15 to 2/28. Contact ADF&G for specific dates and locations. No specific constraints.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance/damage of unoiled biota and substrate.

SHPO SIGNATURE: ___________________________ DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 5416 m
Subsurface Oil Observed: Yes ___ No ___ Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended  ____ Snare/Absorbent Booms
___ Treatment Recommended  ____ Oil Snares (pom poms)
___ Manual Pickup  ____ Absorbents (pads, rolls, etc)
___ Bioremediation  ____ Spot Washing: Wands
___ Tarmat: Breakup  ____ Beach Cleaner
___ Removal  ____ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC ____________ EXXON ____________ NOAA ____________ USCG ____________
FOSC: ___________________________ DATE: 5-6-90
SEGMENT ST / LA-26  SUBDIVISION:  A  DATE 4/2/90

NAME GARY SHIGENAKA  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT WAS A COBBLE-BOULDER BEACH WITH SCRUB VEGETATION ABOVE THE BERM ABUTTING HIGH BANK SCREE. NO OIL WAS OBSERVED ON THE BEACH. HEALTHY POPULATIONS OF AMPHIPODS WERE FOUND BELOW COBBLE.

NAME  John Hoyes  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

No oil observed on this segment.

NAME RITA MUZIO  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

I PARTICIPATED IN THE CSAT INSPECTION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL BE REPORTING BACK TO CAC.
**SHORELINE OILING SUMMARY**

**OG** Mike Fogg  
**USCG** Gary Shigemura  
**NOAA**  
**BIO** Richard Ambrose  
**LAND REP** Rita A. Higuchi  
**SEGMENT** A (10F1)  
**EXXON** Larry Olson  
**ADEC** John Hayes  
**TIME** 15:30 to 16:00

**TEAM NO.: 11**  
**TIDE LEVEL:** 2.6 to 3.8  
**DATE:** 4/2/90

**EST. SUBDIVISION LENGTH:** 552.6 m  
**SURFACE SEDIMENTS:** 100% B 35% C 35% P 15% G 10% S 5% M 5% V ~ ~

**SLOPE:** Long 100% Hang ~ ~ Vert ~ ~

**WAVE EXPOSURE:**  
- Low
- Med
- High

**OIL CATEGORY LENGTH:** W ~ ~ M ~ ~ m N ~ ~ m Vl ~ ~ m NO 552.6 m

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### SURFACE OIL

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### SUBSURFACE OIL

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**COMMENTS:** No oil was observed in this segment. Shore zone consists of low angle boulder/cobble beaches w/ a steep rocky rim/nick for backshore.

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**REVIEWED:** [Signature]  
**DATE:** 4-5-90
|          | BARNACLES |          |          |          |          | MYTILUS |          |          |          |          | GASTROPODS |          |          |          |          |          | FUCUS |          |          |          |          |          |
|----------|-----------|----------|----------|----------|----------|---------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|          | Dense     | Moderate | Sparse   | Rare     | Dense    | Moderate | Sparse   | Rare     | Dense    | Moderate | Sparse   | Rare     | Dense    | Moderate | Sparse   | Rare     | Dense    | Moderate | Sparse   | Rare     | Dense    | Moderate | Sparse   | Rare     |
| Roll No. | ST-1-2    | Frames   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|          | 1U        | 1M       | 1L       | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        | 2        |
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|          | 4         | 4        | 4        |          | 5        | 5        | 5        |          | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        | 6        |
|          | 5         | 5        | 5        |          | 6        | 6        | 6        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |

Wildlife Observations/ General Comments: Eagles (see below), 10 crows, 1 gull, 2 sea lions, 4 common mergansers, and 9 harbor seals hauled out on an offshore rock. Although upper part of beach is barren, portions of mid and low intertidal have dense cover of algae, with scattered mytilus patches.

Ecological Considerations: J. 11-5: Not relevant. Did see one pair of mature bald eagles (possibly the same as noted for LA0308), and one lone mature eagle.
Legend

Δ - Pit, No subsurface oil

/// - Steep rocky Mt, Backshore

Legend

Δ - Pit, No subsurface oil

/// - Steep rocky Mt, Backshore
LA-26A

Low angle B/C Beach

XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

ADEC Segment Length: 5528m

Map Key: PWS-507D
Name: Mike Euse
Date: 4/2/90
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ LA-27       SUBDIVISION A (1 OF 1) DATE        4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon gill net area (1I) - 6/7 to 8/31 (contact ADF&G for specific dates and locations). Purse seine area (1J) - 7/20 to 9/30 (contact ADF&G for specific dates and locations). Deer harvesting (7I) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

SHPO SIGNATURE: ___________________________ DATE: April 12, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 566 m: No Oil 978 m
Subsurface Oil Observed: Yes No X
Minimum Depth

RECOMMENDATIONS:
X No Treatment Recommended  ______ Snare/Absorbent Booms
_____ Treatment Recommended  ______ Oil Snares (pom poms)
_____ Manual Pickup  ______ Absorbents (pads, rolls, etc)
_____ Bioremediation  ______ Spot Washing: Wands
_____ Tarmat: ______ Breakup  ______ Beach Cleaner
_____ Removal  ______ Other (see comments)

COMMENTS:


TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUMER        DATE: 5-6-90
EXXON ANDY TAYLOR
NOAA RYAN WESCOTT
USCG M.J. HALL
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LA-27  SUBDIVISION: __________________________ DATE 4/2/90

USGS NOAA NAME GARY SHIGENAKA SIGNATURE  Gary Shigemoto

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS


THE OCCURRENCE OF STAIN ON COBBLE AND ROCKS BECAME LESS APPARENT AS THE ORIENTATION OF THE BEACH BECAME MORE EASTERLY, CONTINUING SOUTH ALONG THE COASTLINE. EVIDENCE OF OILING DIMINISHED. A SPOT CHECK OF THE SOUTHERN PORTION OF THE SEGMENT REVEALED NO OILING.

ADEC NAME  John Hayes  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Very light for stain but. No 5!

Contamination observed. High energy beach.

LAND MANAGER  CAC

NAME RITA A. MIRAGLIA SIGNATURE  Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

I participated in the CAC evaluation of this segment and will report back to CAC.
SHORELINE OILING SUMMARY

OG Mike Fogt NOAA Gary Shigeno SEGMENT ST/LA-27
BIO Richard Ambrose LAND REP Risa A. Hilagin SUBDIVISION A (1 OF 1)
EXXON Larry Olson ADEC John Hayes TIME 14:40 to 15:30
TEAM NO.: TIDE LEVEL: DATE 4/27/90
EST. SUBDIVISION LENGTH: 1562 m SUN Clouds FOG Rain Snow
UPLANDS DESCRIPTION: M Forest 10 m scrub + snow up to 1m bed
SURVEYED FROM: X Foot X Boat X Halo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 8% B 30% P 30% G 20% S 20% M 10% V ---%
MORE DESCRIPTION: I Grass M Forest 10 m scrub + snow up to 1m bed
SURFACE SEDIMENTS: R 8% B 30% P 30% G 20% S 20% M 10% V ---%
SLOPE: Lang 0.0% Hang --% Vert --% WAVE EXPOSURE: Low Mod HIgh
OIL CATEGORY LENGTH: W m M m N m VL 600 m NO 962 m

SURFACE OIL

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PAVEMENT: H F S ________sq. m by ________cm
PATTIES/TARBALLS ________ BAGS
NEAR SHORE SHEEN? ___ BR RW SL TL

OILED DEBRIS AMOUNT

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Photographs:
Roll No. __________
Frames __________

SUBSURFACE OIL

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A very light discontinous, spattered, 1m x 600 m tar zone was
located in the supra ITZ. The oil stains were located on cobble
and looked highly weathered. No oil was found underwash cobbles.
This 600 meter zone was located on the northern end of the seafloor.

Page 1 of 1

REVIEWED ________ DATE 4/5/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/16024 Subdivision A Date (mo/day/yr) 4/2/90

Time (24 hr) 14:30 Biologist Ambrose

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 Low 100

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L): juvenile/adults (X), new settlement (3)

Photographs:

Roll No. Roll No. 1

Frames 1

BARNACLES

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Wildlife Observations/General Comments: Eagles (see below), 4 murres, 13 cormorant, sea birds, & sea turtles and lots of dog scat. 2 ducks, quail. A very barren cobble beach, with practically no biota.

Ecological Considerations:
7/11; 11:7; ST: One pair of eagle nest (may be the same pair as in 1/1030 B); no nests.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-29  STREAM NO: 226-40-16788  DATE  4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. The subject stream is located in Subdivision A (1 of 1).

SHPO SIGNATURE:  DATE: 5/8/90

Subsurface Oil Observed:  Yes X  No ___  Maximum Depth 15 cm

RECOMMENDATIONS:

X  No Treatment Recommended  Snare/Absorbent Booms
___ Treatment Recommended  Oil Snares (pom poms)
___ Manual Pickup  Absorbents (pads, rolls, etc)
___ Bioremediation  Spot Washing: Wands
___ Tarmat Removal  Beach Cleaner
___ Other (see comments)

COMMENTS:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

TAG COMMENTS:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

TAG APPROVAL DATE: 5/7/90
ADEC  ART WILSON  DATE:  5/15/90
EXXON  ANDY TEM.  DATE:
NOAA  DATE:
USCG  DATE:
Salmon stream mouth - try outmigration (5/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morrison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Sewmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: AOF&G James Brady 424-3212

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net area (8/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3232

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unhulled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3232

3N, 3P
Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q
Harbor seal and sea lion molting (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377
ADF&G Tom Rothe 267-2201

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

6U Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

7Z Subspecies area: Salmon harvesting (5/1 to 9/30)

7U Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1429 SUBDIVISION: 16788 DATE __________

USCG NAME: [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

LAND MANAGER NAME: [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

20 April 1990

ASC # 226-40-16789
Segment LA-031

Observations: Very light stain on surface armor observed more than 50 yards north of stream. One partially oiled drift log observed on storm berm south of stream. No buried oil observed in test pits. No other visible signs of significant quantities of buried oil.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16788
Segment LA-029

Observations: Scattered stained surface cobbles and boulders found throughout anadromous fish stream zone. One out of four test pits revealed a layer of buried mousse 5 to 10 cm thick underneath 10 cm of clean substrate. Results from other pits indicate that this mousse layer was restricted to a small area.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16776
Segment LA-021

Observations: Stain and some light tar and light mousse scattered through anadromous fish stream zone. No significant quantities of buried oil observed.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.
**SHORELINE OILING SUMMARY (ANAD.) 16/49**

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**Photographs:**
- Roll No. ____________
- Frames ____________

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**Otter skull taken by Tom Couer (A.D.C.)**

**REVIEWED** ____________ **DATE** 4-26-90
ADP&Q Multi-Assessment Data Form

1. Survey Type: ES 35 CS TS AVS SCHA VHS PTA
2. Method: Aerial
3. Date: 4/20/90
4. Start Time: 1500
5. Stop Time: 1530
6. Segment #: LA-029
7. Station #: 10
8. High Tide Times: 1007, 1230
9. Low Tide Times: 0400, 1634
10. Tide Ht At Survey: 2.68'
11. Roll #: 1
12. Source: Map
13. Location: S.E. Latouche Is.
14. Description: Oil

Extent of Oil

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36. Cataloged Adj. Fish Present: Y
37. Catalog #: 226-40-16768
38. Stream #: 
39. Oil in Stream Bed: Y
40. Oil on Stream Bank: Y
41. Oil on Beach Adjacent to Mouth: Y
42. Oil within 1 Mile of Stream: Y
43. Anomalous Fish Presumed: Y
44. Anomalous Fish Observation: 

Surface Coverage: 100%
Surface Thickness: <1 mm
Penetration: 10
Overall Oil Impact: N
Oil Type: Pooled
Oil Debris: Y
Shoreline Type: Headland
Wave Exposure: High
Substrate Type: Bedrock

Comments: Stains on scattered rocks in zone of interest. One pit in a revealed buried mussel (5-10 cm band outlined by 10 cm clean substrate). No treatment recommended. Complete skeleton of dead adult sea otter.
Sample taken
Photo frame # and
date direction.
Ecologist’s Summary
Segment LA 29
Stream 226-40-16788

4/20/90
Michael Fawcett

Stream mouth lies on a boulder/cobble/pebble beach. Scattered light stains of oil were found in MTZ. Dense Mussels, barnacles, and Fucus occupy boulders in MTZ-LTZ. No cleanup recommended. Remains of dead sea otter found on UTZ berm. No obvious oil or tar, but all that was left was skeleton and bits of fur. Skull collected by Tom Crowe (A8F46). Several otters seen feeding near shore.

Michael Fawcett
SEGMENT ST/ LA-30 SUBDIVISION A (1 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Bald eagle nest (5T) - 3/1 to 6/1; Subsistence finfish harvest (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. (7HH) - Contact ADF&G and Chenega Corp. for dates, locations, constraints. Avoid disturbance/damage to uncoiled substrate and biota.

SHPO SIGNATURE: DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 114 m: No Oil 642 m
Subsurface Oil Observed: Yes No X

RECOMMENDATIONS:
X No Treatment Recommended Snare/Absorbent Booms
T Treatment Recommended Oil Snares (pom poms)
M Manual Pickup Absorbents (pads, rolls, etc)
B Bioremediation Spot Washing: Wands
T Tarmat: Breakup
R Removal

COMMENTS: Bioremediate area of stain as indicated on sketch map. Work after 6/1. High human use area.

TAG COMMENTS: No Treatment Recommended - High Energy

TAG APPROVAL DATE: 5/6/90
ADEC JOHN BAUER
EXXON ANAY TATE
NOAA G. S. WEDEL
USCG
Salmon Stream-Mouth (No. )

April 6, 1990

1A Salmon fry outmigration (1A) March 1 to May 15 and spawning (1B) July 10 to August 31. No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to cleanup for permits.

1B Harbor seal and sea lion pupping (3N, 3P)-May 15 to July 1. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to cleanup. Cleanup to be completed prior to May 15 or between July 1 and August 15 unless otherwise approved by ADF&G and/or USFWS.

3N Harbor seal and sea lion pupping (3N, 3P)-May 15 to July 1 and molting (3Q) August 15 to September 15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to cleanup. Cleanup to be completed prior to May 15 or between July 1 and August 15 unless otherwise approved by ADF&G and/or USFWS.

3P Harbor seal and/or sea lion pupping (3N, 3P) 5/15 to 7/1. Restrict boat and air traffic to essential minimum. No activity in area 5/15 to 7/1 unless authorized by ADF&G and/or USFWS. Contact ADF&G and USFWS prior to cleanup in any case.

3Q Harbor seal and/or sea lion molting (30, 3Q) 8/15 to 9/15. Restrict boat and air traffic to essential minimum. No activity in area 8/15 to 9/15 unless authorized by ADF&G and/or USFWS. Contact ADF&G and USFWS prior to cleanup in any case.

3T Active Eagle nests (5T) March 1 to June 1. Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to cleanup, for confirmation of dates and avoidance minimums.

5R Seabird colony (5R) May 1 to September 1. Restrict air traffic to essential minimum. Contact ADF&G and USFWS prior to cleanup.

2M Herring spawning (2M) April 1 to June 15. Restrict boat traffic to essential minimum. Avoid damage to unoolied intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

General Restriction for subsegments:
Avoid disturbance/damage to unoolied substrate and biota.

Any unnecessary
April 6, 1990

1C Fry nursery area (1C) 4/31 to 7/31. Contact ADF&G for exact dates, locations, constraints.

1D Esther Hatch release (1D) 4/15 to 6/1. Contact ADF&G for dates, locations, constraints.

1E Main Bay Hatchery release (1E) 4/20 to 5/10. Contact ADF&G for dates, locations, constraints.

1F Sawmill Bay Hatchery release (1E) 4/20 to 5/10. Contact ADF&G for dates, locations, constraints.

1G Cannery Creek Hatchery release (1G) 4/21 to 6/1. Contact ADF&G for dates, locations, constraints.

1H Remote release site (1H). Contact ADF&G for dates, locations, constraints.

1I Gill net area (1II) 6/7 to 8/31. Contact ADF&G for dates, locations, constraints.

1J Purse seine area (1J) 7/21 to 9/30. Contact ADF&G for dates, locations, constraints.

1K Purse seine hook-off (1K) 7/20 to 9/30. Contact ADF&G for dates, locations, constraints.

1L Set net sites (1L) 6/11 to 7/25. Contact ADF&G for dates, locations, constraints.

7Z Subsistence salmon harvest (7Z) 5/1 to 9/30. Contact ADF&G and Chenega Corp. for dates, locations, constraints.

7HH Subsistence finfish harvest (7HH). Contact ADF&G and Chenega Corp. for dates, locations, constraints.

7JJ Subsistence invertebrate harvest (7JJ). Contact ADF&G and Chenega Corp. for dates, locations, constraints.
SEGMENT 8TK-A-30  SUBDIVISION: A  DATE 4/2/90

NAME GARY SHIGENA S  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
SUBDIVISION CONSISTED OF BOULDER BEACH. SPLATTERS OF HIGHLY WEATHERED OIL WERE NOTED ON ROCKS IN THE UPPER INTERTIDAL. EXPOSURE TO STORMS HAS APPARENTLY DEGRADERD MUCH OF THE OIL ON THE ROCK SURFACES.

ADEC
NAME  JOHN HAYES  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
No subsurface penetration observed. Surface oiling consisted of occasional tar stains on boulders. Beach is high energy. One section (band) had a 1x100m area of tar stain that was 2mm of weathering well.

LAND MANAGER CAC
NAME P-R MIRAGLIA  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
I participated in the SSAE-EVALUATION OF THIS SEGMENT AND WILL REPORT BACK TO CAC.
SHORELINE OILING SUMMARY

OG  Mike Foget  NOA  Gary Shigenaka  SEGMENT 8T  LA-30
BIO  Richard Ambrose  LAND REP  Rita A. Mifsud  SUBDIVISION  A (1 or 2)
EXON  Larry Olson  ADEC  John Hayes  TIME  12:10  to  13:30
TEAM NO.  11  TIDE LEVEL  I.O.  6:09  DATE  4/2/90
EST. SUBDIVISION LENGTH:  750 m
UPLANDS DESCRIPTION:  ☐ Grass  ☐ Forest  ☐ Rock  ☐ Very steep mountain side  backpack
SURVEYED FROM:  ☐ Foot  ☐ Boat  ☐ Helo  WORKING DIRECTION:  110 to 5
SURFACE SEDIMENTS:  R 5 % B 40 % C 30 % P 20 % G 5 % S 8 % M 6 % V 5 %
SLOPE:  Lang 100 % Hang 60 % Vert 30 %
WAVE EXPOSURE:  ☐ Low  ☐ Med  ☐ High
OIL CATEGORY LENGTH:  W 100 m  H 200 m  N 400 m  VL 100 m  NO 650 m

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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PAVEMENT:  H  F  S  _____ sq. m by _____ cm

PATTIES / TARBALLS:  _______ BAGS

NEAR SHORE SHEEN?  ☐ BR  RW  SL  TL

OILED DEBRIS AMOUNT

Loga
Vegetation
Trash
Debris

Photographs:
Roll No.  ______
Frames  ______

SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL |
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| 1       | 15             | X                        | X              | X             |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
| 2       | 15             | X                        | X              | X             |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
| 3       | 20             | X                        |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |

COMMENTS

Some very light oiling was observed in the H22Z. The oiling was a splattered distribution and was a very light stain. The oil (see) appears to have been weathered by the high wave exposure.

JW  4-5-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ LA030 Subdivision A Date (mo/day/yr) 4/2/90

Time (24 hr) 13:10 hrs Biologist Pam Joyce

(A) Substrate type and % of segments:
1) Bedrock 5 (2) Boulder 40 (3) Cobble 30 (4) Pebble 20 (5) Sand 5 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 2 Moderate 13 Low 80

(C) Density, substrate preference (by number from A, above), and vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

BARNACLES

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FUCUS

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Wildlife Observations/ General Comments: One otter & deer scat found. Overall, a barren intertidal; only dense cover is in a small section where big boulders predominate. Dense *Nereocystis* bed offshore.

Ecological Considerations:

THU, Fri, & ST: One mature bald eagle seen, but not any nests.
Legend

Δ - Pit, No Subsurface Oil
/// - Steep Mt Side
o - Donders

XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

LA-30A

AEC Segment Length: 1512m

Map Key: PWS-436
Name: Mike Faye
Date: 4/2/10
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ LA-30 SUBDIVISION B (2 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Bald eagle nest (ST) - 3/1 to 6/1: Subsistence finfish harvest (7TH).

SUBDIVISION ECOLOGICAL CONSTRAINTS: (ST) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. (7TH) - Contact ADF&G and Chenega Corp. for dates, locations, constraints. Avoid disturbance/damage to uncoiled substrate and biota.

SHPO SIGNATURE: Date: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 50 m: Narrow 0 m: V.Light 506 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:
□ No Treatment Recommended
□ Treatment Recommended
□ Manual Pickup
□ Bioremediation
□ Tarmat: Breakup
□ Removal
□ Absorbents (pads, rolls, etc)
□ Spot Washing: Wands
□ Oil Snares (pom poms)
□ Absorbent Booms
□ Snare/Absorbent Booms
□ Other (see comments)

COMMENTS: Bioremediate areas of surface coat and stain as indicated on sketch map. Work after 6/1.

TAG COMMENTS: No Treatment Recommended - High Energy

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BAUMER
EXXON
NOAA
USCG

FOSC: DATE: 5-6-90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST LA-30 SUBDIVISION: B DATE 4/2/90

NOAA NAME GARY SHIGENAKA SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION consisted largely of a mixed cobble-boulder beach. Extremely weathered
stain was found on rocks in the upper intertidal, although most of the supratidal was
covered by snow. Some exposed driftwood logs had splashes of oil on them. It is
possible that the supratidal may contain more evidence of oiling.

Approximately midway in the subdivision, oiling became more evident, with the landward
faces of boulders showing some degree of stain or coat. The affected zone also became
wider than the previous band just below the supratidal. The wider zone in the upper
intertidal was estimated to be 15 m. A shallow pit dug in this zone revealed a thin
film of residual oil down to 3 cm with clean sediments beneath. A legitimate pit dug
slightly to the south and about 3 m lower in the intertidal gave a layering of clean
sediments over sediments with a film residual over a lens of heavier residual oil
over clean sediments, as described in attached documentation.

The band of consistent oiling extended south to the end of the subdivision.

ADEC NAME John Hayes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Surface oiling observed was too thin
from the UIIT to MIIT. Staining was light
coat continues 15 m X 400 L on boulders. (See sketch map)

Subsurface oiling was found at one
island spot. Test pit showed no oiling.

Beach is very high energy and difficult to access. Wave energy is tritill surface oiling.

LAND MANAGER CAC NAME RITA A. MIRAGLA SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I participated in the SSPT evaluation of this segment and will
report back to CAC. Subsurface oil was observed.

REVISION NO. 03/1990
SHORELINE OILING SUMMARY

OG: Mike Foger
NOAA: Gary Shigenaka
SEGMENT: LA-30
BIO: Richard Ambrose
LAND REP: Rita A. Martin
SUBDIVISION: G (20F2)
EXXON: Larry Olson
ADEC: John Hayes
TEAM NO.: 11
TIDE LEVEL: +1.0 to +1.5
DATE: 4/13/90

EST. SUBDIVISION LENGTH: 517 m

- Sun
- Clouds
- Fog
- Rain
- Snow

UPLANDS DESCRIPTION:
- Grass
- Forest
- Rock
- Silt
- Mud
- Vegetation
- Garbage
- Debris

SURVEYED FROM:
- Foot
- Boat
- Helicopter

WORKING DIRECTION:

SURFACE SEDIMENTS:
- Sand
- Gravel
- Mud
- Vegetation

SLOPE:
- Low
- Med
- High

OIL CATEGORY LENGTH:
- W
- M
- S

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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PAVEMENT:
- H
- F
- S

PATTERNS / TARBALLS

NEAR SHORE SHEEN?
- BR
- RW
- SL TL

OILED DEBRIS
- Logs
- Vegetation
- Trash
- Debris

DEBRIS COLLECTED
- YES
- NO

TYPE

Photographs:
- Roll No. 55 - 11 - 2
- Frames 2-4

SUBSURFACE OIL

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<th>BELOW</th>
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COMMENTS:
This section has some degree of oiling most of which is a
10m wide CT/s very light stain. This ranges mostly in the H172 and M272
in some staining in the 5U 272. Some stained logs appear to be in the SU 272 but most
his area is under snow. There is a large 2m diameter boulder on the northern part
of this segment. Approx. 10m south of this is a 15m x 50m CRIP tar covered area,
in this area there is some subsurface oiling. This occurs as a 5cm lens, 20cm deep. This large
subsegment has a high wave exposure and most staining affects on the lee side of cobble and
boulders,

Page 1 of 2

REVIEWED: JW
DATE: 4-5-90
### SUBSURFACE OIL (CONTINUED)

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**COMMENTS** PIT NO. 8 CONTAINS "OF" FROM 10-20 CM.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA030 Subdivision B Date (mo/day/yr) 4/2/90

Time (24 hr) 1:30 hrs Biologist Ambrose

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota ( % of segment): Dense 5 Moderate 15 Low 80

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles / adults (X), new settlement (3)

Wildlife Observations/General Comments: Eagles (see below) lots of dear tracks; along segment LA029, saw mink, 2 gulls, 1 Cormorant. A barren intertidal except for a narrow mid/lowlow tidal band with Fucus.

Ecological Considerations:

7HH, 7II, 5T: 3 mature bald eagles seen; one was paired; no nests.
SEGMENT: LA-30
SUBDIVISION: B
DATE: 4/2/90

CHECKLIST:
- M Acre
- Approx. Scale
- Seg/Sub Divn
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. MHWL/MLW
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND:
- Pt: No Subsurface Oil
- Pt: Subsurface Oil
- CT/C: Concentrated Distribution
- CT/P: Patchy Distribution
- CT/S: Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and marker

Legend:
- CT/S stain, Highly weathered
- 2m x 60m HIZ
- Large 2m diameter boulder
- 1.5m x 0.5m stain on lee side
- HIZ
- 6m x 7m CT/P stain, Highly weathered HIZ
- 15m x 50m CT/P tar coat in the HIZ and MITZ

Low angle Boulder cobble Beach

10m x 400m CT/S stain in the HIZ and MITZ
Highly weathered, no subsurface oiling. Most staining occurs on lee side of boulders + cobble

Oil Character Length (m): AP — PO — CV — CT 50 — ST 467 MS — PT — TB — FL — NO —
**SHORELINE EVALUATION**

**SEGMENT ST/ LA-31** **SUBDIVISION A (1 OF 2) DATE 4/8/90**

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

- ADF&G anadromous stream no. 226-40-16785.
- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
- 7HH Subsistence area: Finfish harvesting
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

**SHPO SIGNATURE:**

**DATE:** 4/23/90

**OILING CATEGORIZATION:**

- **Wide 0 m:** Medium 0 m: Narrow 0 m: V.Light 198 m: No Oil 931 m
- **Subsurface Oil Observed:** Yes ___ No X ___ Maximum Depth ______

**RECOMMENDATIONS:**

- X No Treatment Recommended
- ___ Treatment Recommended
- ___ Manual Pickup
- ___ Bioremediation
- ___ Tarmat: Breakup
- ___ Removal

**COMMENTS:**

__________________________________________________________________________

__________________________________________________________________________

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__________________________________________________________________________

**TAG COMMENTS:**

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

TAG APPROVAL DATE: 4/23/90

ADEC [Signature] DATE: 5/12/90

EXXON [Signature] __________

NOAA [Signature] ________

USCG [Signature] ________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream mouth - try outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Easter Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sewnail Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

ST All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

7Z Subsistence area:
Salmon harvesting (5/1 to 9/30)

7H Finfish harvesting

7I Deer harvesting (8/15 to 2/26)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 41-31

SUBDIVISION: A

DATE 4/18/90

USCG NAME R. Hubbed

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

ONLY OIL FOUND WAS A LIGHT STAIN ON ROCKS

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I agree with ADEC

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED

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COMMENTS

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED
**SHORELINE OILING SUMMARY**

OG Reimer | USCG Huard | SEGMENT ST/ LA - 31
BIO Camera | LAND REP Salanif (acc) | SUBDIVISION A (1042)
EXXON Carsey | ADEC Martin | TIME /6 / 20 10/5 : 31

TEAM NO. | 16 | TIDE LEVEL | S to S | DATE | 4 / 8 / 90

EST. SUBDIVISION LENGTH | 12.0 m | ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
UPLANDS DESCRIPTION | ☐ Grass ☒ Forest ☒ Rock ☒ Snow

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South

SURFACE SEDIMENTS: R 20% B 30% C 30% P 20% G ☒ % S ☒ % M ☐ % V ☐ %

SLOPE: Lang 90% Hang 20% Vert 0% WAVE EXPOSURE: ☐ Low ☒ Med ☐ High

OIL CATEGORY LENGTH: W 40 m M 60 m N 4 m VL 200 m NO 920 m

**SURFACE OIL**

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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**SUBSURFACE OIL**

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**COMMENTS**

Coarse sediment beach with frequent rock outcrops across short bars. Two upper bars is typically seaward with large boulders and boulders. The bottom 1/3 of the subsegment is backed by a steep rock cliff. The seaward 1/3 leads out into the backwater associated with a freshwater stream. This section is backed by a well developed pebble-cobble surf zone. The only oil found is associated with the surf zone and appears on the surface of pebbles and cobbles. No oil was found in pits.

PHOTOGRAPHS:
- Roll No. 5T-16-6
- Frames 20-37

DEBRIS COLLECTED
- [ ] YES
- [ ] NO

**PAVEMENT**
- [ ] H ☒ F ☒ S ☒ sq. m by ☒ cm

OILED DEBRIS AMOUNT
- [ ] LOGS
- [ ] VEGETATION
- [ ] TRASH

**TYPE**
- [ ] BAGS

**REVISED DATE** 4 / 10 / 90
## Subsurface Oil (Continued)

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### Comments

- Additional notes or observations related to the subsurface oiling summary.

---

**Reviewed**

---

**Date**

---
SHORELINE ECOLOGICAL SUMMARY

Segment ST / LA 31
Subdivision A
Date (mo/day/yr) 4/8/90

Time (24 hr) 15:31
Biologist  TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment):
Dense 7  Moderate 3  Low 0

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

BARNACLES

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Wildlife Observations/General Comments:
- Nereocystis keep red off shore
- Dense Amphipods under cobble & boulder in Mi
- Dense Algae cover in Mi  & Li - filamentus green, mixed reds
- Litorina Eggs
- Wildlife Sight - seals, otters

Ecological Considerations:
ST-1, 7, 112, 111
SHORELINE EVALUATION

SEGMENT ST/ LA-31 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16785.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ___________________________ DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Narrow 100 m: V.Light 277 m: No Oil 786 m

Subsurface Oil Observed: Yes __ No X __ Maximum Depth __________

RECOMMENDATIONS:

___ No Treatment Recommended ___ Snare/Absorbent Booms
___ Treatment Recommended ___ Oil Snakes (pom poms)
___ Manual Pickup ___ Absorbents (pads, rolls, etc)
___ Bioremediation ___ Spot Washing: ___ Wands
___ Tarmat: ___ Breakup ___ Beach Cleaner
___ Removal ___ Other (see comments)

COMMENTS: __________________________________________________________

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: 4/23/90
ADEC Art Weyer ___________ FOSC: ___________ DATE: 5-12-70
EXXON Mary K Metzler ___________ NOAA ___________ USCG
NOAA ___________ USCG ___________
Salmon stream mouth - fry outmigration (5/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 5/31)
No disturbance of streambed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)

Estuary Hatchery release (4/15 to 6/1)

Main Bay Hatchery release (4/20 to 5/10)

Sawmill Bay Hatchery release (4/15 to 8/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release site

Gill net area (6/7 to 8/31)

Purse seine area (7/20 to 9/30)

Purse seine hook-off (7/20 to 9/30)

Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact ADF&G and USFWS prior to treatment.

Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:
Tent sites (6/1 to 9/15)
Anchorages (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
## SHORELINE OILING SUMMARY

**OG:** Reimer  
**USCG:** Ashford  
**SEGMENT:** LA-31  
**BIO:** Zammora  
**LAND REP:** Selkirk (Euc)  
**EXXON:** Garcia  
**ADEC:** Marlin  
**TIME:** 18:22, 19:15

**TEAM NO.:** 16  
**TIDE LEVEL:** -3.1  
**DATE:** 4/8/90

**EST. SUBDIVISION LENGTH:** 118.4 m  
**LAND REP:** Sun  
**SUBDIVISION:** B (2042)  
**USCG:** ADEC  
**SEGMENT:** B (2042)  
**TIME:** 18:22, 19:15  
**DATE:** 4/8/90

**SURVEYED FROM:** Foot  
**WORKING DIRECTION:** South to South

**SURFACE SEDIMENTS:**
- R: 10%  
- B: 25%  
- C: 50%  
- P: 10%  
- G: 5%  
- S: 0%  
- M: 0%  
- V: 0%

**SLOPE:**
- Lang: 10%  
- Hang: 50%  
- Vert: 0%

**WAVE EXPOSURE:**
- Low  
- Med  
- High

**OIL CATEGORY LENGTH:**
- W: 5 m  
- M: 90 m  
- N: 10 m  
- VL: 320 m  
- NO: 714 m

### SURFACE OIL

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**PAVEMENT:**
- H  
- F  
- S

**OILED AMOUNT DEBRIS:**
- SM  
- MD  
- LG

**NEAR SHORE SHEEN?**
- NO  
- BR  
- RW  
- SL  
- TL

**OILED DEBRIS:**
- Logs
- Vegetation
- Trash
- Debris

**NEAR SHORE SHEEN?**
- NO  
- BR  
- RW  
- SL  
- TL

**PIT NO.**
- 1  
- 2  
- 3  
- 4  
- 5

**PIT DEPTH (cm):**
- 30  
- 30  
- 30  
- 30  
- 30

**SUBSURFACE OIL CHARACTER:**
- X

**OILED INTERVAL (CM):**
- 0  
- 0  
- 0  
- 0  
- 0

**OILED DEBRIS:**
- X  
- Y  
- X  
- X  
- X

**PIT ZONE:**
- ANA  
- ANA  
- ANA  
- ANA  
- ANA

**SUBSURFACE SEDIMENTS:**
- PC  
- PC  
- PC  
- PC  
- PC

**COMMENSTS:**

Rocky, boulder, cobble shoreline.  The majority of the back shore is rock cliff and steepened out coves of rock are found in the cliff face.  The remainder of the beach is mantled with large boulders, boulders, and cobble with small pebble sizes when low tide beaches.  The majority of the oil along this section is spread on sand or sediments, mostly in the 15 to 25 cm depth zone, in crevices between rocks and boulders where it was shed from the ocean's edge.  One medium band was found at the north end of the sub-section, 30 m by 15 m wide at the north end of the sub-section, 30 m by 15 m wide, and another band 15 m wide in the upper/middle section.

**PIT DEPT (cm):**
- 30  
- 30  
- 30  
- 30  
- 30

**OILED INTERVAL (CM):**
- 0  
- 0  
- 0  
- 0  
- 0

**OILED DEBRIS:**
- X  
- Y  
- X  
- X  
- X

**PIT ZONE:**
- ANA  
- ANA  
- ANA  
- ANA  
- ANA

**SUBSURFACE SEDIMENTS:**
- PC  
- PC  
- PC  
- PC  
- PC

**REVIEWED:** J W  
**DATE:** 4/9/90

Page 10
SEGMENT: ST/LA-31  SUBDIVISION: B  DATE 4/08/90

USCG
NAME: R. Hubbard  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS:

ADEC
NAME: J. Lynn Martin  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS:
DUE TO THE FACT THAT PATCHY OILED AREAS WERE A VERY LITTLE COAT TO STAIN

LAND MANAGER
NAME: [Name]  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS:
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA 31 Subdivision: B Date (mo/day/yr) 4/8/90

Time (24 hr) 1930 off Biologist: Tony Zamora

(A) Substrate type and % of segments:
1. Bedrock 70
2. Boulder 25
3. Cobble 5
4. Pebble 5
5. Sand 5
6. Silt

(B) Overall % cover of biota (% of segment): Dense 50, Moderate 50, Low 15

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

Photographs: Roll No. ST-16-7
Frames 1-13

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Wildlife Observations/General Comments:
Dense Algal cover on boulders & cobble in low & mid zones
Gastropod eggs (Littorina ? Nudibranch ?)
Sparse Nereocystis offshore
Ecological Considerations: SHH, FII.

Wildlife: 1 eagle, 2 crow, moose scat, owl (or eagle?) pellets

Note: Photo location not located
SHORELINE EVALUATION

SEGMENT ST/ LA-32   SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-1 All bald eagle nests (3/1 to 6/1) – Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE:              DATE: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 283 m: No Oil 635 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth: ______

RECOMMENDATIONS:
X No Treatment Recommended ___ Snare/Absorbent Booms
___ Treatment Recommended ___ Oil Snares (pom poms)
___ Manual Pickup ___ Absorbents (pads, rolls, etc)
___ Bioremediation ___ Spot Washing: ______ Wands
___ Tarmat: Breakup ___ Beach Cleaner
___ Removal ___ Other (see comments)

COMMENTS:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG COMMENTS:_____________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG APPROVAL DATE: 4/20/90
ADEC Art Weiner Art Wei
EXXON Ann Tem Auvil Tem
NOAA Earl Wescott Earl Wesc
USCG Kenneth Keane Kenneth Keane

FOSC: ______ DATE: 4/16/90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 9/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)

Estuary Hatchery release (4/15 to 6/1)

Main Bay Hatchery release (4/20 to 5/10)

Sawmill Bay Hatchery release (4/15 to 6/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release site

Gill net area (5/7 to 8/31)

Purse seine area (7/20 to 9/30)

Purse seine hook-off (7/20 to 9/30)

Set net sites (6/11 to 7/25)

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

Seabird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (5/1 to 6/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (8/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (9/15 to 2/28)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/LA-32  SUBDIVISION: ______________________ DATE 4/9/90

USCG  NOAA
NAME GARY SHIGENAKA  SIGNATURE  Gary

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT consisted of the shoreline of HAYDOU ISLAND, located off the west coast of LATOUCHE ISLAND. Some evidence of oiling was observed, but overall the island was not heavily contaminated. On the northwest side of the shoreline, a patch of exposed bedrock and boulder contained coat and cover, and sheen was observed in tide pools of this area. On a set of rocks with faces oriented toward the sun, tar patches were observed to be cracking and shedding. Less brittle tar was evident in the cracks. Some weathered stain was found at isolated locations at other locations on the island, but this was light in nature. BEAR SCAT WAS SEEN IN THE SUPRATIDAL ON THE NORTHEASTERN SHORELINE.

ADEC
NAME  John Hayes  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

OLLY ON ISLAND IS SPARSE AND SHORELINE IS STEEP.

I recall this North Shore being businessmen last fall and indications are that this combined with weathering cleared the cobble to light gray as this shore was moderately oiled when I did a P&A in 7/89.

No treatment recommended for this island. To be good exposure to wave action from northern exposure and will weather in weather.

LAND MANAGER
NAME  ______________________ SIGNATURE  ______________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 002/90
SHORELINE OILING SUMMARY

OIL: Mike Foget  NOAA  Gary shigaara  SEGMENT ST/ LA-32
BIO: Richard Ambrose  LAND REP  Tom Ander SUBDIVISION A
EXXON: Lelly Allor  ADEC  John ttw  TIME 18:15 to 19:30
TEAM NO.: 11  TIDE LEVEL: 2.5 to 0.7  DATE 4/10/90
EST. SUBDIVISION LENGTH: 1479 m
SURFACE OIL

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SURFACE OIL CHARACTER DISTRIBUTION: H, F, S = eq m by m

PAVEMENT: H F S eq m by m

PATTIES/TARBALLS: BAGS

NEAR SHORE SHEEN? No: BR RW SL TL

OILED DEBRIS AMOUNT: SM MD LG

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Photographs:
Roll No. ST-11-3
Frames 8

SUBSURFACE OIL

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SUBSURFACE OIL CHARACTER DISTRIBUTION: CPS, CPS, CPS, CPS, CPS

COMMENTS: Oiling occurs on the Northern side of the island (see map).
Oil is very weathered and is a CPS very light spattered distribution in +
S and ++. The beach on the Northern end is a low ankle cobble beach
The rock outcrop on the Northwest part of the island has a max
CTP coating w/ some rainbow sheen in the tide pools. The rest of the island
mostly consists of Boulder beaches w/ some rock outcrops.

Page 1 of__
SHORELINE ECOLOGICAL SUMMARY

Segment ST/1A032  Subdivision A  Date (mo/day/yr) 9-9-90

Time (24 hr) 18/5hrs  Biologist Ambrose

(A) Substrate type and % of segments:
1) Bedrock 5%  2) Boulder 50%  3) Cobble 30%  4) Pebble 5%  5) Sand 10%  6) Silt

(B) Overall % cover of biota (% of segment): Dense 50  Moderate 20  Low 50

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U: mid-M: low tidal-L):
juveniles/adults (X), new settlement (3)

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Photographs:
Roll No. 57-115
Frames 9, 10

Wildlife Observations/General Comments:
(See next page)

Ecological Considerations:
711: No relevant observations.

On NW end rock outcrop has moderate cover of Fucus, but here would be no ecological constraints on access from cattle beach.

On NE end, there are abundant mussels between the cobbles and below the area with steins that would be vulnerable to damage during cleaning operations.
Segment LA032A  Izembek Island  1815 hrs

Wildlife observations:
- Otter
- 2 seals
- 7 scoters
- Deer scat
- 1 oystercatcher
- 1 magpie
- 1 Hardey guck
- Bear scat

Island has dense cover on bedrock flats on North and South ends of the island; in the low intertidal, Fucus and Rhodomenia together comprised about 90% cover, and overall, there was extensive, dense cover in the low and mid tidal zones. On the north end, there is extensive Mytilus cover between the cobbles. On the cobbled beaches, there is dense cover of filamentous algae and rare Fucus. In the low intertidal, but otherwise there is only sparse cover on the east side of the island, and(a) a narrow dense band and moderate cover, with 50-60% sparse cover.

There was recruitment of barnacles, mussels and Fucus.

On the north side of the island, barnacles on bedrock in the upper intertidal were coated with oil, and most of the barnacles were dead.
3m x 20m CT/P Code in the HLTZ, vein sheen in the sidepock

30m x 180m CT/S Very light weathered stain

5m x 30m CT/S Very light Stain HLTZ

Legend

1 A
Pit - No Subsurface Oil

2 A
Pit - Subsurface Oil

CT/C
Continuous Distribution
CT/B
Broken Distribution
CT/P
Patchy Distribution
CT/T
Splashed Distribution

Oil Vegetation

Rock outcrop

Cobble Beach

Boulder/Cobble Beach

Snow

Legend

III - Bedrock

- Snow

- Trees

Oil Character Length (m): AP O PO OV O CT ZO ST 260 MS O PT O TB O FL O NO 1156
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-32A

Map Key: PWS-438
Name: Mike Foster
Date: 4/9/90

ADEC Segment Length: 917m

0 100 200 300 meters
SHORELINE EVALUATION

SEGMENT ST/ LA-33  SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: __________________________ DATE: __/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 52 m: Narrow 0 m: V. Light 495 m: No Oil 782 m
Subsurface Oil Observed: Yes X No ______ Maximum Depth 7 cm

RECOMMENDATIONS:
____ No Treatment Recommended  _____ Snare/Absorbent Booms
____ Treatment Recommended  _____ Oil Snares (pom poms)
____ Manual Pickup  _____ Absorbents (pads, rolls, etc)
____ Bioremediation  _____ Spot Washing: Wands
____ Tarmac: ______ Breakup
____ Removal

COMMENTS: Recommend manual removal of patties. Work should be conducted after 5/1.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: 4/21/90
ADEC: Art Wenzel
EXXON: ____
NOAA: Bar Weiracht
USCG: Kenneth Krane

FOSC: __________________________ DATE: 5-1-90
Sand Wanger's comments noted - however, concern with TAG recommendation.
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
Estuary Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Sawmill Bay Hatchery release (4/15 to 6/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site

Gill net area (5/7 to 6/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:
Tent sites (8/1 to 9/15)
Anchorage (8/1 to 9/15)
Forest Service cabins (8/1 to 9/15)
Lodge (8/1 to 9/15)
Special use destination

Subsistence area:
Salmon harvesting (5/1 to 9/30)

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST/ LA-33 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ___________________ DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 52 m: Narrow 0 m: V.Light 495 m: No Oil 782 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ cm

RECOMMENDATIONS:

No Treatment Recommended X Snare/Absorbent Booms
Treatment Recommended Oil Snares (pom poms)
Manual Pickup Absorbents (pads, rolls, etc)
Bioremediation Spot Washing: Wands
Tarmat: Breakup Beach Cleaner
X Removal Other (see comments)

COMMENTS: Recommend manual removal of patties. Work should be conducted after 5/1.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: 4/21/90
ADEC Art Weigel
EXXON Kaye Strickland
NOAA B. Wescott
USCG Kenneth Keane

FOSC: ___________________ DATE: 5-1-90
Sandspit's comment noted however, concern with TAG recommendations.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-33  SUBDIVISION: LA-33  DATE 4/9/90

NOAA
NAME  GARY SHIGENAKA  SIGNATURE  GARY SHIGENAKA

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS


ADEC
NAME  JOHN HAYES
SIGNATURE  J.H.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Oily or stained on shore up on the Island around of the point or East Side of Island and Weathered Oil on Northwest Tip. Both areas I recommend for treatment. Recommended manual cleanup of the points and possibly mechanical treatment or mechanical treatment for Northwest corner. The Island is really on the better back line. The treatment is needed and weathering will be working here. Although we did observe oiling at the two points of the Northwest Corner on the Bedrock Shelf. Also that Island is a close to point to oiling to South Bay + Rainainted Harbor. So should be watched carefully this summer for possible shoreline towards the harbor.

LAND MANAGER
NAME  JAMES BARKER
SIGNATURE  JAMES BARKER

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

SAT TEAM STARTED ON N. END OF CHICKEN ISL. OIL OBSERVED 3-10 M WIDE
5.30 m LENGTH, DISCONTINUOUS STAIN CLEARLY VISIBLE UNDER ROCK, OVERTURNING
RANK RECOGNIZED STICKY TAR, HUN DUG, SATISTACTIVE DOWN SE/ PAGE TEAM ON N. SOUTH ON EAST SIDE, TAR PARTIALLY FREQUENCY BAND 3-6 M WIDE RUNNING % OF FINISH OF STAIN. STAIN PRESENT HAVING HIGH TIDE MARK, SATISFACTORY CONCENTRATION AT N. ONE END OF STAIN, THAT OUT AT 1/2 HEAD SOUTH. TIDE HAS WEATHERED OIL, BUT HAS DONE LITTLE IN REMOVAL OF THE PATTIES. CREW SAVED CP WITH RACE / CLEANERS

REVISION NO. 03/2/90
### SHORELINE OILING SUMMARY

#### SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>PATTIES</td>
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</tr>
<tr>
<td>TARBALLS</td>
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</tr>
<tr>
<td>FILM</td>
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#### OILED DEBRIS AMOUNT

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Photographs:
- Roll No. ST-11-3
- Frames 1-6

#### SUBSURFACE OIL

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<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH(cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
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#### COMMENTS

Oiling occurs on the northern and eastern side of the island. The rock outcrop on the north end of the island had some moderate oiling.

CTP: Patchy distribution of coated oil with some pooling and asphalt patties in the HLTZ. On the eastern side of the island the amount of oiling decreases from the northern side to the southern. A wider band (5m) in the CTZ starts with some asphalt patties and a smaller band of CTZ. Staining occurs on the southern part of the island.
SHORELINE ECOLOGICAL SUMMARY

Segment ST_L9033 Subdivision_A ___________________________ Date (mo/day/yr) 9-9-90

Time (24 hr) 1730 hrs Biologist Ambrose ___________________

(A) Substrate type and % of segments:
   1) Bedrock 10%  (2) Boulder 30%  (3) Cobble 40%  (4) Pebble 10%  (5) Sand 10%  (6) Silt __________

(B) Overall % cover of biota (% of segment):
    Dense 25%  Moderate 20%  Low 55% __________

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
     juveniles/adults (X), new settlement (3)

**BARNACLES**

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<th>Sparse</th>
<th>Rare</th>
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**MYTILUS**

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**GASTROPODS**

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**FUCUS**

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<td>1L</td>
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Wildlife Observations/General Comments: 13 crows.
Island consists of bedrock flats on N/S ends, with fairly dense cover, and cobble boulder beaches on E/W sides. East beach is very sparse; west beach has more cover, with moderate Fucus and barnacles and filamentous algae, carrying rocks in low intertidal.

Ecological Considerations:
711: No relevant observations

Near oil on north end, there was moderate cover in the lower-middle intertidal, which would be susceptible to tides (oil, hot water, chemicals) or trampling. However, there is no vegetation close to the oiled areas.
The beach on the east side of the island, where there was also some oil, is very sparse and would not present any particular ecologically problems.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-33 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmac Removal
OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

711 Subsistence: Deer Harvesting

No constraint to manual pickup and tarmac removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unololed biota and substrate.
SEGMENT LA 33  SUBDIVISION A  DATED 5-29-90

MODIFICATION

1. REASON FOR MODIFICATION

MOUSSE AND SUBSURFACE OIL REMAIN ON
POCKET BEACH ON NORTH SIDE OF ISLAND, AND
COATS, MOUSSE, AND OR SEDIMENTS REMAIN ON
THE NORTH HALF OF THE EAST SIDE OF ISLAND.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

BIOREMEDiate POCKET BEACH ON NORTH SIDE
OF ISLAND AND NORTH HALF OF THE EAST
SIDE OF THE ISLAND WHERE OIL IS PRESENT.

3. TIMING ISSUES

TII SUBSISTENCE AREA: DEER HARVESTING (8-15 to 2-28)

ADEC

EXXON

USCG

LAND MANAGER Leigh Carlson (If field rep is on scene)
WORK PLAN ADDENDUM

PWS  Segment LA-33  Subdivision A  Dated 6-04-90.

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR ADDITIONAL WORK EFFORT AS PER ATTACHED WORK ADDENDUM.

2. ADJUSTMENT TO WORK PLAN

ADD BIOREMEDIATION FOR THE POCKET BEACH ON THE NORTH-SIDE OF THE ISLAND AND NORTH HALF OF THE EAST SIDE OF THE ISLAND.

SHPO APPROVAL NEEDED YES ☑  SHPO SIGNATURE ___________________________  6-04-90

TAG APPROVAL DATE 6-04-90.

ADEC  Key Means ___________________________  6-04-90

EXXON  ________________  6-04-90

NOAA  Joseph Talbert ___________________________  6-04-90

USCG  G.A. Beiler  6-04-90

DATE  ________________  6-04-90
WORK PLAN ADDENDUM

PWS
Subdivision A
Dated 6-04-90.

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR ADDITIONAL WORK EFFECT AS PER ATTACHED WORK ADDENDUM.

2. ADJUSTMENT TO WORK PLAN

ADD BIOREMEDIATION FOR THE POCKET BEACH ON THE NORTH-SIDE OF THE ISLAND AND NORTH HALF OF THE EAST SIDE OF THE ISLAND.

SHPO APPROVAL NEEDED YES ☑ SHPO SIGNATURE

TAG APPROVAL DATE 6/04/90.
ADEC
EXXON
NOAA
USCG

FOSC
DATE 6/13/90

Add Bioremediation to Constant Addendum
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-33 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
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<tr>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
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<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 8/15</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

711 Subsistence: Deer Harvesting
Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unooled biota and substrate.

FOSC: ____________________ Date: 6/14/90
Prepared by: ____________________ Date: 6/14/90
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7II   Subsistence area: Deer harvesting (8/15 to 2/28)
7HH   Subsistence area: Finfish harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 0 m; V.Light 0 m; No Oil 618 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth _______

RECOMMENDATIONS:
X ___ No Treatment Recommended        ___ Snare/Absorbent Booms
___ Treatment Recommended                ___ Oil Snare (pom poms)
___ Manual Pickup                        ___ Absorbents (pads, rolls, etc)
___ Bioremediation                       ___ Spot Washing: ___ Wands
___ Tarmat:    ___ Breakup                   ___ Beach Cleaner
___ Removal                                  ___ Other (see comments)

COMMENTS:
______________________________________________________
______________________________________________________
______________________________________________________
______________________________________________________

TAG COMMENTS:
______________________________________________________
______________________________________________________
______________________________________________________
______________________________________________________

TAG APPROVAL DATE: 4/20/90
ADEC Art Weiss  Art Klein __ FOSC: ___ DATE: 5-9-90
EXXON Andy Ten __
NOAA "F.  ___________
USCG Kenneth Kearns ___
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)

Estuar Hatchery release (4/15 to 6/1)

Main Bay Hatchery release (4/20 to 5/10)

Sawmill Bay Hatchery release (4/15 to 6/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release site

Gill net area (6/7 to 6/31)

Purse seine area (7/20 to 9/30)

Purse seine hook-off (7/20 to 9/30)

Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from sites. Contact ADF&G and USFWS prior to treatment.

Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

Active Bald Eagle nests (3/1 to 6/1)

Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation: Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)

Finfish harvesting

Deer harvesting (9/15 to 2/23)

Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-34          SUBDIVISION: __________________________ DATE 4/9/90

NAME NOAA                        SIGNATURE Gary Shigemaka

☐ NO TREATMENT RECOMMENDED       ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT consisted of a rocky shoreline interspersed with cobble/boulder beaches, located along the western shore of Latouche Island. A portion of the segment was adjacent to an abandoned mine site. No oiling was observed along the segment.

ADEC
NAME John Hayes          SIGNATURE

☐ NO TREATMENT RECOMMENDED       ☐ TREATMENT SUGGESTED

COMMENTS
No oil was observed on this segment, segment had a history of light oiling in two areas, this was either snow covered or wetland. No treatment recommended.

LAND MANAGER
NAME ______________________ SIGNATURE ______________________

☐ NO TREATMENT RECOMMENDED       ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 05/21/90
**SHORELINE OILING SUMMARY**

**OQ**: Mike Fogle
**USGS**: Gary Stinemets
**SEGMENT#:** LA-34

**BIO**: Richard Abrose
**LAND REP**: Scott Lollar
**SUBDIVISION**: A (141)

**EXXON**: Larry Oseg
**ADEC**: John Wates

**TIME**: 17:00 to 17:20
**DATE**: 4/1/90

**EST. SUBDIVISION LENGTH**: 611 m

**UPLANDS DESCRIPTION**: Grass, Forest, Rock, Surf & ETZ covered by Snow

**SURVEYED FROM**: Foal, Boat, Helo

**WORKING DIRECTION**: South

**SURFACE SEDIMENTS**: R: 60%, B: 15%, C: 10%, P: 10%, G: 5%, S: 2%, M: 6%, V: 2%

**SLOPE**: Low 90%, Med 30%, High 30%, Hang 10%, Ven 40%, WAVE EXPOSURE: Low, Med, High

**OIL CATEGORY LENGTH**: W: 0 m, M: 0 m, N: 0 m, V: 0 m

**SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</table>

**PAVEMENT**: H, F, S 0 sq. m by 0 cm

**PATTIES / TARBALLS**: 0 BAGS

**NEAR SHORE SHEEN?**: No

**OILED DEBRIS**: Amount

**Log**: 0

**Vegetation**: 0

**Trash**: 0

**Debris**: 0

**DEBRIS COLLECTED**: No

**TYPE**: 0

**Photographs**: Roll No. 0

Frames 0

**SUBSURFACE OIL

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<th>SUBSURFACE OIL CHARACTER</th>
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**COMMENTS**: No oiling was observed in this segment. Shore zone consisted of Bed Rock / Boulders with a few pocket cobble / pebble beaches.

Reviewed: M.J., Date: 5/1/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA034 Subdivision A

Date (mo/day/yr) 9/9/90

Time (24 hr) 1700 Biologist Ambrose

|         | 1U | 1M | 1L | 2U | 2M | 2L | 3U | 3M | 3L | 4U | 4M | 4L | 5U | 5M | 5L | 6U | 6M | 6L | 7U | 7M | 7L | 8U | 8M | 8L | 9U | 9M | 9L | 10U | 10M | 10L |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Barnacles |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Dense    | 2  | 2  | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 5  | 5  | 5  | 6  | 6  | 6  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Moderate |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Sparse   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Rare     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

| Mytilus |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Dense    | 2  | 2  | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 5  | 5  | 5  | 6  | 6  | 6  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Moderate |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Sparse   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Rare     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

| Gastropods |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Dense     | 2  | 2  | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 5  | 5  | 5  | 6  | 6  | 6  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Moderate  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
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| Rare      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

| Fucus    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Dense    | 2  | 2  | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 5  | 5  | 5  | 6  | 6  | 6  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Moderate  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Sparse    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Rare      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

Wildlife Observations/General Comments: 4 gulls, 4 dolphins (unknown species).

Ecological Considerations:

7/11, 7/18: No relevant observations.

No oil observed.
SEGMENT ST/ LA-36 SUBDIVISION A (1 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16764
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
4GG Alaska State Parks
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7TII Subsistence area: Deer harvesting (8/15 to 2/28)
7TZ Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiied biota and substrate.

OILING CATEGORIZATION:
Wide 0 m: Medium 74 m: Narrow 0 m: V. Light 41 m: No Oil 363 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 cm

RECOMMENDATIONS:
___ No Treatment Recommended
___ Snare/Absorbent Booms
X Treatment Recommended
___ Oil Snares (pom poms)
___ Manual Pickup
___ Absorbents (pads, rolls, etc)
X Bioremediation
___ Spot Washing:
___ Tarmat:
___ Removal
___ Breakup
___ Beach Cleaner
___ Other (see comments)

COMMENTS: Recommend bioremediation of areas shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of eagle nesting constraints and spawning stream constraints. (USFWS should be contacted prior to treatment to determine if eagle nest site has become active.)

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90
ADEC A. W. Weiland
EXXON A. M. Theddi
NOAA J. W. Craven
USCG R. W. Norshe
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

No disturbance of seafloor bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioresource or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/16 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sewmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1J Gill net area (9/7 to 8/31)
1K Purse seine area (7/20 to 9/30)
1L Purse seine hook-off (7/20 to 9/30)
1M Herring spawning (4/1 to 6/15)

Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5F Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5F All Bird Eggs nesting (3/1 to 5/1)
Active Bird Eggs nests (5/1 to 5/15)

Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6J Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabin (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence (only): Squirrel harvesting (6/1 to 8/31)
7HH Finfish harvesting
7H Shell harvesting (6/15 to 8/15)
7I Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA - 36

SUBDIVISION: A

DATE 4/5/90

NAME GARY SHIGENAKA

SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION consisted of a northerly facing cobble beach along the west-central shore of Latouche Island, East of Chicken Island. The subdivision was bisected by an anadromous stream in which tods and morel had installed fish sampling apparatus. North of the stream, no evidence of oiling was found. On the south side of the stream, evidence of oiling was observed in the mid to upper intertidal zone. Sheen was seen in tidal drainage of this area, and globular oil on water was found beneath cobbles. Although estimation of the depth of penetration of the oil into sediments was difficult due to rapid filling of pits with water, it was noted to be approximately 5 cm. Scouring or other similar fish were seen in a sheltered tide pool; apparently robust populations of amphipods were found in relatively heavily oiled surface sediments under rocks. A mussel beds was located in the lower portion of the affected area. The approximate side of the impacted area was 5-10m across tidal zones, and 30m in length. In the adjacent sediments lying to the south, weathered splashes were observed. No oiling was seen in the immediate vicinity of or directly in the stream. However, the stream and the mussel beds represent likely constraints for treatment options.

ADEC

NAME John Huyer

SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Recommend beach assessment for ANAD SCAT team. Significant subdivision has anadromous stream with oil spill within 25 yrs. of stream.

See stat lead: we dug pits on both banks of stream in upper 1 mile 725 ft. and no surface or 5.5.

Contaminants: Oiling is isolated to M + U T12. Most of the oil was in U12 in a bead of cm 5 cm, sheen was visible down to M + U T2. S + S. penetration was approx. 2 cm in M + U T2. Although terrestrial water filling pits made it difficult to determine extent of oiled.

LAND MANAGER

NAME   ☐ S + S. OILING. Treatment recommended after assessment from ANAD SCAT team + F + C. rep.

SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

REV No. 05/21/98
# Shoreline Oiling Summary

**Surveyor:** Mike Fotot  
**Team No.:** 11  
**Date:** 9/5/90

**Subdivision Length:** 700 m

**Tide Level:** 1.0

**Oil Characteristics:**
- **Surface Oil**
  - Asphalt Pavement
  - Pooled
  - Cover
  - Coated
  - Stained
  - Mousse
  - Patties
  - Tarballs
  - Film
  - No Oil

**Subsurface Oil**

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil / Film Color</th>
<th>Pit Zone</th>
<th>Subsurface Sediments</th>
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<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>C, G</td>
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<td>X</td>
<td>P, C</td>
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<td>3</td>
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<td>C, G, C</td>
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<tr>
<td>6</td>
<td>15</td>
<td>X</td>
<td></td>
<td>X</td>
<td>C, G, C</td>
<td></td>
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</table>

**Comments:**
- Oiling in this subsegment consists mostly of a CT/P cover with a medium distribution in the H12Z. The patch is a 5m x 30m size with a rainbow and glimmer sheen underlain by cobbles. Below 20 cm in the M2Z, there is an area 3 x 30 cm with surface rainbow sheen and no subsurface oil. There is also some CT/P staining in the H12Z among the cobble/rock.

---

**Photographs:**
- Roll No.: 55-11-2
- Frames: 9-12

---

**Debris Collected:**
- YES
- NO

---

**Debris Type:**
- Logs
- Vegetation
- Trash
- Debris

---

**Surface Sediments:**
- C, G
- P, C
- P, C (H, O, 5 cm)
- C, G (H, O, 5 cm)
- C, G, C
- C, G, C
### Subsurface Oil (Continued)

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<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm)</th>
<th>Below Oil Film Color</th>
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<td>G, P, G (H₂O 45%)</td>
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<td>C, G, C</td>
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</tbody>
</table>

**Comments**

**Reviewed** Mr. DATE 4-9-90
LEGEND
1 A
PE - No subsurface oil
2 A
PE - Subsurface oil
CT/C Commercial distribution
CT/D Dispersant distribution
CT/P Patches distribution
CT/S Spattered distribution

Oil Character Length (m): AP - PO - CV 30 CT - ST 15 MG - PT - TB - FL 30 - NO 165

Legend
1
- Snow covered supra ITZ
2
- Trees

Low angle B/C Beach
15m x 0.3m CV/5 discontinues tar stain

CT/5 tar cover, patchy Medium
5m x 0.3m, free oil

Globules underneath cobble
Rainbow shown

10m 2-30m, surface
Rainbow sheen, no
sub-surface oil

Bedrock, Boulder outcrop

Sketch Map

SEGM T
LH-36
SUBDIVISION A
DATE 11/5/00

CHECKLIST
- N Anem
- Approx Scale
- Depth/Strata
- Oil Dist
- Width
- Length
- % Cleaver
- Substrate Character
- EK, HWL, WL
- SRI
- Profile Location(s)
- Photo(s)
- PE Location(s)
- Photo Location(s)
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA03G Subdivision A Date (mo/day/yr) 4/5/90

Time (24 hr) 1710 hr Biologist Ambrose

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 20 Low 60

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

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Wildlife Observations/General Comments:
4 Harlequin ducks, 5 mid. sea birds, I gull. Main beach in core had cobble/pebble substrate with generally sparse cover, except for dense mussel bed (see Addendum). Boulders/cobbles on either side of beach had moderate to dense cover.

Ecological Considerations:
711, 72, 5T-1, 46G: No eagles or nests seen

A possibly anomalous stream bed/sets core, with oil found w/in 25m on south side. Dense mussel bed (and scattered mussels) occurs between oiled area and water - would be susceptible to trampling (see Addendum).
Oil found in the core that constitutes subdivision A, which also has an anadromous stream and an extensive mussel bed.

Note: Sparse Mytilus occurs throughout area south of stream.
SHORELINE EVALUATION

SEGMENT ST/ LA-36 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4GG Alaska State Parks
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoi led biota and substrate.

SHPO SIGNATURE: __________________ DATE: 4/6/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 32 m: No Oil 1362 m
Subsurface Oil Observed: Yes  No X  Maximum Depth_____

RECOMMENDATIONS:
X  No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup
____ Bioremediation
____ Tarmat: ___ Breakup
____ Removal
____ Snare/Absorbent Booms
____ Oil Shores (pom poms)
____ Absorbents (pads, rolls, etc)
____ Spot Washing: ______ Wands
_______ Beach Cleaner
______ Other (see comments)

COMMENTS: __________________

__________________________

TAG COMMENTS: __________________

TAG APPROVAL DATE: 4/10/90
ADEC Art Weiner
EXXON Art Weiner
NOAA Art Weiner
USCG Art Weiner
FOSC: LY DATE: 5-9-90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
Estuary Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Sewmill Bay Hatchery release (4/15 to 8/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site
Gill net area (5/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 600m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USPWS prior to treatment.

Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:
Tent sites (5/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area:
Salmon harvesting (5/1 to 9/30)
Furfish harvesting
Dear harvesting (5/15 to 2/25)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LA - 36 SUBDIVISION: B DATE 4/5/90

NAME GARY SHIGENAKA SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
SUBDIVISION WAS A COBBLE BEACH SHORELINE THAT WAS A CONTINUATION OF LA - 36A TO THE SOUTH. WEATHERED SPLASHES OF STAIN WERE OBSERVED VERY SPORADICALLY ON COBBLE ROCKS IN THE UPPER INTERTIDAL ZONE. WITH SEVERAL OF THESE OCCURRENCES ON THE UNDERSIDE OF COBBLES, THIS SUGGESTED THAT WEATHERING OF EXISTING STAIN WAS READILY OCCURRING TO EXPOSED FACES. NEAR THE SOUTHERN TERMINUS OF THE SUBDIVISION, A FULL SKELETON OF A SEA OTTER WAS FOUND IN THE UPPER INTERTIDAL. THE CARCASS WAS WELL-DECOMPOSED. NO EVIDENCE OF OILING WAS SEEN ON THE REMAINS.
THE SUPRATIDAL WAS COVERED BY SNOW AND WAS NOT ASSESSED.

NAME John Hayes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
Specific to pier + steps observed. Beach was well vegetated and most staining was on lee side of boulders and under cobbles. No SS. Oiling observed in test pit dug.

NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

REVISION NO. 09/21/98
**SHORELINE OILING SUMMARY**

**M. F. Hoover, NOAA**

**R. A. Brooks, Land Rep.**

**L. A. Jacobs, ADEC**

**S. A. Schmidt, TIME 18:00 10/20/90**

**DATE 10/20/90**

**EST. SUBDIVISION LENGTH: 1750 m**

**UPLANDS DESCRIPTION: Grass, Rock**

**SURVEYED FROM: Foot, Boat, Helicopter**

**WORKING DIRECTION: N to S**

**SLOPE: Long. 100% Hang, Short. 15% Hang, 15% Ven.**

**OIL CATEGORY LENGTH:**

- W - m
- M - m
- N - m
- VL - m
- NO - m

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PIT OIL ANALYSIS**

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<td>20</td>
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**COMMENTS**

Only very light sheen was observed in this segment. 1 in x from only very light rain occurred in the area. The oil appeared to be unchanged. A few oil stains were also observed in the area.

**REVIEWED**

**DATE:** 4-9-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LA036 Subdivision B Date (mo/day/yr) 4/5/90

Time (24 hr)_____________Biologist__Ambrose________

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 30 Low 65

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
juveniles/adults (X), new settlement (G)

BARNACLES

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MYTILUS

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FUCUS

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</table>

Wildlife Observations/ General Comments: 1 dead otter (mostly skeleton) in upper intertidal—no sign of oiling.
Moderate cover in mid intertidal; otherwise sparse.

Ecological Considerations:
711, 72, 57-2, 466: No eagles or nests seen.
SEGMENT ST/ LA-37        SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Anadromous stream #16764 (1A) Stream mouth out-migration (3/1 to 5/15) (1B) Stream mouth spawning (7/10 to 8/31) Active bald eagle nests (5T-2) - 3/1 to 6/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28 and salmon harvesting (7Z) - 5/1 to 9/30.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) Restrict air traffic to essential minimum. Air approach and take off from and to seaward only. Contact USFWS prior to treatment, for confirmation of dates and avoidance minimums. (7Z) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes     No  Maximum Depth 10 cm

RECOMMENDATIONS:
X No Treatment Recommended     ___Snare/Absorbent Booms
     ___Treatment Recommended     ___Oil Snares (pom poms)
     ___Manual Pickup             ___Absorbents (pads, rolls, etc)
     ___Bioremediation            ___Spot Washing: Wands
     ___Tarmat: Breakup           ___Beach Cleaner
     ___Removal                   ___Other (see comments)

COMMENTS: Anadromous Fish Stream therefore do not recommend bioremediation. (to be classified by ADF&G)

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC  EXXON  NOAA  USCG  FOSC:          DATE: 5-6-90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-37 SUBDIVISION: A DATE 4/4/90

NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT consisted of a boulder-cobble shoreline (shale) along the western central coast of Latouche Island. A large stream intersected the segment about two-thirds of the way down, running northeast to southwest. Approximately one-third of the length down the segment, the spotting was observed in the upper intertidal, and a sheen layer was found beneath 5 cm clean sediments (gravel). This oiled layer extended 5 cm. Other evidence of oiling was found closer to the stream, with splatters and stained rocks found on both its north and south sides in the upper intertidal. In the middle intertidal adjacent to the stream, 2 cm clean sediments were found. South of the stream, a discrete patch of sticky surface sediments and sheen was seen but did not intrude below about 1 cm.

The leading edge of the supratidal zone was not covered by snow in some places, and appeared to be free of oiling. However, a large portion remained under snow cover and could not be assessed.

ADEC
NAME John Hayes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

We walked this segment and observed one bed of surface oiling at three areas with subsurface oiling. The surface oiling was very sporadic and consisted of stained isolated ter spots. Subsurface oiling was a film below a clean surface. Clean gravel ranged from 2-5 cm. 5 cm was from 2-5 cm below clean gravel is isolated areas. Stream on segment may be examined and should be checked again for any residual surface oiled water column. Subsurface oilled new since last was Jan. see sketch.

LAND MANAGER
NAME RITA A. MIRAGLIA SIGNATURE Rita L. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I participated in the SEAT evaluation of this segment as a representative of the landowner and will report back to CAC.

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

(Continued) We observed a bright rainbow sheen in LITZ. The sheen appeared to be from a recent fuel spill. Possibly from a leak at fuel bladder reported at location or from a recent vessel spill. Fuel had the smell of diesel or other lighter fuel. The rainbow sheen was bright and appeared very recent.

LAND MANAGER
NAME_________________________   SIGNATURE_________________________

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
SHORELINE OILING SUMMARY

DISTRIBUTION OIL IFILM COLOR CHARACTER
IC POOLED COVER STAIN MOUSSE PATTIES TARBALLS FILM NO OIL

SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</tr>
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<td>FILM</td>
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<tr>
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PAVEMENT: H F S _____ sq. m by _____ cm
PATTIES / TARBALLS _____ BAGS
NEAR SHORE SHEEN? NO BR (RW) SL TL

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>G, C</td>
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</table>

COMMENTS The entire segment was surveyed by foot. A very light oiling (10 cm x 15 cm) of tar stains were located in the H12 and M272. The oiling appeared to be weathered. Some subsurface oiling did occur as a light film. A rainbow sheen w/ strong Hydro carbon odor appeared in the LZ-2 box. It is believed not to be Exxon related. The same sheen was observed in segments LA-35 - no apparent oil nearby. Comments:

Reviewed _____ DATE 4-7-50
## Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil/Film Color</th>
<th>Pit Zone</th>
<th>Ana.</th>
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**Comments**

The shore zone is a low angle Boulder/Cobble zone with a wooded backshore zone is located in the supra Z.2.

* Oiled interval < 5 cm in Pit Nos. 10, 11 and 13 does not constitute subsurface oil.

**Reviewed** [Sign]  **Date** 07-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/ SA03 Seg A Date (mo/day/yr) 4/4/90

Time (24 hr) 13/04, Scientist/Observer Ambrose

(A) Substrate type and % of segments:
1) Bedrock 5 (2) Boulder 20 (3) Cobble 30 (4) Pebble 25 (5) Sand 20 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 10, Moderate 25, Low 65

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L)

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Photographs:
Roll No. ______ Frames ______

Wildlife Observations/General Comments: 1 mature bald eagle, 7 Canada geese, 50 scoters and one deer track. Bore fairly sparse in N. part of segment on cobble/boulder beach; cover is higher south of stream. A fair number of barnacle scars & dead barnacles seen.

Ecological Considerations:
41, 72: No relevant observations.

One stream that is likely to be anadromous was located in this segment, towards the southern end of segment.
SHORELINE EVALUATION

SEGMENT ST/ LA-38

SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to unoiled substrate and biota.

SHPO SIGNATURE: \\
DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 167 m: No Oil 3261 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X Treatment Recommended

Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing:

Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommend manual removal of small asphalt mat and bioremediation of area shown on attached sketch map.

CUSTOMISE SMALL AREA AS NECESSARY.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90

ADEC JOHN BAEGER

EXXON

NOAA BUDDY RYAN

USCG CHUCK HAYDEN

FOSC: \\
DATE: 5-3-90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA - 38        SUBDIVISION: ___________________ DATE 4/4/90

NOAA
NAME    GARY SHIGENAKA    SIGNATURE    GARY SHIGENAKA

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT was COBBLE AND BOULDER SHORELINE. EVIDENCE OF OILING WAS OBSERVED AT THIS LOCATION; HOWEVER, THE NATURE OF OILING WAS NOT CONSISTENT WITH OTHER OBSERVED SEGMENTS. A SHEEN WAS NOTED AS THE SHORELINE ASSESSMENT TEAM PUT ASHORE. EXAMINATION OF COBBLES AND SEDIMENTS JUST ABOVE THE TIDE LINE (UPPER PORTION OF THE LOWER INTERVAL) SHOWED THAT SURFACE SEDIMENTS ONLY (1-2 CM) WERE AFFECTED. THE SEDIMENTS HAD A DISTINCT FUEL ODOR BUT DID NOT LEAVE A HEAVY RESIDUE WHEN RUBBED BETWEEN FINGERS. THE BEACH WAS IN AN AREA OF A GROUNDWATER SEEP. SAMPLING FARTHER UP INTO THE MIDDLE INTERVAL SHOWED CONTINUED PRESENCE OF SHEEN IN THE SEEPAGE, BUT TO A LESSER DEGREE THAN IN THE LOWER INTERVAL. NO SHEEN WAS OBSERVED IN THE UPPER INTERVAL. NO OTHER EVIDENCE OF OILING WAS OBSERVED IN THE IMMEDIATE VICINITY OF THE SHEEN ZONE (I.E. SPATTERS OR STAIN). DUE TO THE UNUSUAL NATURE OF THIS OCCURRENCE, THE SHEEN SAMPLING KIT WAS SENT FOR AND THE O'BRIEN OIL POLLUTION SERVICES REPCOLLECTED SAMPLES OF THE SHEEN AND WATER.

SOUTH OF THIS LOCATION SPORADIC INSTANCES OF WEATHERED ASPHALT WERE ENCOUNTERED IN THE UPPER INTERVAL, WITH THE LARGEST OBSERVED OCCURRENCE ABOUT 1-2 M SQUARE. OILING DID NOT EXTEND BELOW THE SURFACE 2 CM.

ADEC
NAME    JOHN HAYES    SIGNATURE    JH

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Rainbow sheen seen earlier in LA-37 was more pronounced in LA-38. 00VTS rep on board took a sample of sheen to be tested in Lab. Sheen was in LITZ and MIZZ (see sheen rep).

South of the sheen we observed some weathered spatter pattern isolated. There were broken up to enhance weathering. Some (not) to spots were also observed. This was no fuel oiling.

LAND MANAGER
NAME    RITA A. MIRAGLIA    SIGNATURE    RITA A. MIRAGLIA

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

I participated in the SEAT evaluation of this segment as a representative of the landowner and will be reporting back to CAC.
**SHORELINE OILING SUMMARY**

**OG:** Mike Fogg, NOAA
**Rep:** Gary Shigenaka
**SEGMENT:** A (10F1)
**LAND REP:** Rich Ambrose
**TIME:** 14:10 9/15/85

---

**TEAM NO.:** 11
**TIDE LEVEL:** 3.1
**DATE:** 9/15/85
**EST. SUBDIVISION LENGTH:** 2.491 m
**UPLANDS DESCRIPTION:** Grass, Forest, Rock
**SURVEYED FROM:** Road, Boat, Helo
**SURFACE SEDIMENTS:** Rock
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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**OIL CATEGORY LENGTH:**

- W: m
- M: m
- N: m

**PAVEMENT:** 1 sq.m by 3 cm

<table>
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<tr>
<th>MATERIAL</th>
<th>AMOUNT</th>
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<tbody>
<tr>
<td>PAVEMENT</td>
<td></td>
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<tr>
<td>TARBALLS</td>
<td></td>
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</tbody>
</table>

**NEAR SHORE SHEEN:** No

**OIL DEBRIS**

- Loga
- Vegetation
- Trash
- Debris

**PHOTOGRAPHS:**

- Roll No.: ST-11-2
- Frames: 6

---

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>OIL/FILM COLOR</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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</table>

**COMMENTS:**

- The rainbow sheen observed in the Northern part of the Segment was believed to come from the oil spill. No oil or subsurface oiling (brown/piece rock, asphalt, or sand) was observed in the area. Also, no sheen occurred only in the H2Z, M1Z and S4Z offshore. No sheen was observed in the H1Z or S4Z. A tension sheen sample and a water sample were collected by O'Brien Oil Pollution Services (OPS), and will be sent on 9/15 for sample analysis in Anchorage.

**REVIEWED:** J. O. DATE: 8-7-86
## Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below</th>
<th>Oil/Film Color</th>
<th>Pit Zone</th>
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<td>X</td>
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<td>(2,0 - 20cm)</td>
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<td>P</td>
<td>(4,0 - 10cm)</td>
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**Comments**

An 0.5m x 1.5m very light tar staining was observed in the MIZ. Some small asphalt patties were observed among the boulder/cobbles. The oil appears to be weathered (tar stains). The shore zone consists of a low angle boulder cobble beach.
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST/LA 038**

**Date (mo/day/yr)**: 4/4/90

**Time (24 hr)**: 14:30

**Biologist**: Ambrose

---

#### A) Substrate type and % of segments:

1. Bedrock
2. Boulder
3. Cobble
4. Pebble
5. Sand

---

#### B) Overall % cover of biota (% of segment):

- Dense: 15
- Moderate: 25
- Low: 60

#### C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

- Juveniles/adults (X), new settlement (3)

---

#### BARNACLES

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#### MYTILUS

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**Wildlife Observations/ General Comments:**

- 3 otters, 2 sea lions, 1 nature, bald eagle, 1 black-legged kittiwake, 7 oystercatchers, 1 common merganser, 2 harlequin ducks, 1 seal, 2 sets of deer tracks.

**Ecological Considerations:**

- A long segment with many different habitats; some parts had dense cover, while others were sparse. Overall, there was moderate density in the mid intertidal, and upper and lower zones were fairly sparse. Many dead clams (including Saxidomus giganteus and Uniocardium nitidum).

**H11:** No relevant observations.
SHORELINE EVALUATION

SEGMENT ST/ LA-39 SUBDIVISION A (1 OF 1) DATE: 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream mouths (ADF&G catalogue 226-40-16715; 226-40-16720; 226-40-16730 REV 12/89). - fry out migration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (1A, 1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits.

SHPO SIGNATURE: [Signature] DATE: April 14, 1990

OILING CATEGORIZATION:
Wide_0 m: Medium_0 m: Narrow_0 m: V.Light_55 m: No Oil_3029 m
Subsurface Oil Observed: Yes_0 No: X Maximum Depth______

RECOMMENDATIONS:
____ No Treatment Recommended ______ Snare/Absorbent Booms
____ Treatment Recommended ______ Oil Snares (pom poms)
____ Manual Pickup ______ Absorbents (pads, rolls, etc)
____ Bioremediation ______ Spot Washing: ______ Wands
____ Tarmat: Breakup ______ Beach Cleaner
____ Removal ______ Other (see comments)

COMMENTS: Recommend manual removal of small tarmat, and bioremediation of areas indicated on attached sketch map but do not bioremediate within 100 meters of anadromous streams or clarify with ADF&G. Treatment activities should be conducted between 5/15 and 7/10.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC [Signature] DATE: 5/6/90
EXXON [Signature] DATE: 5/6/90
NOAA [Signature] DATE: 5/6/90
USCG [Signature] DATE: 5/6/90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LA - 39 SUBDIVISION: __________________________ DATE 4/4/90

NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shimen

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT CONSISTS OF A PORTION OF COBBLE-Boulder-EXPOSED BEDROCK SHORELINE (WITH VARYING PROPORTIONS OF EACH COMPONENT) ALONG THE WESTERN CENTRAL COAST OF LUTOCHE ISLAND. THE BEACH SOMETIMES PROLONGED TO ABOUT 1/4 KM AND WAS INFLUENCED BY AT LEAST 3 SIGNIFICANT STREAMS. NO EVIDENCE OF OILING WAS OBSERVED ALOONG THE NORTHERN PORTION OF THE SEGMENT WHICH INCLUDED THE 3 STREAMS. IN THE SOUTHERN PORTION OF THE SEGMENT, AN APPROXIMATELY 60X40 FT PATCH OF WEATHERED STAIN AND TAR SPLETSSES WAS FOUND. OCCURRENCE OF OILING WAS LIGHT. ON THE SMALL PENINSULA IMMEDIATELY TO THE SOUTH OF THIS PATCH (SEE SKETCH MAP), THE OBSERVER FOUND A TAR MAT AND SOME WEATHERED SPLETSSES.

TRACKS OF BEAC AND AN UNIDENTIFIED OTHER WILDLIFE (LIKELY RIVER OTTER) WERE OBSERVED IN A SAINTY PART OF THE SEGMENT. THE SUBLATINA WAS EXPOSED IN SOME PLACES AND APPEARED TO BE CLEAN.

ADEC
NAME John Hoyes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Two patches of staining observed in UFZ2.

Staining was light and discontinuous. Northern section of segment had three streams, one was very likely abandoned. No oil was observed in vicinity of streams. Danner & Moore was doing a fish study on one of the streams.

LAND MANAGER
NAME Rita A. Miranda SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I PARTICIPATED IN THE OSAT EVALUATION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL REPORT BACK TO CAC.
**SHORELINE OILING SUMMARY**

**DG:** Mike Foye  
**NOAA:** Gary Shigenaka  
**SEGMENT:** ST. LA-39  
**BIO:** Richard Ambrose  
**LAND REP:** Risa A. Higashi  
**EXXON:** Larry Olson  
**ADEC:** John Hayes  
**TIME:** 15:45 to 16:30  
**DATE:** 4/4/90  
**TIDE LEVEL:** 1.3 to 1.2  
**ST. SUBDIVISION LENGTH:** 2.751 m  
**SURVEYED FROM:** Foot  
**WORKING DIRECTION:** N to S  
**SURFACE SEDIMENTS:** 0 - 2.0, 0 - 2.0, 0 - 2.0  
**SLOPE:** 0 - 100%  
**OIL CATEGORY LENGTH:** W - m  

### SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>NO OIL</td>
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**PAVEMENT:** H F  
**PATTIES/TARBALLS:** 1 BAGS  
**NEAR SHORE SHEEN:** NO  
**OILED AMOUNT:** Debris Collected  
**(TYPE):** YES NO  
**OILED AMOUNT:**  
- **Debris:** Logs, Vegetation, Trash, Debris  
- **#BAGS:**

<table>
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<tr>
<th>Photographs:</th>
<th>Roll No.</th>
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### SUBSURFACE OIL

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<tr>
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<th>SUBSURFACE OIL CHARACTER</th>
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<th>BELOW</th>
<th>OIL / FILM COLOR</th>
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<td>S, P, C,S</td>
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**COMMENTS:** Oiling was observed in the middle of the segment by the 
*HITZ* / peninsula. There was a 2m x 1.5m discontinuous C/T/S stain located in 
the *HITZ*. On the beach near the peninsula was a weathered Bmx1m 
continuous C/T/S stain in the *HITZ*. The *Shoreline Zone* consists 
mostly of cobble / pebble beach. The southern end of the segment consists of 
a sandy beach.  

**REVIEWED:** [Signature]  
**DATE:** 4-7-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST1 LA039  Subdivision A  Date (mo/day/yr) 4/4/90

Time (24 hr) 1550 hrs  Biologist Ambrose

(A) Substrate type and % of segments:

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<tr>
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<th>Boulder</th>
<th>Cobble</th>
<th>Pebble</th>
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(B) Overall % cover of biota (% of segment): Dense 20  Moderate 20  Low 60

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles / adults (X), new settlement (3)

**BARNACLES**

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**FUCUS**

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Wildlife Observations/ General Comments: See addendum.

Ecological Considerations:

71), 5T: No eagles seen on this segment.

; good anadromous-like streams noted (see addendum).
Wildlife observations:

2 oystercatchers
8 Canada geese
1 otter
3 seals
24 seabirds, incl. scoters
40 crows
4 deer tracks
2 oystercatchers
1 gull
1 track of marten or river otter

3 Anadromous streams found in this segment:

[Diagram of streams and zones, labeled with habitat descriptions such as 'mussel beds', 'Fucus', 'bedrock', 'fire pool', and Algae (Laminaria, Cymathara, Palmaria, etc.) sheet.]

TOTAL: P. 71
XXX Wide
///// Medium
-- Narrow
TTTT Very Light
0000 No Oil

LA-39A

Map Key: PWS-445
Name: Mike Forrest
Date: 4/4/40
Date Entered:
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA-39  SUBDIVISION A (40)  DATED 8/4/90

MODIFICATION

1. REASON FOR MODIFICATION:
   An area approx. 30m x 1m of tarred/Asphalt will need to be removed this year (1990) if possible. It is likely this oiling was not located during the SSA7 or summer clean up operations. In addition, an area on estate/ground that will require further tarred removal in area of previous work (1990).

2. SUGGESTED ADJUSTMENT TO WORK PLAN:
   One 10 person work crew would be able to complete removal of tarred/Asphalt in approx. 5 days (5 mondays) area was partially treated by ASAP crew aboard Albatross.

3. TIMING ISSUES: Area is of relatively low priority and should be considered for treatment (1990) after more heavily oiled segments have been treated.

4. ADDITIONAL COMMENTS:

ADEC Robert L. McC.  
EXXON Randall K. Bayer  
USCG  
LAND MANAGER (If field rep is on scene)
SEGMENT LA-39 SUBDIVISION A (FL) DATED 8-1-90

MODIFICATION

1. REASON FOR MODIFICATION:
ASAP located on area of current requiring further work on EV-39.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:
ASAP-VECO crew worked for approx. 1.5 hours removing approx. 50% of material on EV-26. This included 2 supersticks removed.

3. TIMING ISSUES:

4. ADDITIONAL COMMENTS:

ADEC: [Signature] Robert E. McLean
EXXON: [Signature] Randall B. Bray
USCG: [Signature] [Signature] (If field rep is on scene)

LAND MANAGER: [Signature] Steve [Name]
SEGMENT AS LA35

SUBDIVISION: A

SITE: 1

DATE 8/10/90

USCG/NOAA

NAME DON ORVIS (USCG) SIGNATURE

D.A. NICO (NOAA)

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: APPROX. 1/4 OF EFFECTED AREA WAS CLEANED ON SITE. REMAINING OBVIOUS AREA WILL TAKE SMALL AMOUNT OF TIME TO COMPLETE REMOVAL. RECOMMEND LOW PRIORITY CLEAN UP THIS YEAR. REASSESS FOR RESIDUAL

IN 1991.

NAME ROB MCBREEN SIGNATURE

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AN AREA OF TARMAT (x1m x 30m) was located just to the west/south of segment. APPROX. 1/4 of this tarmat/AP was removed by ASAP-VECO crew. I recommend that this remaining tarmat/AP receives a low priority rating for further treatment this year (90). In addition a small area where AP was removed by 90 summer cleanup crew should receive additional treatment this year (90). This area occurs at end of cutoff/ground spill-off from 150% west/south south stream.

NAME STEVE LIBBA CVC SIGNATURE

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: THERE IS ENOUGH TARMAT IN THIS AREA TO REQUIRE ADDITIONAL WORK THIS FALL. HOWEVER, THIS IS NOT IN MY OPINION A HIGH PRIORITY AREA AND THE WORK IS NOT GOING TO EXCEED THE BUDGET (STUDY STIP). I THINK THE 90 WORK SHOULD BE CANCELED IN THE SPRING WITH SUBSEQUENT CONTAMINATION BEING THE HIGH PRIORITY AREA.

EXXON

NAME RANDALL K. BOYER SIGNATURE

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: IN AN AREA DESCRIBED AS COVER ON THE SUBDIVISION THE ASAP CREW LOCATED A DISTINCTIVE AP/C AREA. ASAP VEVO REMOVED 60% OF THE 1X 30M TARMAT STRIP. A SMALL MANUAL CREW COULD FINISH THIS SUBDIVISION IN 2 HRS. A WORK ORDER MOD. HAS BEEN FILED FOR COMPLETION IN 1990. REASSESS IN 1991 TO DETERMINE TARMAT EXISTENCE.
SEGMENT AS LA-39  SUBDIVISION: A SITE: 2  DATE 10/11/90

SCG
NAME Don Davis (ESC)  SIGNATURE

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Very small part of an exposed "spit" of land. Very shallow penetration of oil in subsurface. I expect tidal conditions and winter weather will strip the patch of remaining oil.

ADEC
NAME Bob McCready  SIGNATURE Robert L. McCready

☒ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Residual oil remains in an area I treated removed from cleanup of summer 1990. I do not recommend treatment in 1990 but do recommend reassessment in spring 1991. Area in question is distinct spit/cobble/feather and gravel spit at west end of segment.

LAND MANAGER
NAME Steve Wood CVC  SIGNATURE

☒ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Very lite residual oil remaining. I don't recommend treatment in 90 but it will surely need a spring assessment and a close look for subsurface oil.

EXXON
NAME Randall K. Boyer  SIGNATURE Randall K. Boyer

☒ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

High energy beach for minor oiling. No reassessment required.
**TOTAL EST LENGTH OF SHORELINE SURVEYED:** 150 m

**SURFACE OIL**

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**EST. SITE LENGTH**

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**JBSURFACE OIL**

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**REVIEWS**

**65 m of ASPHALT, NO SITE**

**SITE 1:** MOUSE/ASPHALT, DULL BROWN COLOR, IN SHAKE WITH VERTICAL BANDING/CRINKLING

- AREA MANUAL PICK-UP OCCURRED ALONG 30 OF 65 (M) AT EASTERN EDGE OF SITE
- 100 BAGS BOTTED ON BOARD

**SITE 2:** PATCHY ASPHALT ON ISLAND/ROCKS (INTERMIXED)

- AREA 1 M X 4 M (LONG)

**PHOTOS:**

- Roll No. 001
- Frames 3

**REVIEWED**

8/4/90 Y/W
GENERAL DATA

Seg ID: LA-39
SBDV: A
Site: 1
Team: 3
Date: 8-1-90

Site Lenth: 650
Oil Categories: W - M - N 95 VL - NO - U 29134
1991 Reassessment: USCG: Yes
ADEC: Yes
LDMGR: Yes
Exxon: Yes

SURFACE DATA

Char #: 1
Oil Char: AP
Oil Dist: CONT - BROKEN PTCH - SPLH -
Tidal Zone: SU - UI X MI - LI -

Char #: 2
Oil Char: CT
Oil Dist: CONT - BROKEN - PTCH X SPLH -
Tidal Zone: SU - UI X MI - LI -

Char #: 3
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Oil Dist: CONT - BROKEN - PTCH X SPLH -
Tidal Zone: SU - UI X MI - LI -

Char #: 4
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Clean Below: Yes

Pit Zone: SU-UI-MI-LI

Subsurf Sediment: BRK-BLD-COB-PEB-GRM-SAN-MUD-VEG

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Pit # | Pit Depth (cm) | Oil Character | Oil Interval: From | To |
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Pit Zone: SU-UI-MI-LI

Subsurf Sediment: BRK-BLD-COB-PEB-GRM-SAN-MUD-VEG

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Clean Below: Yes

Pit Zone: SU-UI-MI-LI

Subsurf Sediment: BRK-BLD-COB-PEB-GRM-SAN-MUD-VEG
GENERAL DATA

SEG ID: LA-39  SBID: A SITE: 2  TEAM: 3  DATE: 8-1-90
SITE LGTH: 30m  OIL CATEGORIES: W - M - N  # - VL - NO - U 41934
1991 REASSESSMENT: USCG: Yes  ADEC: Yes  LDGR: Yes  EXXON: Yes

SURFACE DATA

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TIDAL ZONE: SU  UI  MI  LI

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TIDAL ZONE: SU  UI  MI  LI

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TIDAL ZONE: SU  UI  MI  LI

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TIDAL ZONE: SU  UI  MI  LI
### ASAP DATA ENTRY FORM

**Segment ID:** LA - 39  
**SubDiv:** A  
**Site:** 2

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<td>Pit # 20</td>
<td>10</td>
<td>OIL</td>
<td>FROM 0 TO 2</td>
<td>Y</td>
<td>SU UI MI LI</td>
<td>BRK BLD COB PEB GRN SAN MUD VEG</td>
</tr>
</tbody>
</table>
SHORELINE EVALUATION

SEGMENT ST/LA-40 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Active bald eagle nest (ST) - 3/1 to 6/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (ST) Restrict air traffic to essential minimum. Air approach and take off from and to seaward only. Contact USFWS prior to treatment, for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: [Signature] DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3453 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
___ Treatment Recommended
___ Manual Pickup
___ Bioremediation
___ Tarmat: Breakup
___ Tarmat: Removal

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC John Koza
EXXON Andy Ton
NOAA Bryn Wronski
USCG C.A. Keister

FOSC: [Signature] DATE: 5-6-90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-40  SUBDIVISION: ___________________________ DATE 4/4/90

NOAA 
NAME GARY SHIGENAKA  SIGNATURE  Gary Shigenaka

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT WAS A MIX OF SHORELINE TYPES RANGING FROM SAND TO COBBLE TO BOULDER TO EXPOSED BEDROCK. NO OIL WAS OBSERVED IN THIS SEGMENT.
THE SUPRATANGENT WAS COVERED BY SNOW IN MOST PORTIONS OF THE SEGMENT.

ADEC
NAME  J. Haye  SIGNATURE  Jeff

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS  No oil observed on this segment.

LAND MANAGER
NAME RITA A. MIRAGLIA  SIGNATURE  Rita M.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
I PARTICIPATED IN THE SSAT EVALUATION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL REPORT BACK TO CAL.
SHORELINE OILING SUMMARY

OG: Mike Foset
USGS: Gary Shigenaka
SEGMENT ST: LA-40

BIO: Richard Ambrose
LAND REP: Rick A. "Ming" Subdivision: A (1056)

EXXON: Larry Olson
ADEC: John Hayes

TIME: 16:30 to 17:30
DATE: 4/4/90

EST. SUBDIVISION LENGTH: 2.142 m

- Sun
- Clouds
- Fog
- Rain
- Snow
- Gray

SURVEYED FROM:
- Foot
- Boat
- Helo

WORKING DIRECTION:
- N to S

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>Coat</td>
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<td>Stain</td>
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<td>Mousse</td>
<td>X</td>
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<td>Tarballs</td>
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<tr>
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OIL CATEGORY LENGTH:
- W m
- M m
- N m
- V m

SURFACE OIL PAVEMENT:
- H
- F
- S

PATTERNS/TARBALLS:
- BAGS

NEAR SHORE SHEEN?
- NO
- BR
- RW
- SL
- TL

OILED SHORE FILM:
- CO: Debris
- Mesh
- Material

OILED DEBRIS AMOUNT:
- SM
- MD
- LG

DEBRIS COLLECTED:
- YES
- NO

TYPE:
- Logs
- Vegetation
- Trash
- Debris

NO BAGS:

Photographs:
- Roll No.
- Frames

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>C, G, C</td>
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</table>

COMMENTS: No oil was observed in this segment. The shore zone in the Northern face is mostly Boulder/Cobble beach. The area where its 1-3 were due is uplifted bedrock with sand and the rest of the segment is low ridge cobble beach.

Page 1 of 1

REVIEWED: [Signature]
DATE: 4/4/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/1A040  Subdivision: A  Date (mo/day/yr): 4/4/90

**Time (24 hr):** 1640 hrs  **Biologist:** Ambrose

(A)  Substrate type and % of segments:

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</tbody>
</table>

(1) Bedrock  (2) Boulder  (3) Cobble  (4) Pebble  (5) Sand  (6) Sir

(B)  Overall % cover of biota (% of segment):  Dense 20  Moderate 20  Low 60

(C)  Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):

- Juveniles / adults (X), new settlement (3)
- Photographs:
  - Roll No._______
  - Frames_______

### BARNACLES

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### MYTILUS

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</table>

**Wildlife Observations/ General Comments:**

- 4 black scoters, 1 otter, 1 gull, 2 deer and 3 deer tracks.
- Segment was a mixture of cobble/boulder beaches and bedrock area.
- Cobble/boulder areas had sparse to moderate cover, bedrock areas had dense cover. Sparse mussel bed occurred before and in Montgomery Bay.
- Ecological Considerations:  

711, ST-2: No eagles or nests seen.
SEGMENT LA-40
SUBDIVISION A
DATE 4/4/90

CHECKLIST
- N Area
- Approx. Scale
- Seg/Sub Divide
- Oil Dist.
- Water
- Length
- % Cover
- Substrate Character
- Est. HWL/WL
- SSL
- Profile Location(s)
- Photo(s)
- Pt Location(s)
- Photo Location(s)

LEGEND
1 A
Fl: No Subsurface Oil

2 A
Fl: Subsurface Oil

[Diagram of geological features with legend:
- Trees (Forest)
- Snow (Super ITZ)
- Bedrock/Sand Beach
- Cobble Beach]

Oil Character Length (ft): AP--PO--CV--CT--ST--MS--PT--TB--FL--NO--Z192
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-40

Map Key: PWS-440c
Name: Mike Foret
Date: 4/4/90

ADEC Segment Length: 3453m

44000

PWS 440A

LA-40

H000
XXX Wide

/// Medium

--- Narrow

LA-40A

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<tr>
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<tr>
<td>Name</td>
<td>Mike Fort</td>
</tr>
<tr>
<td>Mark</td>
<td>PMS-446</td>
</tr>
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</table>

0000 No.0

Map Key: PMS-446

0000 Meters

La Eniert:

Phina

4/24/80
SHORELINE EVALUATION

SEGMENT ST/ LA-41 SUBDIVISION A (1 OF 1) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nest (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
7TI Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [signature] DATE: 4/18/90

OILING CATEGORIZATION:
Wide _0 m: Medium _0 m: Narrow _0 m: V.Light _27 m: No Oil _3862 m
Subsurface Oil Observed: Yes__ No X__ Maximum Depth____

RECOMMENDATIONS:
X No Treatment Recommended ___ Snare/Absorbent Booms
___ Treatment Recommended ___ Oil Snares (pom poms)
___ Manual Pickup ___ Absorbents (pads, rolls, etc)
___ Bioremediation ___ Spot Washing: ___ Wands
___ Tarmat: ___ Breakup ___ Beach Cleaner
___ Removal ___ Other (see comments)

COMMENTS:

________________________________________

TAG COMMENTS:

________________________________________

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAKER FOSC: __ DATE: 5-6-90
EXXON
NOAA By Warrant, Dated 4/17/90
USCG
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)

Ester Hatchery release (4/15 to 6/1)

Main Bay Hatchery release (4/20 to 5/10)

Sawmill Bay Hatchery release (4/15 to 6/1)

Cannery Creek Hatchery release (4/21 to 6/1)

Remote release site

 Gill net area (6/7 to 8/31)

Purse seine area (7/20 to 9/30)

Purse seine hook-off (7/20 to 9/30)

Set net sites (6/11 to 7/25)

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)

Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)

Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic.

All Bald Eagle nests (6/1 to 6/1)

Active Bald Eagle nests (3/1 to 6/1)

Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:

Tent sites (6/1 to 9/15)

Anchorages (6/1 to 9/15)

Forest Service cabins (6/1 to 9/15)

Lodge (6/1 to 9/15)

Special use destination

Subsistence area:

Salmon harvesting (5/1 to 9/30)

Finfish harvesting

Bear harvesting (9/15 to 3/15)

Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/LA-41 SUBDIVISION: ___________________ DATE 4/4-4/5/90

NOAA
NAME: GARY SHIGENAKA SIGNATURE: ___________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT consisted of cobble rock and boulder beaches along the southwest shoreline of Latouche Island. Survey of the segment began on 4/4/90 but was broken off due to building seas, poor visibility, and snow. Assessment was continued and completed on 4/5/90. At the southernmost end of the segment an area of rocky outcropping was encountered that was the subject of much discussion. Extensive portions of the surface area of the rocks were covered with a black coating that was described by some members of the team as tar stain, and by others as a lichen or algal growth. Scrapings and other close examinations failed to resolve the vegetation. Although coverage of the rock outcrops by the unidentified coating was extensive (approx. 3 ft high x 50 ft wide), there was no other evidence of oiling in this immediate vicinity. My opinion (and that of others) was that the coating was of algal origin rather than petroleum, however, other members of the team were certain that the coating was in fact tar. Thus deadlocked, we agreed to no consensus. Wet weather conditions made a difficult task of differentiation even more difficult. A quick means of distinguishing between tar and lichen—for example, a vial of organic solvent in which scrapings of tar would dissolve but algae or lichen would not because of cellulose content—would be desirable in the field. (Comments continued on next page)

ADEC
NAME: ___________________ SIGNATURE: ___________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

LAND MANAGER
NAME: ___________________ SIGNATURE: ___________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA - 41  SUBDIVISION: ___________________ DATE 4/4 - 4/5/90

NOAA 
NAME GARY SHIGENAKA  SIGNATURE: ____________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

(Comments for LA-41, continued)

North of the point where the rock outcrop was encountered, some sporadic stain splatters and a single spot of tar were observed on boulders in the upper intertidal zone. In a sandy portion of this beach, deer tracks and scat were found.

The remainder of the segment, largely double-boulder beach, was free from evidence of oiling. A large portion of the supratidal was covered by snow, but in those areas where it was not, it appeared to be clean. At the northern end of the segment, deer and river otter tracks were seen in the sand just below the supratidal. The CAC landowner rep accompanied us on 4/4 when we began our survey of LA-40. On 4/5, she departed and so the remainder of the segment was assessed with no rep.

ADEC 
NAME JIAN HAYER  SIGNATURE: ____________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

We walked much of the segment at high water mark. No subsurface contamination was observed on this segment. Surface contamination consisted of tar staining on southern portion of segment. Staining was in corner for end of U.I.T.Z.

LAND MANAGER 
NAME: ___________________ SIGNATURE: ____________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 03/14/90
South end of the segment. The shore zone consists mostly of low angle cobble and w/ some boulder/cobble beaches. There was some black lichen located.
### SHORELINE OILING SUMMARY

**OG**: Mike Foger  
**BIO**: Richard Ambrose  
**NOAA**: Gary Shimada  
**SEGMENT**: ST/  
**STATION**: 41

**EXXON** Larry Galen  
**ADEC**: John Hayes  
**TIME**: 14:00 to 15:30  
**DATE**: 4/5/90

**TEAM NO.**: 11  
**TIDE LEVEL**: 5.0 to 1.5

**EST. SUBDIVISION LENGTH**: 382.5 m  
**UPLANDS DESCRIPTION**: □ Sun □ Clouds □ Fog □ Rain □ Snow

**SURVEYED FROM**: □ Foot □ Boat □ Helo  
**WORKING DIRECTION**: S to N

**SLOPE**: □ Lang 100% □ Hang □ Vert □ Wave Exposure

**OIL CATEGORY LENGTH**: W — m  
**OIL FILM COLOR**: I

---

### SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PAVEMENT**: H F S — sq. m by — or
**PATTIES / TARBALLS**: — — BAGS
**NEAR SHORE SHEEN?** □ YES □ NO
**PHOTOGRAPHS**: Roll No. —  
**Frames**: —

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### SUBSURFACE OIL

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<th>OILED DEBRIS AMOUNT</th>
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<td>TYPE</td>
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<tr>
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**COMMENTS**: No oil was observed in the segment with the exception of 9m x 20 m +/- in the NEIZ located in a rock outcrop at the end of the segment. The shore zone consists mostly of low and cobble size, with some brown limestone. There was some brown lichen located.

---

**REVIEWED** —  
**DATE** —
## SHORELINE OILING SUMMARY (PAGE 2 of 3)

**SEGMENT ST/ LA-41 SUBDIVISION A**

### SUBSURFACE OIL (CONTINUED)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-ml)</th>
<th>OILED BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>-</td>
<td>X</td>
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**COMMENTS**

In the southern end of the segment located above the rock outcrop in the unit 2, this made the identification of the excess oil stain more in the area difficult. It was identified at the 1 in 20 cm 0-1/3 yard.
**SHORELINE ECOLOGICAL SUMMARY**

<table>
<thead>
<tr>
<th>Segment ST / LADY</th>
<th>Subdivision</th>
<th>A</th>
<th>Date (mo/day/yr)</th>
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<td>Biologist</td>
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### (A) Substrate type and % of segments:
1. Bedrock: 5
2. Boulder: 30
3. Cobble: 40
4. Pebble: 10
5. Sand: 10
6. Silt: ___

### (B) Overall % cover of biota (% of segment):
- Dense: 20
- Moderate: 20
- Low: 60

### (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Upper-U, mid-M, low tidal-L
- Juveniles/adults (X), new settlement (G)

### Photographs:
- Roll No. ST-11-2
- Frames 7-8

#### BARNACLES

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#### MYTILUS

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**Wildlife Observations/General Comments:**
- Osprey, common merganser, white-winged scoters, goldeneye, buffleheads, 3 wild birds.
- LADY is a diverse section, with a mix of bedrock (generally dense cover), point (with boulders/low cover), and cobble beds (with low cover).
- Ecological Considerations: several mussel beds along the segment.
- 711 ST: No bald eagles or nests.
XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

Map Key: PWS-447F
Name: Mike Poger
Date: 4/15/90
Date Entered:
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7HH Subsistence area: Finfish harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoined biota and substrate.

OILING CATEGORIZATION:
Wide 0 m: Medium 56 m: Narrow 0 m: V.Light 94 m: No Oil 1781 m
Subsurface Oil Observed: Yes ___ No X Maximm Depth___

RECOMMENDATIONS:
X ___ No Treatment Recommended
___ Treatment Recommended
___ Manual Pickup
___ Bioremediation
___ Tarmat: Breakup
___ Removal
___ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/80

ADEC: Art Werner, Assistant
EXXON: Andy G., Assistant
NOAA: Bill W., Assistant
USCG: James K., Assistant

FOSC: ___ DATE: 5/12/80
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)

1D Esther Hatchery release (4/15 to 6/1)

1E Main Bay Hatchery release (4/20 to 5/10)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/Seabird colony (4/1 to 5/1)
Restrict all activity to essential minimum, especially air traffic.

ST All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from land to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
Tent sites (5/1 to 9/15)
Anchorage (5/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

7Z Subsistence area:
Salmon harvesting (5/1 to 9/30)

7THH Fish harvesting

7JJ Deer harvesting (8/15 to 2/28)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-42 SUBDIVISION: ___________________________ DATE 4/9/90

NOAA NAME GARY SHIGENAKA SIGNATURE __________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Segment consisted of a very rugged shoreline at the southern tip of Latouche Island. It was characterized by rock outcroppings and boulders, and low buff (rocky) beaches extending for a considerable distance at low tide. Speckled evidence of oiling was observed along the length of the segment, and this took the form of weathered splashes and a few bands of cover/coat on rock faces in the upper intertidal zone. In a few locations, sheen was observed on water surfaces, but closer examination of the immediate area revealed no obvious petroleum-related source. Large amounts of decaying algae were apparent along the shore, and it is possible that at least some of the sheen was organic in origin. The OG and ADEC KP examined the southeastern tip of the island and segment and found a wide swath of stain and cover on the bedrock outcropping, but also observed that it was well-weathered in the extremely exposed environment.

Finger prints were obvious along the supralittoral. A set of bear tracks were observed, and unidentified scat was found along the supralittoral and in the snow above the supralittoral.

ADEC NAME______JOHN HAYES ________SIGNATURE________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Studied segment LA-42 had oily debris on the bare and exposed portions. The sheen has significantly dispersed from when I did a PR on the last fall. No treatment recommended at this time in the presence of weathering.

LAND MANAGER

NAME ___________________________ SIGNATURE ___________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Land Manager was not present due to weather delays.
SHORELINE OILING SUMMARY

**OG**: Mike Foger  
**NOAA**: Gary Shirakawa  
**BIO**: Richard Ambrose  
**LAND REP**: James A. Carter  
**EXXON**: Larry Olson  
**ADEC**: John Hayes  
**TIME**: 7:40 to 9:15

**TEAM NO.**: 11  
**TIDE LEVEL**: -0.4 to 0.9  
**DATE**: 4/4/90

**EST. SUBDIVISION LENGTH**: 416.7 m  
**SUN**: ☀  
**CLOUDS**: ☁  
**FOG**: ☁  
**RAIN**: ☁  
**SNOW**: ❄  
**UPLANDS DESCRIPTION**: Grass ☑  
**FOREST**: ☑  
**ROCK**: ☑  
**SNOW COVERED FORESTED GLASSY UPLANDS**

**SURFACE SEDIMENTS**: R: 40% B: 30% C: 20% T: 10% P: 5% G: 0% S: 0% M: 0% V: 0%

**SLOPE**: Long: 90% Hang: 5% Vert: 5%

**WAVE EXPOSURE**: Low ☑  
**Med**: ☑  
**High**: ☑

**OIL CATEGORY LENGTH**: W: 0 m M: 150 m N: 0 m V: 85 m No: 3432 m

**PAVEMENT**: H: 9  
**BR**: 8  
**RW**: 8  
**SL**: 8  
**TL**: 8

**PHOTOGRAPHS**: Roll No. ST-11-2

**FRAMES**: 32

### SURFACE OIL

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**COMMENTS**: Shore zone consists mostly of low angle upfll and bedrock, which runs perpendicular (⊥) to the shoreline, with a granule/pebble storm surf zone. Most of the surf zone is covered by snow and kelp. The oil observed (map) was mostly CT/P staining in the H172. The staining was very weathered. Some translucent sheen was observed in some of the tide pools located in the H172 but no subsurface oiling or heavy oiling was observed. At the southern end of the segment there is a 100x150m CT/P stain...
SKETCH MAP

Segment ST: LA-412
Subdivision: A
Date: 4/9/90

Checklist:
- Pit Access
- Approx. Scale
- Seg/Sub Boundary
- Oil Dist.
- Wetted
- Length
- % Cover
- Substrate Character
- Est. Max/Min
- SSL
- Profile Location(s)
- Pit Location(s)
- Profile Label(s)

Legend:
1A
- Pit: No Subsurface Oil

2A
- Pit: Subsurface Oil

CTPC
- Conterminous Distribution

CITP
- Bracketed Distribution

CITP
- Patchy Distribution

CITP
- Splashed Distribution

Oiled Vegetation
1
- Photo: location, direction, and number

Shore zone
- consists of low angle uplifted fractured bedrock
drying planes run 1 to the shore line

1m x 90m CT/SP Stain HETZ on vertical rock face in the protected site

1m x 150m CT/SP Stain HETZ
1 to shoreline. Stain is on vertical rock face in the protected site

5m x 30m CT/SP Stain in the HETZ among rock face.

10m x 150m CT/SP Stain/Coat in HETZ, slightly weathered along rock face
billing is 1 to shoreline.

Oil Character Length (m): AP PO CV GT 100 ST 135 MG PT TB FL NO 3932
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/ LA042 Subdivision A __________ Date (mo/day/yr) 4/9/90

Time (24 hr) 0740 hrs Biologist Ambrose

(A) Substrate type and % of segments:

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<td>1L</td>
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(B) Overall % cover of biota (% of segment): Dense 65, Moderate 25, Low 10

(C) Density, substrate preference (by number from A above) & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (Q)

**BARNACLES**

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Wildlife Observations/General Comments: 5 deer (and lots of tracks), unip. (bear?) scat, bear tracks, weathered whale bones (2), 50 bufflehead, 2 Harlequin ducks, 3 eiders.

Very extensive, dense and rich intertidal region, with many tidepools and channels thru bedrock. Nearly 100% cover in low intertidal, abundant algal drift, Phyllospadix in pools.

Ecological Considerations: Very dense Nereocystis and offshore of entire segment.

Field Notes: No relevant observations.

Anadromous streams occur in this segment; no oil was observed near either of them.
SHORELINE EVALUATION

SEGMENT ST/ LN-01 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- 2M Herring spawning (4/1 to 6/15)
- 5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
- 6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING Categorization:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 527 m: No Oil 657 m
Subsurface Oil Observed: Yes X No X Maximum Depth 1

RECOMMENDATIONS:

- X Treatment Recommended
- No Treatment Recommended

- X Manual Pickup
- Bioremediation
- X Tarmat Removal

- Snare/Absorbent Booms
- Oil Snares (pom poms)
- Absorbents (pads, rolls, etc)
- Spot Washing: Wands
- Beach Cleaner
- Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of oiled vegetation and cleanup debris in area indicated on sketch map and 2) manual removal of tarmat in area indicated on sketch map. Work should be conducted after 6/15 with approval of USFWS due to eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/30/90

ADEC: [Signature] DATE: 5/1/90
EXXON: [Signature] DATE: 5/1/90
NOAA: [Signature] DATE: 5/1/90
USCG: [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact USFWS Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Moffison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sewmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Perch release
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. Treatment to include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

2M Herring spawning (4/14 to 5/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncollected intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

4.3P Harbor seal and sea lion pupping (5/15 to 7/1)
3.3Q Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Celkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/anderlow concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothf 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (6/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 800m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Jeff Hughes 267-2201

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorage (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)

Salar harvesting

Salmon harvesting

Deer harvesting (9/15 to 2/28)

Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
The low angle beaches had very light coat splashes and stains on boulders. Loc #1 had pockets of penetrated oil to 2 cm into sediments. Soft mousse pavement at HIZ extended over 4 x 1/2 meter area, 2 cm thick (See Location #2). The pavement should be shovelled up and bagged.

Subsurface oil 5 cm thick lay under 2 cm surface substrate and consisted of oiled vegetation, debris and gravel pebbles. The area extended over app. 60 m along the SUTZ back of beach (in Storm beam). See Location #3. Oil to six spots of cover (over 1 m² area) penetrated to 3 cm at UITZ. (con.)

Treatment should be to pick-up oiled debris and possible (low priority) treatment of pavement patches. Rest of oil identified as splash and broken coat.
The penetrated oiled areas are not thick enough to necessitate treatment.
The storm beam area should be treated. The oiled rock + vegetation can be turned over to expose it to weathering and heavier oiled debris should be bagged.
There is enough oiled pop poms, rocks + snare booms to have a crew come and clean up, so the pavement area + oiled beam should be treated at this time.
**SHORELINE OILING SUMMARY**

**OG**  G. MACDONALD  USCG  S. M. LANDSFOOT  SEGMENT LN. 1

**BIO**  M. A. SCOTT  LAND REP. L. KELLOGG  NFR  SUBDIVISION A  (1 OF 1)

**EXXON**  EX-2-9  ADEC  LAND. TR.  STRATON  TIME 4:55 to 6:40

**NM NO.**  3  **TIDE LEVEL**  +2 to +75 ft  **DATE**  6/12/90

T. SUBDIVISION LENGTH: 1450 m  ☑ Sun  ☑ Clouds  ☑ Fog  ☑ Rain  ☑ Snow

**UPLANDS DESCRIPTION:** ☑ Grass  ☑ Rock

**SURVEYED FROM:**  ☑ Foot  ☑ Boat  ☑ Helo  **WORKING DIRECTION:**  W to E

**SURFACE SEDIMENTS:**  R 20%  B 50%  C 15%  P 10%  G 5%  S 2%  M 0%  V 0%

**SLOPE:**  Lang  60%  Hang  20%  Vert  20%

**WAVE EXPOSURE:**  ☑ Low  ☑ Medium  ☑ High

**OIL CATEGORY LENGTH:**  W 60 m  M 20 m  N 60 m  VL 540 m  NO 910 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</thead>
<tbody>
<tr>
<td>Mousse</td>
<td>X</td>
<td>X</td>
<td>XX</td>
</tr>
<tr>
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<td>XX</td>
</tr>
<tr>
<td>PAVEMENT</td>
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</tr>
<tr>
<td>POOLED</td>
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<td>X</td>
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<tr>
<td>COVER</td>
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<tr>
<td>STAIN</td>
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<tr>
<td>MOUSSE</td>
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</tr>
<tr>
<td>PATTIES</td>
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</tr>
<tr>
<td>TARBALLS</td>
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</tr>
<tr>
<td>NO OIL</td>
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</tbody>
</table>

**PAVEMENT H F 3.5 sq. m by 5 cm**

**PATTIES/TARBALLS**  0  **SUSPENDED**  0  **BAGS**  0

**NEAR SHORE SHEEN?**  ☑

**OILED DEBRIS**

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<tr>
<th>DEBRIS</th>
<th>AMOUNT</th>
<th>DID YOU COLLECT DEBRIS?</th>
<th>TYPE</th>
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<td>Vegetation</td>
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<tr>
<td>Trash</td>
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<tr>
<td>Debris</td>
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<td></td>
<td>BAGS 3</td>
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**PHOTOGRAPHS:**

- Roll No. ST-5-9
- Frames ___________

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED DEBRIEF</th>
<th>OIL / FILM COLOR</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA DISCHARGE (m³)</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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</table>

**COMMENTS:** Exposed, low angle BCF viewed over raised beach. Bordered by steep rocky outcrops. Surface oil as str. cr's @ htwz; plus trace mouse pavement. Subsurface oil on oiled vegetation in storm beach.

**REVIEWED**  YW  DATE  4/30/90
SCH MAP

PROFILE - TYPICAL

Typical ST, CT/S, @ HRTZ < 1%. Cover.

MANUALLY REMOVE TARMAT

beach

V. spring forced sheen
from mouse.

ST, CT/S @ HRTZ < 1%.

- foamy, abraded.

CPB beach

Some berm w/ oiled vegetation
2m x 60cm x 1m

ST, CT/S or B @ HRTZ < 2%

2m x 10cm

OIL CHARACTER

Oiled vegetation...
### Shoreline Ecological Summary

- **Segment:** LN-R1
- **Subdivision:** A
- **Date:** 4/10/70
- **Time (24 hr):** 0900-1100
- **Biologist:** M. AS. COTT

#### Substrate Type and % of Segments

<table>
<thead>
<tr>
<th>Substrate Type</th>
<th>% of Segments</th>
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</thead>
<tbody>
<tr>
<td>Bedrock</td>
<td>2</td>
</tr>
<tr>
<td>Boulder</td>
<td>3</td>
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<tr>
<td>Cobble</td>
<td>5</td>
</tr>
<tr>
<td>Pebble</td>
<td>5</td>
</tr>
<tr>
<td>Sand</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Overall % Cover of Blobs (% of Segment)

- **Dense:** 60
- **Moderate:** 10
- **Low:** 2.5

#### Vertical Zonation of Major Taxa

- **Juveniles/Adults:** New settlement

#### Barnacles

<table>
<thead>
<tr>
<th>Location</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<td>1L</td>
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- **Not Present**

#### Mytilus

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- **Not Present**

#### Gastropods

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- **Not Present**

#### Fucus

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<td>1L</td>
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</tbody>
</table>

- **Not Present**

#### Wildlife Observations/General Comments

- Sea otter
- Bald eagle
- Migratory birds
- Not observed

#### Ecological Considerations

- Small stream (600 m from each end of segment), possible spawning stream (6 permanent pools)
- Dense, diverse community primarily on rock/boulder; extensive algal covering
- New settlement of Mytilus everywhere throughout
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LN-1 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmac Removal
OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning
NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.

5T Bald Eagle Nest
NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/15/90 by Mike Lockhart indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 6/24/90
Prepared By: Linda Tayan
Date 6/2/90
Incorporates information from USDA bald eagle survey 7/15/90

ECOLOGY MAP %
SEGMENT LN-1
SUBDIVISION (A) (D of L)

EXON Company, USA
Map Key: PWS-LN-1
May 11, 1990

1 inch = 1417 feet

---

Seabird Colony

Eagle Nest

---
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M  Herring Spawning   NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.

5T  Bald Eagle Nest    NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/15/90 by Mike Lockhart indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT: SUBDIVISION A DATED 6-11-90

MODIFICATION

1. REASON FOR MODIFICATION

OIL FILM REMAINS IN THE SUPRATIDAL AREA. THE STORM BERM HAS A CONSISTENT LUBRICATION THAT WOULD POSSIBLY RESPOND TO BIOREMEDIATION.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

APPLY BIOREMEDIATION AND THEN REEVALUATE AFTER THE APPROPRIATE TIME PERIOD.

3. TIMING ISSUES

ADEC Deb Nafzger 6-11-90
EXxon RE: Hame
USCG V: K. Cato: USCG 6/10
LAND MANAGER (if field rep is on scene)
Storm berm area of cobble beach has oil film in gravel substrates. Bioremediate then reevaluate after appropriate time period.

Stain berm in oil, vegetation, & driftwood.

T3 over R

Unclear location

CP8 beach

MANUALLY REMOVE OILED VEGETATION AND CLEANUP DEBRIS IN SITZ

Oil Character: Length (m): 5 PO - CV - CT 340 CT 200 MS L PT - TI - FL - NO G10
WORK PLAN ADDENDUM

Segment LN-001 A   Subdivision A   Dated 6-15-90

MODIFICATION

1. REASON FOR MODIFICATION

Request for the addition of bioaugmentation from the field monitor and supervisors.

2. ADJUSTMENT TO WORK PLAN

Add customers to the oiled area of the storm beam as indicated.

SHPO APPROVAL NEEDED YES X   SHPO SIGNATURE   6/22/90
NO

TAG APPROVAL DATE 6/20/90
ADEC Ray Moore 6/22/90
EXXON Andy Tolle 6/22/90
NOAA Joseph Tahvonen 6/22/90
USCG C. A. Reiter 6/22/90
ECOLOGY MAP
SEGMENT LN-1
SUBDIVISION A
METERS

Incorporates information from USFWS bald eagle survey 8/7/90

Exxon Company, USA
Map Key: PMS-LN-1
May 11, 1990

Seabird Colony
Eagle Nest

1 inch = 1617 foot
SEGMENT ST/ LN-02 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Bald eagle nest (5T) - 3/1 to 6/1; Herring spawning (2M) - 4/1 to 6/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. (2M) - Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

SHPO SIGNATURE: [Signature] DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 80 m: Narrow 0 m: V.Light 116 m: No Oil 249 m
Subsurface Oil Observed: Yes X No__ Maximum Depth 15+ cm

RECOMMENDATIONS:
___ No Treatment Recommended ___ Snare/Absorbent Booms
X Treatment Recommended ___ Oil Snares (pom poms)
X Manual Pickup ___ Absorbs (pads, rolls, etc)
X Bioremediation ___ Spot Washing: _____ Wands
___ Tarmat: _____ Breakup ___ Beach Cleaner
___ Removal ___ Other (see comments)

COMMENTS: Bioremediate area of coat indicated on sketch map. Pick-up mousse/tar balls as shown. Work after 6/1 based on herring constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC [Signature] DATE: 4/30/90
EXXON [Signature] FOSC: [Signature]
NOAA [Signature]
USCG [Signature]
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<th>Field Shoreline Comment Sheet</th>
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<tr>
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<tr>
<td><strong>Subdivision:</strong> A 1 of 1</td>
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<tr>
<td><strong>Date:</strong> 4/1/90</td>
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<tr>
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<tr>
<td><strong>Name:</strong> David S. Thomas</td>
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<td><strong>ADEC</strong></td>
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<tr>
<td><strong>Name:</strong> Clara S. Crosby</td>
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<td><strong>Land Manager</strong></td>
</tr>
<tr>
<td><strong>Name:</strong> Marsha Martin</td>
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<td><strong>DNR Signature:</strong></td>
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<thead>
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</thead>
<tbody>
<tr>
<td>No Treatment Recommended</td>
<td>Treatment Suggested</td>
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</table>

Mechanical treatment of the northern end of LN 002 recommended.

TREATMENT SUGGESTED
# SHORELINE OILING SUMMARY

**CG Rick Gillie** | **USCG BM Thomas** | **SEGMENT** | **LN-02**
**Bio Dave Holmes** | **LAND REP Martha Martin** | **SUBDIVISION** | **A 1st**
**Exxon Frank Crooby** | **ADEC Cindy Crooby** | **TIME** | 4:00 to 5:30

**TEAM NO.** | 15 | **TIDE LEVEL:** | +1 to +3 | **DATE** | 4/1/90
**EST. SUBDIVISION LENGTH:** | 441 m | **UPLANDS DESCRIPTION:** | Grass | **SLOPE:** | 40% | **SLOPE:** | 20% | **WAVE EXPOSURE:** | Low
**SURVEYED FROM:** | Foot | **WORKING DIRECTION:** | S to N | **WAVE EXPOSURE:** | Med
**SURFACE SEDIMENTS:** | R 60% B 25% C 5% P 5% G 5% S | **SLOPE:** | 20% | **DEBRIS:** |
**OIL CATEGORY LENGTH:** | W 86 m M 0 m N 120 m | **NO. OF BAGS:** | 285

## SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>Film</td>
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<tr>
<td>No Oil</td>
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**PAVEMENT:** H F S N/A sq m by cm:

**PATTIES / TARBALLS:** BAGS

**NEAR SHORE SHEEN?** No

**OILED DEBRIS:** AMOUNT
- Logs
- Vegetation
- Trash
- Debris

**Photographs:**
- Roll No.: ST-13-1
- Frames: 32-33

## SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
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<td>5-15 X</td>
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**COMMENTS**
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LW02 Subdivision A Date (mo/day/yr) 4-1-90

A) Substrate type and % of segments:
   (1) Bedrock 60 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt

B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 Low 30

C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
   juveniles/adults (X), new settlement (3)

BARNACLES

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FUCUS

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Wildlife Observations/General Comments:
present in low intertidal - Enteromorpha, Pelagia, Ulva, Scytopliphon, Katherine humidus,
Epiclados, Nuxella, coralline algae, Halosaccion.
mid intertidal - Enteromorpha, coralline algae, Nuxella, Ulva, Pagurus.

Ecological Considerations:
1. Species richness of bedrock in mid and low intertidal appears...}

2. none observed
3. not observed
4. if clean-up is decided upon for this area, caution should be used to avoid disturbing the dense mussel beds in the mid-intertidal and the dense Fucus beds...
SEGMENT: LN-02
SUBDIVISION: A, 1of1
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LN-2 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
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<tr>
<th>Manual Pickup</th>
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<tbody>
<tr>
<td>Bioremediation</td>
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ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>TIME</th>
<th>Activity</th>
<th>Constraint Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2M</td>
<td>Herring Spawning</td>
<td>NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&amp;G on 5/17/90 to Exxon/Tom Kelley.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>USFWS bald eagle impact assessment conducted on 5/15/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to manual pickup and bioremediation.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS

If the bald eagle constraint is removed, other ecological considerations will apply.

TAG APPROVAL DATE 6/4/90
ADEC
EXXON
NOAA
USCG

Prepared By: [Signature]
Date 6/2/90

FOSC [Signature] DATE 6/4/90
ECOLOGY MAP
SEGMENT LN-2
SUBDIVISION A (1 of 1)

Incorporates information from USFWS bald eagle survey 5/1/74.

Seabird Colony
Eagle Nest

1 inch = 1088 feet
SHORELINE EVALUATION

SEGMENT ST/ LN-03 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. One bald eagle nest in segment.

SHPO SIGNATURE: DATE: 5/1/90

OILING CATEGORIZATION:

Wide_0 m: Medium_0 m: Narrow_10 m: V.Light_99 m: No Oil_527 m
Subsurface Oil Observed: Yes _ No_X Maximum Depth________

RECOMMENDATIONS:

_X No Treatment Recommended
_____Treatment Recommended
_____Manual Pickup
_____Bioremediation
_____Tarmat Removal

COMMENTS:

________________________________________

________________________________________

________________________________________

TAG COMMENTS:

________________________________________

________________________________________

TAG APPROVAL DATE: 4/30/90

ADEC
EXXON
NOAA
USCG

FOSC: DATE: 5-9-90
**PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS**

1A. Salmon stream mouth - drift outmigraton (5/1 to 5/15)
1B. Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpil application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

**AGENCY CONTACT PERSON:** ADF&G John Mofinson 267-2324

1C. Salmon fry nursery areas (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpil application, prior to at least July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

**AGENCY CONTACT PERSON:** ADF&G Larry Pelz 424-3214

1D. Esther Hatchery release (4/15 to 6/1)
1E. Main Bay Hatchery release (4/20 to 6/10)
1F. Sawmill Bay Hatchery release (4/15 to 6/1)
1G. Cannery Creek Hatchery release (4/21 to 6/1)
1H. Pernaite release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpil application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

**AGENCY CONTACT PERSON:** 1E ADF&G Larry Pelz 424-3214

1I. Gill net area (5/7 to 8/31)
1J. Purse seine area (7/20 to 9/30)
1K. Purse seine hook-off (7/20 to 9/30)
1L. Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inpil application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

**AGENCY CONTACT PERSON:** ADF&G James Brady 424-3212

2M. Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncilled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inpil application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

**AGENCY CONTACT PERSON:** ADF&G Evelyn Biggs 424-3235

3N, 3P. Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q. Harbor seal and sea lion molting (5/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inpil within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).

Contact ADF&G and USFWS prior to treatment for confirmation.

**AGENCY CONTACT PERSON:** US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R. Seabird colonies (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal. 300m vertical distance from colony. Contact USFWS prior to treatment.

**AGENCY CONTACT PERSON:** USFWS Jill Parker 766-3377

5S. Shorebird/waterfowl concentration (4/1 to 5/19)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

**AGENCY CONTACT PERSON:** USFWS Jill Parker 766-3377
ADF&G Tom Rothby 267-2206

5T. All Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

**AGENCY CONTACT PERSON:** USFWS Jill Parker 766-3377
ADF&G Jeff Hughes 267-2201

6U. Recreation: Tent sites (6/1 to 9/15)
6V. Anchorages (6/1 to 9/15)
6W. Forest Service cabins (6/1 to 9/15)
6X. Lodge (6/1 to 9/15)
6Y. Special use destination

**AGENCY CONTACT PERSON:** ADF&G Jeff Hughes 267-2201

7Z. Subsistence area: Salmon harvesting (5/1 to 9/30)
7H. Fish harvestng
7I. Deer harvesting (8/15 to 2/28)
7J. Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inpil which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

**AGENCY CONTACT PERSON:** ADF&G Jim Fall 267-2355
The segment was high angle rock with narrow and very light cover, coat splashes, and patches on boulders. One area (1.5 m) had saturated sediments. Oil cover penetrated to 5 cm. Another area (loc. 42) had cover (narrow) extending over a 25 m area through fissures on bedrock islet. Rainbow shell was in tidal pools. The only way to clean area would be to use hot water (spotted) but damage to healthy biota would ensue. Tidal pools surround oiled boulder/bedrock area. Eagle nest area is present. No treatment recommended due to eggs.

Minimum amount of oil found as decent, by B.C.C. Does not warrant physical or biological enhancement type treatments. Continue Natural Cleanup.
SHORELINE OILING SUMMARY

OIL

OIL / FILM COLOR

IMPACTED ZONES

C A U

SURFACE OIL

CHARACTER

ASPHALT

PAVEMENT

POOLED

COVER

COAT

STAIN

MOUSSE

PATTIES

TARBALLS

FILM

NO OIL

PAVEMENT

H F S 0 sq. m by 0 cm

PATTERNS/TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT

Did you collect

DEBRIS?

YEB NO

TYPE

NO BAGS

Photographs:

Roll No. ST-2-5

Frames 4, 5

SUBSURFACE OIL

ROCKY SHORE

PIT NO.

PIT DEPTH

SUBSURFACE OIL CHARACTER

OILED DEBRIS

LOW

OIL / FILM COLOR

IMPACTED ZONES

C A U

SURFACE - SUBSURFACE

SEDIMENTS

COMMENTS

Exposed steep rocky shore with raised wave-worn benches.

Surface oil only, 0.0 cft./psi, Hi Top in small pocket and in channels in small inlet. Oil is dark, tor, dry and slightly flaky in part.

REVIEWED J M DATE 4/29/90
**Sketch Map**

**Location 1**
- Boulder pocket
- 1/4 CT/8, 50L or B, > 10%
- Trace PO = intersected, < 1m²; @ HRTZ
- 5m x 20m x ∅ 5cm

**Location 2**
- Silt to CT/8 in rock
- Channeling only: 15m QN, 10m QF
- Total 25m long; trace RV shan in fanface
- Possible seal haulout; islet perimeter clean.

(60 V, 35N)

Oil Character Length (m): AP -- PO -- CV -- CT 95 -- ST -- MS -- PT -- TB -- FL -- NO 54.5
SHORELINE ECOLOGICAL SUMMARY

Segment STA: LA-02 Subdivision A

Date (mo/day/yr) 4/20/90

Time (24 hr) 17:00 Biologist A. Scott

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand — (6) SME —

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 35 Low 50

(C) Density, substrate preference (by number from A above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

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Wildlife Observations/General Comments:
1 sea otter
1 eagle
1 eagle nest observed 200m to east of area shown on "eco-map"
6 eagles
1 common

Ecological Considerations:
1 eagle nest (no nest or oil sheen)
estensive mussel beds on rock/boulders
multiple dense, diverse algae (on rock + boulders)
may point to small oil or wave/foam likely a possible hot-spot area (although not identified as resource 1st or 2nd hardest out)
New settlement of barnacles throughout

18
SHORELINE EVALUATION

SEGMENT ST/ LN-04     SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 2M Herring spawning (4/1 to 6/15)
- 5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles A. Sill DATE: 5/13/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 276 m: No Oil 625 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

- No Treatment Recommended
- K Treatment Recommended
- X Manual Pickup
- Bioremediation
- Tarmat Removal

Comments:


TAG APPROVAL DATE: 4/20/90
ADEC Art Weiler  Ron Adams
EXXON Andy Traylor  George Peterson
NOAA Gary Peterson  Ray Peterson
USCG

FOSC: Date: 5-8-90
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fly outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Mapson 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sewmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release sites
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMullan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Bings 424-3235

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unplied intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-pool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (5/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377
ADF&G Jeff Hughes 267-2201

6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorage (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (5/15 to 2/28)
Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-pool which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
NO TREATMENT RECOMMENDED

COMMENTS

Low angle beaches had very light splash coats on cobbles, pebbles, and boulders, in UI + SU. Segment is well exposed to weathering. The high exposure and insignificant oiling does not warrant treatment.

NO TREATMENT RECOMMENDED

COMMENTS

Oil found on splash, and small coats in protected areas primarily as small patches at a distance. No mechanical or biological enhancement warranted.

Continue natural cleaning.
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
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<tr>
<td>TARBALLS</td>
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</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
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</tr>
</tbody>
</table>

**Subsurface Oil**

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | BELOW OIL / FILM COLOR | PIT ZONE | ANA | THUMB | T | SURFACE - SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|------------------------|----------|-----|-------| |                         |
| 1       | 25             |                          | X                      |          |     |       | |                         |

**Comments:**
- Moderate - hi: exposure, thin layer of well rounded sand over worn bedrock. Low 3 beater named by deep chis.
- Surface oil on DGL tar 2/3 and ITZ - 24T.
- No subsurface oil.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST**: Subdivision A  
**Date (mo/day/yr)**: 4/30/92

**Time (24 hr) (1 AM)**  
**Biological M/A Score**

(A) **Substrate type and % of segments:**
- Bedrock: 0
- Boulder: 0
- Cobble: 50
- Pebble: 0
- Sand: 0
- Other: 50

(B) **Overall % cover of biota (% of segment):**  
- Dense: 20  
- Moderate: 15  
- Low: 65

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**  
- (upper-U; mid-M; low tidal-L)
- Juveniles/adults (X): new settlement (S)

### BARNACLES

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<thead>
<tr>
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<tbody>
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<tr>
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### MYTILUS

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### GASTROPODS

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### FUCUS

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<td>1L</td>
<td>6</td>
<td>6</td>
<td>6</td>
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<td></td>
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</tbody>
</table>

### Wildlife Observations/General Comments:
- Each past shown on eco-map at noon and -not observed (see note on segment 2N-23A)
- 1 dead star
- 1 sea star
- 1 bald eagle

### Ecological Considerations:
- Patches of dense Mytilus beds + rock + boulders
- M+L+T = rock + boulders, dense, diverse algae
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LN-4 SUBDIVISION A (1 of 1)

WORK WINDOW

| Manual Pickup More Than 400m From Active Nest | OPEN |
| Manual Pickup Less Than 400m From Active Nest | CLOSED |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 2M | Herring Spawning | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| 5T | Bald Eagle Nest | USFWS bald eagle impact assessment conducted on 5/26/90 by Mike Lockhart indicates an active eagle nest in Subdivision A. Closed to manual pickup less than 400m from active nest. No constraint to manual pickup more than 400m from active nest. |

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 6/4/90
ADEC Ray McManus
EXXON Andy Ten
NOAA Dr John Talbot
USCG Capt Robert M. Finster

Prepared by Andrew Meyery Date 6/2/90

FOSC Signatures Date 6/4/90
Incorporates information from USFWS bald eagle survey 1989.

Ecology Map
Segment LN-4
Subdivision A (1 of 1)

- Seabird Colony
- Eagle Nest

1 inch = 1211 feet
SHORELINE EVALUATION

SEGMENT ST/ LN-05  SUBDIVISION A  (1 OF 1)  DATE  4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1)
Active bald eagle nests (3/1 to 9/1)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid unnecessary disturbance or damage to unoiled biota and substrate. See attached Ecological Constraint Sheet.

SHPO SIGNATURE: [Signature]  DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 105 m: Medium 22 m: Narrow 39 m: V.Light 46 m: No Oil 786 m
Subsurface Oil Observed: Yes X  No  Maximum Depth 10 cm

RECOMMENDATIONS:
_____No Treatment Recommended  _____Snare/Absorbent Booms
X  Treatment Recommended  _____Oil Snares (pom poms)
X  Manual Pickup  _____Absorbents (pads, rolls, etc)
X  Bioremediation  _____Spot Washing: Wands
_____Tarmat: Breakup  _____Beach Cleaner
_____Removal  _____Other (see comments)

COMMENTS: Recommend manual removal of mousse and bioremediation of areas shown on attached sketch map. Activities should be conducted after 6/15 per above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN RAUER  DATE: 4/22/90
EXXON  DATE: 4/22/90
NOAA  DATE: 4/22/90
USCG  DATE: 4/22/90
PWS ECOLOGICAL CONSTRAINTS

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C  Salmon fry nursery area (4/31 to 7/31)
1D  Estuary Hatchery release (4/15 to 6/1)
1E  Main Bay Hatchery release (4/20 to 5/10)
1F  Sawmill Bay Hatchery release (4/20 to 5/10)
1G  Cannery Creek Hatchery release (4/21 to 6/1)
1H  Remote release site
1I  Gill net area (6/7 to 8/31)
1J  Purse seine area (7/21 to 9/30)
1K  Purse seine hook-off (7/20 to 9/30)
1L  Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M  Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncured intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P  Harbor seal and sea lion pupping  (5/15 to 7/1)
3O, 3Q  Harbor seal and sea lion marking (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R  Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from treatment.

5S  Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T  All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U  Recreation: Tent sites (5/1 to 9/15)
6V  Anchorages (6/1 to 9/15)
6W  Forest Service cabins (6/1 to 9/15)
6X  Lodge (6/1 to 9/15)
6Y  Special use destination

7Z  Subsistence area: Salmon harvesting (5/1 to 9/30)
7H  Finfish harvesting
7I  Deer harvesting (8/15 to 2/20)
7JJ  Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-05 SUBDIVISION: A, lot 1 DATE 4/1/90

USCG NAME: David S. Thomas SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

ADEC NAME: Clara S. Crosby SIGNATURE: Clara S. Crosby

Strongly suggest treatment of Site #3 - (sketch)

Oiling - heavy - Mousse pooled in spots to 7.5 cm -

Oil is mobile - in that brown sheens were noted

in runoff. Intensive mechanical treatment re-

commended. Suggested treatment for Site #1 (possible wash/flush) - mechanical

LAND MANAGER NAME: MARSHA MARTIN/DNR SIGNATURE: MARSHA MARTIN

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

REVISION NO. 03/21/90
**SHORELINE OILING SUMMARY**

**SHORELINES OIL EMBRACE SUMMARY**

**OIL**: Rick Gillie, USCG 6M 1 Thomas

**LAND REP.**: Tharsha Martin

**SEGMENT ST:** A - 1

**TIME** 16:00 to 16:45

**DATE** 2/4/90

**TIDE LEVEL**: 48.6 + 4.8

**WORKING DIRECTION**: N to S

**SURFACE SEDIMENTS**: R 30% B 30% C 30% P 5% G 5% S 0% M 8% V 0%

**SLOPE**: Lang 10% Hang 40% Vert 50%

**WAVE EXPOSURE**: Low Med High

**OIL CATEGORY LENGTH**: W 180 m M 60 m N 50 m V 20 m NO 928 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>Asphalt Paving</td>
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<td>Pool</td>
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</tr>
<tr>
<td>Coat</td>
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</tr>
<tr>
<td>Stain</td>
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<tr>
<td>Mousse</td>
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<tr>
<td>Patties</td>
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<tr>
<td>Tarballs</td>
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<tr>
<td>Film</td>
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</tr>
<tr>
<td>No Oil</td>
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</tbody>
</table>

**PAVEMENT**: H F S N/A sq. m by cm

**PATTIES / TARBALLS**: N/A

**BAGS**:

**NEAR SHORE SHEEN?** (Yes/No)

**BR** RW SL TL

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>C</td>
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</table>

### COMMENTS

**GENERAL**: OILING - 2 AREAS OF WIDE AND NARROW OIL

**GEOLOGICAL** - NARROW COBBLE AND BOULDER BEACHES ON PREDOMINANTLY ROCK CLIFF COAST

**REVIEWED** 4-4-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / LN 005 Subdivision: A | Date (mo / day / yr): 4-1-90

(A) Substrate type and % of segments:

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<thead>
<tr>
<th></th>
<th>Bedrock</th>
<th>Boulder</th>
<th>Cobble</th>
<th>Pebble</th>
<th>Sand</th>
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<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>(B) Overall % cover of biota (% of segment):</td>
<td>Dense</td>
<td>Moderate</td>
<td>Sparse</td>
<td>Rare</td>
<td></td>
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(B) Density, substrate preference (by number from A above), & vertical zonation of major taxa:

- **Barnacles**
  - Dense
  - Moderate
  - Sparse
  - Rare
  - NOT PRESENT

- **Mytilus**
  - Dense
  - Moderate
  - Sparse
  - Rare
  - NOT PRESENT

- **Gastropods**
  - Dense
  - Moderate
  - Sparse
  - Rare
  - NOT PRESENT

- **Fucus**
  - Dense
  - Moderate
  - Sparse
  - Rare
  - NOT PRESENT

Wildlife Observations/General Comments:

- Present in low intertidal: Enteromorpha, Scytosiphon, Ecklonia, Ulva,
  - mid intertidal: Porphyra, Endocladiella, coralline algae, Ceramium, Nucella
  - high intertidal: Porphyra, Enteromorpha

- Killdeer (Common terns) rarely observed in area

Ecological Considerations:

- 3. Small reeds offshore site. 2 had seals on them

- Not observed

- 5T - none observed
1. CT/P, 5x10m, NO oil to North

2. 300 m long cobble beach, AT North End's
   - CT/C, boulders, 10x130w
   - CT/P, cobbles, 10x30w

3. CT/S, cobble beach, 10m

No oil observed

LEGEND

- Pt - No Substrate Oil
- C - Substrate Oil
- C - Continuous Distribution
- C - Broken Distribution
- CT/P - Patches
- C - Splashed Distribution
- C - Chalk Vegetation

Checklist

- Jn Arrow
- Approx. Scale
- Seg/Sub Bndry
- Off Glut.
- Width
- % Cover
- Substrate Checklist
- Sw/IIW/ML/W
- Ssl
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)
Incorporates information from USFWS bald eagle survey 5/24/90

Ecology Map
Segment LN-5
Subdivision A (1 of 1)

Meters
0 362 723
1 inch = 1187 feet

Exxon Company, USA
Map Key: PMS-LN-5
May 11, 1990

Exxon

- Seabird Colony
- Eagle Nest
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
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<th>Time</th>
<th>Activity</th>
<th>Constraints</th>
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<tr>
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<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates no active nests within 400m of the work area.</td>
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</table>

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unolled biota and substrate.
SHORELINE EVALUATION

SEGMENT ST/ LN-06 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ____________________________ DATE: 6/3/90

OILING CATEGORIZATION:
Wide 74 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 161 m
Subsurface Oil Observed: Yes__X__ No____ Maximum Depth 35+cm

RECOMMENDATIONS:
____ No Treatment Recommended __X__ Treatment Recommended
__X__ Manual Pickup __X__ Bioremediation
__X__ Tarmat Removal

Snare/Absorbent Booms Oil Snakes (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands Beach Cleaner
Spot Washing: Wands
Other (see comments)

COMMENTS: Recommended treatment includes 1) tarmat removal, 2) manual pickup of tarballs, and 3) bioremediation of areas shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: Spot Wash Covers Prior To Bio

TAG APPROVAL DATE: 5/3/90
ADEC Art Weiner DATE: 5/3/90
EXXON __X__ Bioremediation
NOAA __X__ Bioremediation
USCG Kenneth R. ___ __
FOSC: ___ 5/3/90
PWS, SEWARD AND HOMER ECOCLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Estuary Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Seawall Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q Harbor seal and sea lion mating (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 600m. Aircraft to maintain 500m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 6/30)
7H-H Finfish harvesting
7H-1 Deer harvesting (8/15 to 2/28)
7J Invertebrate harvesting
For Codes 7Z through 7JU contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: LN-06  SUBDIVISION: A  DATE: 4/20/90

USCG
NAME: M.J. Sharpe  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME: Stephen Ferguson  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

WIDE AREA SHOWN ON SKETCH MAP

N-SIDE OF BEACH AREA

☐  MANUAL REMOVAL OF PAVEMENT (10.5(2) x 2 m(2)) DEPTH 0.5 cm

☐  MANUAL REMOVAL OF POOLED OIL SEE NEAR TEST PIT #8

☐  HOT WASH AFTER STEPS 1 & 2 ARE COMPLETED OF N-SIDE OF LARGE BEACH

HAD ALSO POOLED BEACH JUST NORTH (ON SKETCH MAP) MOST OILING IS IN N17

+ UPPER N17

☐  AFTER STEPS 1 & 2? BIO ??

LAND MANAGER
NAME: Leigh Carlson  SIGNATURE: [Signature]  ADV

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

No ecological considerations listed for the segment. Did observe seals
hauled out on the rocks offshore of the segment. Historic 1930's
fox pen located in uplands adjacent to oiled area. Recommend treatment
as suggested by ADEC above.
**SHORELINE OILING SUMMARY**

**SEGMENT ST/ LN - 06**

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<tr>
<th>TEAM NO.</th>
<th>1</th>
<th>TIDE LEVEL</th>
<th>4' to 8.5'</th>
<th>DATE</th>
<th>4/20/90</th>
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**EST. SUBDIVISION LENGTH:** 255 m

**UPLANDS DESCRIPTION:**
- [ ] Foot
- [ ] Boat
- [ ] Helo
- [ ] Working Direction: 5 to 17

**SURFACE SEDIMENTS:**
- [ ] % A
- [ ] % B
- [ ] % C
- [ ] % D
- [ ] % E
- [ ] % F
- [ ] % G
- [ ] % H

**SLOPE:**
- [ ] % Lang
- [ ] % Hang
- [ ] % Ver

**WAVE EXPOSURE:**
- [ ] Low
- [ ] Med
- [ ] High

**OIL CATEGORY LENGTH:**
- [ ] W 82 m
- [ ] M 0 m
- [ ] N 0 m
- [ ] VL 0 m
- [ ] NO 1/3 m

**SURFACE OIL**

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<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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**PAVEMENT H @ 10.5 sq. m by 2.5 cm**

**PATTIES/TARBALLS**

**NEAR SHORE SHEEN?**
- [ ] BR RW SL TL

**OILED DEBRIS**
- [ ] AMOUNT
  - [ ] SM
  - [ ] MD
  - [ ] LG

**DID YOU COLLECT DEBRIS?**
- [ ] YES
- [ ] NO

**TYPE**
- [ ] 0

**Photographs:**
- Roll No.: ST - 4 - 3
- Frames: 1

**SUBSURFACE OIL**

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<th>PIT NO.</th>
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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED DEBRIS</th>
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**COMMENTS**

This area is a low angle cobble + boulder beach which ends into bedrock on the north side. Then a high angle boulder cove.

Here were areas of oiling described as 1) cobble beach, 2) boulder beach, + 3) cove. 1) cobble beach - The surface cobbles contained an oil stain; the cracks within the cobble, otherwise appeared clean on surface.

Subsurface oil was in an area = 25 m long x 12 m wide.

Reviewed: 4/23/90
**Cobble Beach Comments**

This Subsurface oil was a lens of dark brown color. Boulder beach (shown on diagram) had pooled mousse trapped behind boulders grading into asphalt pavement. There was a continuous cover just below the top pebbles which covered the length of the awl (45m long). The largest pool mousse was 32cm long x 30 cm wide x 2.5-7.5 cm deep. There was also patchy coat + stain which was thick enough to be a cover on the tops + sides of large boulders from upper intertidal zone down to mid tidal zone 3) boulder cove head a coat + stain band which was continuous throughout. + Patchy in mid tidal zone. This area covered an area x 35 long x 10m wide. Small patchy areas of pooled mousse trapped

---

**SHORELINE OILING SUMMARY (PAGE 2)**

**SEGMENT ST/LN-6 SUBDIVISION A (L, OFF)**

**SUBSURFACE OIL (CONTINUED)**

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**REVIEWED** J W DATE 4/23/02
SHORELINE ECOLOGICAL SUMMARY

Segment ST: LN-6 Subdivision: A Date (mo/day/yr): 4-20-90
Time (24 hr): 18:45 Biologist: Punn

(A) Substrate type and % of segments:
(1) Bedrock (5) Boulder (3) Cobble (2) Pebble (4) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 15 Low 60

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

Photographs:
Roll No. __________________ Frames __________________

BARNACLES

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Wildlife Observations/General Comments:

Ecological Considerations:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LN-6 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
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<tr>
<th>Manual Pickup</th>
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<table>
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<th>Bioremediation</th>
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<tr>
<td>Spot Washing</td>
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ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS bald eagle impact assessments completed on 5/15/90 and 5/26/90 by Mike Lockhart indicate no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unolied biota and substrate.

TAG APPROVAL DATE 6/24/90
ADEC Ray Wynn's Redakt
EXXON Andy Tyack
NOAA Monika Kull
USCG Robert Stretz
FOSC Arthur Nausch DATE 6/24/90

Prepared By: Linda Nuy Date 6/2/90
ECOLOGY MAP
SEGMENT LN-6

Exxon Company, USA
Map Key: PhS-LN-6
May 11, 1990

SEABIRD COLONY
EAGLE NEST

1 inch = 1086 feet
SHORELINE EVALUATION

SEGMENT ST/ LN-07 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest in adjacent segment to North.

SHPO SIGNATURE: DATE: 5/8/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 178 m: V.Light 150 m: No Oil 1025 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended X Snare/Absorbent Booms
X Treatment Recommended Oil Snare (pom poms)
X Manual Pickup Absorbents (pads, rolls, etc)
X Bioremediation Spot Washing: Wands
X Tarmat Removal Beach Cleaner
X Other (see comments)

COMMENTS: Recommend manual pickup of oiled debris and bioremediation as indicated on sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints with the exception of Inipol application which should be conducted between 7/2 and 7/31.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90
ADEC Art Weber DATE: 5-9-90
EXXON Amy Teal
NOAA Casey Peterson
USCG C.A. Beiter C.A. Beiter
Salmon stream mouth - try outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

Esther Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 6/10)
Sawmill Bay Hatchery release (4/15 to 6/1)
Canoe Creek Hatchery release (4/21 to 6/1)
Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzamoto 424-7511

Gill net area (6/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (8/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

Harbor seal and sea lion pupping (5/15 to 7/1)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to un tidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

RRR Harbor seal and sea lion molting (5/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 600m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235
ADF&G Don Callins 267-2403

Seabird colony (5/1 to 8/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothby 267-2206

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 9/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Recreation: Tent sites (8/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (8/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/23)
Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fial 267-2356
FIELD SHORELINE COMMENT SHEET

SEGMENT # LN - 7
SUBDIVISION: A
DATE 4/20/96

SCG
NAME M. J. SHORE
SIGNATURE M.J. SHORE

☑ NO TREATMENT RECOMMENDED
☒ TREATMENT SUGGESTED

Some oiled debris was collected and some left on the shore.

ADEC
NAME STEPHEN FERGUSON
SIGNATURE STEPHEN FERGUSON

☑ NO TREATMENT RECOMMENDED
☒ TREATMENT SUGGESTED

MAP A ➔ STORM BERM ➔ BREAK UP ➔ Bô

MAP B ➔ CV/C ➔ LOCATED ON ROCK FACE OF BOULDER AND UNDER SIDE OF BOULDER, NO TREATMENT RECOMMENDED/UNABLE TO WASH DUE TO BOULDER SIZE Bô NOT PRACTICAL DUE AGAIN TO SIZE OF BOULDER (WHERE OIL IS LOCATED)

LAND MANAGER
NAME Leigh Carlson
SIGNATURE Leigh Carlson

☑ NO TREATMENT RECOMMENDED
☒ TREATMENT SUGGESTED

Ecological considerations for segment listed as herring spawning area and recreation (special use). The pocket beaches on this segment mainly consisted of large boulders which are hard to walk on or land a skiff on. Recommend storm berm with oil shown on diagram A be broken up and bioremediated.
SHORELINE OILING SUMMARY

Team No.: __

Tide Level: __ Sun __ Clouds __ Fog __ Rain __ Snow

Uplands Description: 
- Grass
- Forest
- Rock

Surveyed from: __ Foot __ Boat __ Helo

Working Direction: __ S to N __

Surface Sediments: R 35 % B 12 % C 3 % P 0 % G 0 % S 0 % M 0 % V 12 %

Slope: Lang 0 % Hang 15 % Ven 85 %

Wave Exposure: __ Low __ Med __ High

Oil Category Length: W __ m M __ m N __ m

OIL CAVERN LENGTH:

Oil Cary Length:

Surface Oil:

- Asphalt Pavement
- Pooled
- Cover
- Coat
- Stain
- Mousse
- Patties
- Tarballs
- Film
- No oil

Impacted Zones:

Oil Film Color:

- Su
- U
- M
- L

Pavement:

- H
- F
- S
- B
- m by __ cm

Patties/Tarballs: __ Bags

Near Shore Sheen? __

Oiled Debris:

- Logs
- Vegetation
- Trash
- Debris

Debris Collected:

- Yes
- No

Type Writing:

Photographs:

- Roll No.
- Frames

Subsurface Oil:

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<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil Film Color</th>
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This segment was mainly pillow basalt vertical bedrock. There were 2 coves and a small pocket beaches. Attached are illustrations of rock vertical bedrock walls clean. The 1st cove had a lobate coast + TL fill on the bottom side of cobbles + over the underlying bedrock trapped in the storm berm. The 2nd cove was a wide × 3 m wide × 10 m long – (see page 17)

JW 4/23/90
SHORELINE OILING SUMMARY (PAGE 2 of 2)
SEGMENT ST/ LN - 7 Subdivision A

**Subsurface Oil (Continued)**

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**Comments**

Patchy coat band starting from the UI/MI line. The second cove located on diagram. This cove was a cobble + boulder mix to the T2 zone with boulders up in berm area + from landslide. There was a patchy coat + stain (DBK in color) at the base of the slide on the boulders. Along the bedrock in the UI was a continuous coat x 1-2m long and goes up under the rock debris of the second landslide. A small amount of oil/splash on the rock wall itself. Otherwise clean.

Reviewed: [Signature]  Date: 4/23/90
no pits were dug due to substrate

...
SKETCH MAP

Cove #2 - LN-7

Legend:

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patches Distribution

CT/S Splashed Distribution

Oil Vegetation

Photo location, direction, and number

Oil Character Length (m): AP________PO________CV________CT________ST________MS________PT________TB________FL________NO________
### SHORELINE ECOLOGICAL SUMMARY

**Segment:** LN-7  **Subdivision:** A  **Date (mo/day/yr):** 9-20-90

**Time (24 hr):** 1640  **Biolgist:** PEN

(A) **Substrate type and % of segments:**
- Bedrock (5)
- Boulder (12)
- Cobble (3)
- Pebble (2)
- Sand (6)
- Silt (0)

(B) **Overall % cover of biota (% of segment):**
- Dense (15)
- Moderate (30)
- Low (50)

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**
- (upper-U; mid-M; low tidal-L; juveniles/adults (X), new settlement (G))

#### BARNACLES

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Wildlife Observations/General Comments:
- 7 Eagles (2 were immature) 1 Chaw 1 Otter (e.g.)
- 4 Harbor seals - 22, 23

Ecological Considerations:
- 9 for sale
Ecology Map

Resource Codes for Entire Segment

- Oiled Log which was washed up on beach. Log was ST/S in UI.

- Bald Eagle nests within 400 m. in Segment LN09 and adjacent segment LN06

Legend:

XXXX Wide
/// Medium
----- Narrow
TTTT Very Light
0000 No Oil

ADEC Segment Length: 1352 m

Map Key: PWS-469
Name: K. Ramsey
Date: 4/20/90
Date Entered: 21
SHORELINE EVALUATION

SEGMENT ST/ LN-08 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
3N,3P  Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q  Harbor seal and sea lion molting (8/15 to 9/15)
Adjacent segment LN-09 has eagle nest (5T)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: DATE: 5/3/90

OILING CATEGORIZATION:
Wide 22 m: Medium 0 m: Narrow 43 m: V.Light 0 m: No Oil 235 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+ cm

RECOMMENDATIONS:
_____ No Treatment Recommended  _____ Snare/Absorbent Booms
X Treatment Recommended  _____ Oil Snares (pom poms)
X Manual Pickup  _____ Absorbents (pads, rolls, etc)
X Bioremediation  _____ Spot Washing: X Wands
_____ Tarmat Removal  _____ Beach Cleaner
X* Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of oiled debris, 2) rake down storm berm and bioremediate as indicated on sketch map. Bioremediation should be conducted between 7/2 and 7/31 and manual pickup from 7/2 to 8/14 due to pinniped constraints.

TAG COMMENTS: RAKE DOWN STORM BERM USE SORBENTS + SPILLWALL TO REDUCE CONCENTRATION PRIOR TO 7/2

TAG APPROVAL DATE: 5/3/90
ADEC  Act. Wtrwr Antlwr  DATE: 5-8-90
EXXON  Amyy C. C.  FOSC:
NOAA  G. R. R.  DATE: 5-8-90
USCG  L. Kris C. A.
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by AD&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from AD&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to at least July 1 unless authorized by AD&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact AD&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: AD&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to July 31 unless authorized by AD&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact AD&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: AD&G Larry Peltz 424-3214

1D Esterhatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Salmon release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to at least July 1 unless authorized by AD&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact AD&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: AD&G Larry Peltz 424-3214

1I Gill net area (5/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact AD&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by AD&G. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact AD&G for consultation and authorization.

AGENCY CONTACT PERSON: AD&G Evelyn Biggs 424-3235

2M Herring spawning (4/1 to 6/15)
Contact AD&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncollected intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact AD&G for consultation and authorization.

AGENCY CONTACT PERSON: AD&G Evelyn Biggs 424-3235

2N Harbor seal and sea lion pupping (5/15 to 7/1)
2O Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-pool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact AD&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 556-7235
AD&G Don Calkins 267-2403

5R Seabird colony (5/1 to 6/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and AD&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377
AD&G Tom Rothy 267-2206

5T Bald Eagle nests (3/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (6/15 to 2/20)
7J Invertebrate harvesting

Contact AD&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-pool which might affect intertidal or nearshore oil or toxicity levels, contact AD&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: AD&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ST/N-8 SUBDIVISION: __________ DATE __________

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

 Comments:
2 pompoms were removed; the debris in storm berm was left and oil/ro vegetation also was left.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

 Comments (main beach):
CV/CT/FM-C in storm berm = rake down berm = bid

2 small beach
(CT/ST/B) →

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

 Comments:
Ecological considerations for segment listed as herring spawning area. Recommend oiled storm berm shown on sketch map be moved down the beach and bioremediated. Recommend washing than bioremediation for boulder/cobble pocket cove shown on right side of sketch map.

REVISION NO. 05/21/90
SHORELINE OILING SUMMARY

K. RAMSEY
USCG  R. STORRE SEGMENT ST/ L - B

BIO: G. F. DEO LAND REP: L. CARLSON SUBDIVISION: L 101

EXXON: D. RAEI ADEC: J. E. FERGUSON TIME: 2:55 to 4:15/90

TEAM NO.: 9 TIDE LEVEL: 3' to 1.5' DATE: 7/13/90

EST. SUBDIVISION LENGTH: 329 m

UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N

SURFACE SEDIMENTS: A 7 % B 25 % C 48 % P 20 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 80 % Hang 15 % Vent 5 % WAVES: ☐ Low ☐ Med ☐ High

OIL CATEGORY LENGTH: W 3.35 m M 2.7 m N 3.5 m V 1.21 m NO 2.94 m

SURFACE OIL

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PAVEMENT: H F S ☐ sq m by ☐ cm

PATTIES/TARBALLS ☐ ☐ BAGS

NEAR SHORE SHEEN? ☐ NO BR RW SL TL

OILED DEBRIS

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DEBRIS COLLECTED ☐ YES ☐ NO

TYPE 3cm Forms ☐ ☐ BAGS

Photograph:

a lot of trash is decomposed but not oiled

Same with logs

SUBSURFACE OIL

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This segment consisted of a cobble beach with cobble x cobble accumulation and a boulder + cobble cove separated by bedrock outcropping. The beach portion had a continuous cover of bottom rocks exposed. The cove was oiled from mist to hazy. (25m long x 15m wide) when digging pits...
SHORELINE OILING SUMMARY (PAGE 1 of 2)
SEGMENT ST/ LN - B SUBDIVISION A 191

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COMMENTS
The water filled in with residual beads of oil.
Rainbow sheen was seen in runoff.
Silver sheen in runoff in MITE.
LI appeared clean.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/LN-8, Subdivision A, Date (mo/day/yr) 4-19-90

Time (24 hr) 15:00, Biologist PEN

(A) Substrate type and % of segments:
1. Bedrock
2. Boulder
3. Cobble
4. Pebble
5. Sand
6. Silt

(B) Overall % cover of biota (% of segment):
- Dense
- Moderate
- Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: 
- barnacles: juveniles/adults, new settlement
- mytilus
- gastropods
- fucus

Wildlife Observations/General Comments:
1. Snow 1991
2. Seals

Ecological Considerations:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LN-8 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
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<tr>
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<td>Spot Washing</td>
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<td>Manual Raking</td>
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<td>Other Approved Treatment</td>
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</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley.

3N, O, P, Q Harbor Seal & Sea Lion Pupping and Molting NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

5T Bald Eagle Nest NO CONSTRAINT. USFWS bald eagle impact assessment was completed on 5/12/90 by Mike Lockhart. No active nests were found in the survey area and no restrictions apply.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unolied biota and substrate.

TAG APPROVAL DATE 6/11/90
ADEC Ray Meyer, Date 6/1/90
EXXON Away Team
NOAA Jason Tatum
USCG Gail Reimer Date 6/11/90

Prepared by Ray Meyer Date 6/3/90
Incorporates information from USFWS bald eagle survey 5/26/92.

ECOLOGY MAP
SEGMENT LN-8 5/21/90

Eagle Nest
Seabird Colony

EXxon Company, USA
Map Key: PWS-LN-8
May 11, 1990

1 inch = 1151 feet
SEGMENT ST/ LN-10  SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
3N,3P  Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q  Harbor seal and sea lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/2/90

OILING CATEGORIZATION:
Wide 13 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1003 m
Subsurface Oil Observed: Yes X  No  Maximum Depth 10+ cm

RECOMMENDATIONS:
_X  No Treatment Recommended  ___Snare/Absorbent Booms
___Treatment Recommended  ___Oil Snares (pom poms)
___Manual Pickup  ___Absorbents (pads, rolls, etc)
___Bioremediation  ___Spot Washing: Wands
___Tarmat Removal  ___Beach Cleaner
___Other (see comments)

COMMENTS: ______________________________________________________

_________________________________________________________________

_________________________________________________________________

TAG COMMENTS: ____________________________________________________

_________________________________________________________________

_________________________________________________________________

TAG APPROVAL DATE: 5/8/90
ADEC [Signature] DATE: 5-9-90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
PWS, SEAWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fly outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainages. No bio remediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morrison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to at least July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cherry Creek Hatchery release (4/15 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for a list of authorized methods.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peitz 424-3214

1I Gill net area (6/1 to 9/30)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-down (7/20 to 9/30)
1L Set net sites (6/1 to 7/23)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

1P Harbor seal and sea lion pupping (6/15 to 7/1)
1Q Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel with in 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in situ within two weeks of arrival. Contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: USFWS Steve Zimmerman 586-7735

5R Seabird colony (8/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

5S Shorebird/wader/loof concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbances to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 796-3377

6U Recreation:
6V Tents sites (6/1 to 9/15)
6W Anchorage (6/1 to 10/15)
6X Forest Service cabins (8/1 to 9/15)
6Y Lodge (6/1 to 9/15)
6Z Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7JH Deer harvesting (8/15 to 2/20)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. It plans for treatment include methods such as hot water wash or application of in situ which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2358
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-10 SUBDIVISION: 4 DATE 4/19/90

USCG NAME: MJ. SHARER
SIGNATURE:

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

1. Due to large size of boulders cu/b on south end of Pocket Cove - wash would be ineffective. Also large size of boulders would cause bid to be ineffective.

2. High energy area - recommend natural process to continue.

ADEC NAME: STEPHEN FERGUSON
SIGNATURE:

COMMENTS

Land manager
NAME: Leigh Carlson
SIGNATURE: Leigh Carlson

COMMENTS

Ecological considerations for segment listed as herring spawning area. Pocket of oil was minimal and in an area exposed to the waves at southern end of the island. Not a high recreational use area due to location and make-up of beach (boulders). Treatment not recommended.
SHORELINE OILING SUMMARY

OIL K. RAMSEY USCG R. SHARPE SEGMENT ST/ LN -10
BIO: G. BROWN LAND REP: L. CARLSON SUBDIVISION A (LOF)
EXxon: S. Reid ADEC: S. Ferguson TIME: 10/10/2:55
TEAM NO. 4 TIDE LEVEL: 4.6 ft DATE: 4/19/90
EST. SUBDIVISION LENGTH: 1059 m

UPLANDS DESCRIPTION:
- Grass
- Forest
- Rock

SURVEYED FROM:
- Foot
- Boat
- Helo

WORKING DIRECTION: N to S

SURFACE SEDIMENTS:
- R = % B/S: % C 10 % P 20 % G 30 % S 30 % M 20 % V 20 %

SLOPE:
- Lang 10 %
- Hang 40 %
- Vert 30 %
- Wave Exposure:
  - Low
  - Med
  - High

OIL CATEGORY LENGTH:
- W = 7 m
- M = 10 m
- N = 9 m
- VL = 5 m
- NO. LS m

SURFACE OIL

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<td>TARBALLS</td>
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PAVEMENT H F S D sq. m by cm

PATTIES/TARBALLS BAGS

NEAR SHORE OIL?
- NO
- BR
- RW
- SL
- TL

OILED DEBRIS AMOUNT
- SM/MD/LG
- DID YOU COLLECT DEBRIS?
- YES
- NO

TYPE
- BAGS

PHOTOGRAPHS:
- Roll No.
- Frames

SUBSURFACE OIL

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<th>OILED DEBRIS</th>
<th>OILED INTERVAL</th>
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COMMENTS

There wasn't any observed oil until the pocket at the South end of the section at the LN10/LN-9 border. Here, this oil was a broken cover with a film on rocks which was 7 m wide x 1 m long. As you went to the N, the cover continued 2 more meters. No longer present, but the film on the mud oil mixes with water when digging pits. A review of 7/18/90 revealed that the area was remedied.
### Comments

By definition the oiling would have been in the wide category, but reality is only 1 meter of coverage long x not enough to worry about.
SHORELINE ECOLOGICAL SUMMARY

Segment ST / LN-10 Subdivision A Date (mo / day / yr.) 04/20/90

Time (24 hr.) 13:20 Biologist PENN

(A) Substrate type and % of segments:
1. Bedrock 5%
2. Boulder 5%
3. Cobble 10%
4. Pebble 50%
5. Sand 30%
6. Shale 0%

(B) Overall % cover of biota (% of segment):
- Dense 5%
- Moderate 70%
- Low 20%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Upper-U; mid-M; low tidal-L;
- Juveniles / adults (X); new settlement (3)

### BARNACLES

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Wildlife Observations/ General Comments:
- 6 River Otter
- 2 Rabbits
- 14 Goldeneye
- 1 Common Murre
- 2 Eagles

Ecological Considerations:

Photographs:
- Roll No. ST-4-2
- Frames 6 thru 10

NOT PRESENT
SHORELINE EVALUATION

SEGMENT ST/ LN-12    SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 32 m: No Oil 674 m
Subs'ur'face Oil Observed: Yes __ No X Max. Depth ___

RECOMMENDATIONS:
X No Treatment Recommended ___ Snare/Absorbent Booms
___ Treatment Recommended ___ Oil Snares (pom poms)
___ Manual Pickup ___ Absorbents (pads, rolls, etc)
___ Bioremediation ___ Spot Washing: Wands
___ Tar mat Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS:


TAG COMMENTS:


TAG APPROVAL DATE: 4/20/90
ADEC Art Winter [Signature] DATE: 5/9/90
EXXON Roy Ken [Signature] FOSC: [Signature]
NOAA Gary Petree [Signature]
USCG Ken Wynn [Signature]
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100 m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)

1D Kool Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1E Remote release site

1F Gill net area

1G Purse seine area
Mainland, West side Kodiak; Shuyak & Moser/Olga Bay - 6/9 to 10/1.
East side Kodiak, East side Afognak - 7/4 to 10/1.

1H Purse seine hook-off

1I Set net sites
USFWS set/net uplands permit 5/15 to 9/15.

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

✓ 4

2A Harvesting spawning (4/15 to 6/30)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/10 to 6/30)
Restrict boat and air traffic to essential minimum. No personnel within 400 m. Aircraft to maintain 800 m horizontal and 300 m vertical distance from haulouts.

3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400 m. Aircraft to maintain 800 m horizontal and 300 m vertical distance from haulouts.

5R Seabird colony (5/1 to 8/31)
Restrict air traffic to essential minimum. No personnel within 800 m. Aircraft to maintain 800 m horizontal, 300 m vertical distance. Contact ADF&G and USFWS prior to treatment.

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

✓ 4

6U All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400 m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 500 m horizontal, 300 m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

Recreation:
6V Tent sites (8/1 to 9/15)
6W Anchorage (8/1 to 9/15)
6X Forest Service cabins (8/1 to 9/15)
6Y Lodge (8/1 to 9/15)
6Z Special use destination

7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/1 to 1/7)
7J Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
For Codes 7Z through 7K contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST: LN-012  SUBDIVISION: A  DATE: 4/20/90

CG
NAME: Scott Lamford  SIGNATURE: Scott Lamford

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

ADEC
NAME: Lori J. Stratton  SIGNATURE: Lori J. Stratton

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
Segment consisted of predominantly bedrock high and gravelly pocket beaches. (See OS maps + sheet).
Oil was very light salt splashes on cobbled and boulders (surface) and not enough to warrant treatment.
(Note pre-1989 tarballs = oil on boulders in segment).

LAND MANAGER
NAME: Leo Reeler  SIGNATURE: Leo Reeler

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
Small amount of oil found contaminated with a very old spill.
No sensitive resources present. Present scavenge attention, at this stage. Continue natural cleaning recommended.
**SHORELINE OILING SUMMARY**

**OG: G. MACDONALD**  
USCG S. BAYNEFORD  
SEGMENT ST. LN-12

**MA. JOFFITT**  
LAND REP L. KEEPER  
NP SUBDIVISION A (1 OF 1)

**XON J. BAYLE**  
ADEC L. STRATTON  
TIME: 73.15.14; 20

TEAM NO. 5  
TIDE LEVEL +5  
TO +5.5  
DATE: 4/22/90

**EST. SUBDIVISION LENGTH:** 7.10 m

**UPLANDS DESCRIPTION:**  
☐ Grass  ☐ Forest  ☐ Rock

**SURVEYED FROM:**  
☐ Foot  ☐ Boat  ☐ Helo

**WORKING DIRECTION:**  
☐ S to ☐ N

**SURFACE SEDIMENTS:**  
R 70% B 10% C 5% P 10% S 5% O 2% M 12% M 12% V 2% W

**SLOPE:**  
Lang 50% Hang 50% Van 20%

**WAVE EXPOSURE:**  
☐ Low ☐ Med ☐ High

**OIL CATEGORY LENGTH:**  
W 60 m  M 20 m  N 0 m  VL 20 m  NO 090 m

### SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PAVEMENT H F 8 0 sq. m by 0 cm**

**PATTIES/TARBALLS D BAGS**

**NEAR SHORE SHEEN? ☐ BR RW SL TL**

**OILED DEBRIS AMOUNT DID YOU COLLECT DEBRIS?**

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**TYPE ☐**

Photographs:

- Roll No. 5T-3-3
- Frames 3

### SUBSURFACE OIL

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<th>PIT NO.</th>
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**COMMENTS:**  
Steep rocky pillow basalt & breccia shore with SCP & PG  
local beaches. Surface oil on trace CT/ST @ HZ-25TZ and one  
area of pre-1989 spill dried tar. No subsurface oil.

**REVIEWED Jw DATE 4/22/90**
**SEGMENT**

**ST/L** - 12

**SUBDIVISION** A

**DATE** A 1/20 90

---

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Sub Map
- Oil Dist.
- Wave
- Length
- % Cover
- Subsea Character
- Ext. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

---

**LEGEND**

1 △ Ph - No Subsurface Oil
2 △ Ph - Subsurface Oil

**CT/C**

Continuous Distribution

**CT/B**

Broken Distribution

**CT/P**

Patchy Distribution

**CT/S**

Splashed Distribution

**Oil Vegetation**

- *Photo location, direction, and number*

---

**Profile**

- Steep rocky bluff
- Low 3, PG veneer over bedrock
- Low L, PG veneer over bedrock
- Pillow lava, breccia

---

**Sketch Map**

- Low L, PG veneer over bedrock
- BC pocket over bedrock
- LWL
- WWL
- HWL
- LWL
- HWL
- CT/S, 1/2 mx 10 m @ HITZ, 1°
- CT/S, 1/2 mx 10 m @ HITZ, 1°
- P surge gully
- 2m x 15m v. old non-'89 oil; as hard tar w/ entrained granules of deg.
- <10% core; some mass growing on this 'ancient' tar.

---

**Profile**

- Trace CT/S oil

---

Oil Character Length (m): AP — PO — CV — CT — ZO — ST — MS — PT — TB — FL — NO C 70
SHORELINE ECOLOGICAL SUMMARY

Segment ST/1 11-22  Subdivision A

Date (mo/day/yr) 4/20/78

Biol (24 hr) 1315  Biologist M.A. Scott

(A) Substrate type and % of segments:
(1) Bedrock _ 2 (2) Boulder _ 10 (3) Cobble _ 5 (4) Pebble _ 5 (5) Sand _ 10

(B) Overall % cover of biota (% of segment): Dense _ 50  Moderate _ 25  Low _ 25

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa. (upper-U; mid-M; low tidal-L)
juveniles/adults (X) new settlement (9)

Wildlife Observations/General Comments:
(20 observations at U78)
1 eagle
1 common tern
1 sea otter
2 dead eels (not named) in SP8

Ecological Considerations:
1 eagle nesting on "eco-map"-pair of eagles observed nearby
1 eagle nest as shown on "eco-map"-pair of eagles observed nearby

my = extensive, dense patches of Mytilus beds on rocks & boulders
My = dense, diverse biota (particularly algae) well established, no observed disturbance
Fucus = dense in U78; reproductive throughout, barnacle spot throughout segment; new settlement of Mytilus & litorinids common in crevices/kras

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SHORELINE EVALUATION

SEGMENT ST/ LS-48 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Seabird colony (5R) - 5/1 to 9/1; Harbor seal and sea lion pupping (3N. P) - 5/15 to 7/1 and molting (30. O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment. Complete treatment prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: [Signature] DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 244 m: Narrow 0 m: V.Light 0 m: No Oil 280 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
___ No Treatment Recommended ___ Snare/Absorbent Booms
X Treatment Recommended ___ Oil Snare (pom poms)
X Manual Pickup ___ Absorbents (pads, rolls, etc)
X Bioremediation ___ Spot Washing: Wands
___ Tarmat: Breakup ___ Removal
____ Tarmat: _____________ Beach Cleaner
___ Other (see comments)

COMMENTS: Treatment activities are recommended as follows: 1) Manual pickup of oiled debris; 2) Bioremediation of areas shown on attached sketch map. Conduct activities before 5/15 and/or between 7/1 and 8/15 or at the direction of the cognizant agencies as described above.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN DAUGHERTY DATE: 4-20-90
EXXON
NOAA FOSC:
USCG
FIELD SHORELINE COMMENT SHEET

SUBDIVISION: ___________________ DATE 4/1/90

USCG NAME: Robert Joern SIGNATURE: ___________________

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Pits dug in storm barrier area to a depth of 1 to 1.5 ft. Debris with small amount of oil contamination, then near a seal pupping haulout.

ADEC NAME: Rowan T. Hudnall SIGNATURE: ___________________

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Tar and stain in upper intertidal: trapped in devices of bedrock, sheening in tidepools.

Asphalt patch to breakup (see map)

LAND MANAGER

NAME: U.S. Forest Service SIGNATURE: ___________________

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED - John Fritz

CONTINUE NATURAL CLEAN Up

COMMENTS

Oil found in storm barrier

Minor amount of oil in cracks of rock near at breakouts

Some heavy stain on vertical surfaces in scattered locations

Question toxicity of any oil found - well weathered
### SHORELINE OILING SUMMARY

**FROM:** DON BOLLINGER 2152  
**TO:** DRAFT

**SEGMENT:** 15-48  
**TIME:** 9:56 to 10:27

---

### SURFACE OIL

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<th>IMPACTED ZONES</th>
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**PAVING:** H F S N sq. m by cm

**NEAR SHORE SHEEN?** NO BR RW SL TL

**OILED DEBRIS**: Logs, Vegetation, Trash, Debris

**AMOUNT**

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**PHOTOGRAPHS:**

- Roll No. S7-2-2
- Frames 16-19

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### SUBSURFACE OIL

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**COMMENTS**

- Oiled intervals of 0-2 in pit 1 & 0-3 in pit 2 do not constitute subsurface oil.
Little Smith Island, LS-48, April 1, 1990

Segment LS-48 makes up the southern tip of Little Smith Island located due east of Eleanor Island. The coast is exposed to a long fetch to the southwest, and its exposure makes it accessible to waves travelling from the east and southeast.

The shoreline consists mainly of steep fractured bedrock headlands alternating with very small pocket beaches of boulders and cobbles on bedrock intertidal ramps. At the western end of the segment, the headlands trend northeast and the foliation dips 80-90 deg. to the west giving the headlands a very jagged outline. To the east, the section grades into talus and cobble beaches backed by bedrock cliffs.

With the exception of the western and eastern extremities, the segment shows oiling in the form of a 10 to 15 m wide band in the upper intertidal zone. Oil covers some bedrock surfaces, and has accumulated at the base of and around coarse sediments (boulder/cobbles) and in fracture zones. In general coverage does not exceed 10 to 20% and penetration is limited to a few cm of surface sediments.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST: Subdivision: N/A Date (mo/day/yr): 04/11/90

Time (24 hr): 0900 Biologist: John Dixon

(A) Substrate type and % of segments:
   - 1) Bedrock 75
   - 2) Boulder 20
   - 3) Cobble 10
   - 4) Pebble 5
   - 5) Sand 3
   - 6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

**BARNACLES**

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**GASTROPODS**

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**FUCUS**

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Photographs:

Roll No. 3
Frames 1

Wildlife Observations/General Comments:

Gator cutouts on rocky headland, several seagulls offshore.

Ecological Considerations:
The major habitat type in this segment is bedrock outcrop. The biota on this stable substrate is dense &
diverse with clear zonation. Intermixed among these outcrops are boulder/cobble pocket beaches, which in this high energy environment are extremely dynamic.

Harbor seal can be seen plogging %100% of time.
**ADDENDUM: SUBDIVISION CONSTRAINTS**

SEGMENT LS-48 SUBDIVISION A (1 of 1)

**WORK WINDOW**

<table>
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<tr>
<th>Manual Pickup</th>
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<tbody>
<tr>
<td>Bioremediation</td>
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**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
<th>Dates</th>
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<tbody>
<tr>
<td>3N, O, P, Q</td>
<td>Harbor Seal and Sea Lion Pupping and Molting</td>
<td>Closed to manual pickup prior to 7/1 and after 8/15. Closed to bioremediation prior to 7/1 and after 7/31.</td>
</tr>
<tr>
<td>5R</td>
<td>Seabird Colony</td>
<td>Closed to manual pickup and bioremediation from 5/1 to 9/1.</td>
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</tbody>
</table>

**OTHER ECOLOGICAL CONSIDERATIONS**

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Aircraft to maintain 800m horizontal and 300m vertical distance from seabird colonies. Avoid any unnecessary disturbance or damage to unjured biota and substrate.

FOSC [Signature]  
Prepared by [Signature]  
Date 6/4/91
SHORELINE EVALUATION

SEGMENT ST/JS-49 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting (3O, 0) - 8/15 to 9/15; Tent sites (6U) - 6/1 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADFG and USFWS prior to treatment. Treatment to be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADFG and/or USFWS. Seabird colony (5R) - 5/1 to 9/1. Air approach and takeoff from and to seaward only.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

SHPO SIGNATURE: Charles B. Hooper DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 670 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
T Treatment Recommended
M Manual Pickup
B Bioremediation
T Tarmat: Breakup
R Removal

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BUAH
EXXON
NOAA
USCG
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 15 49 A  SUBDIVISION: ______________________ DATE 4-1-90

SCG
NAME: James C. Cambell  SIGNATURE: ______________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS: No oil sighted.

ADEC
NAME: Brian K. Fitzsimons  SIGNATURE: ______________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS: LS 49 located on north end of Little Smith consists of 2 @ 3 pocket beaches bordered by headlands - No oil observed in either the MITZ, MITZ or the LITZ.

LAND MANAGER
NAME: Carol S. Huber  SIGNATURE: ______________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS: No oil observed. Recommend monitoring.
SHORELINE OILING SUMMARY

OG: B. Berglund USCG J. Gamble SEGMENT ST/ 15 - 49 A
BIO: S. Schreiber LAND REP C. Hube III (VP) SUBDIVISION A (10/F)
EXXON: C. Levy ADEC T. F. Cassman TIME 10:00 to 11:00
AM NO: 1 TIDE LEVEL: 3 to 4 DATE 4/1/90
IT. SUBDIVISION LENGTH: 660 m
UPLANDS DESCRIPTION: [ ] Grass [ ] Forest [ ] Rock
SURVEYED FROM: [ ] Foot [ ] Boat [ ] Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: [ ] 40% S [ ] 35% C [ ] 15% P [ ] 10% G [ ] 0% M [ ] 0% V [ ] 0% SLOPE: [ ] 10% Hang [ ] 10% Vert [ ] 90% WAVE EXPOSURE: [ ] Low [ ] Med [ ] High
OIL CATEGORY LENGTH: W D M M D m N D m V D m NO G 660 m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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PAVEMENT: [ ] H [ ] F [ ] S [ ] sq. m by [ ] cm

PATTIES / TARBALLS: [ ] BAGS

NEAR SHORE SHEEN? [ ] No [ ] BR [ ] RW [ ] SL [ ] TL

OILED DEBRIS AMOUNT

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<tr>
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<td>LG</td>
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DEBRIS COLLECTED [ ] Yes [ ] No

Debris TYPE

[ ] Yes

[ ] No

Photographs:

Roll No. [ ]

Frames [ ]

SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | OILED INTERVAL | OILED INTERVAL (cm-FT) | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL | OILED INTERVAL |
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| 1 20    |                |                           |                |                         |                |                |                |                |                |                |                |                |                |                |                |                |                |
| 2 30    |                |                           |                |                         |                |                |                |                |                |                |                |                |                |                |                |                |                |
| 3 50    |                |                           |                |                         |                |                |                |                |                |                |                |                |                |                |                |                |                |

COMMENTS

Majority of segment consists of steep bedrock cliffs.
No oil found in pocket beaches.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/LS-49 A, Subdivision N/A

Date (mo/day/yr) 4/1/90

Biologist S. Schroeter

1. Substrate type and % of segments:
   (1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

2. Overall % cover of biota (% of segment):
   Dense 63, Moderate 15, Low 17

3. Density, substrate preference (by number from A, above), &
   vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
   juveniles/adults (X), new settlement (G)

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Wildlife Observations/General Comments:

Ecological Considerations:

Tide levels observed >1.5 low tide level not observed. Dense populations of Barnacles, Mussels & Fucus
   on bedrock in upper & mid tidal. Segment contained
debris from bedrock. Gastropods in moderate
   abundance in middle to tidal zone. Dense patches of
   Halosaccion & Fucus on boulders in mid to tidal zone.
TCH MAP

Majority of Segment consists of steep bedrock.

No Oil.

Exposed Bedrock

LEGEND

- Pit: No Subsurface Oil
- Pit: Subsurface Oil

Continuous Distribution

Broken Distribution

Patchy Distribution

Splashed Distribution

Oiled Vegetation

Distance (m):

0 100 200 300
SEGMENT ST/LS-60  SUBDIVISION A (1 OF 1)  DATE  4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints or sensitivities listed. Adjacent to harbor seal and sea lion pupping (3N, P) and molting area, and seabird colony (5R). Restrict boat and air traffic to essential minimum. Complete treatment prior to 5/15 or between 7/1 and 8/15. Contact ADF&G and USF&W prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance/damage to unoiled substrate and biota.

SHPO SIGNATURE:  DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 127 m: Narrow 361 m: V.Light 269 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 25+ cm

RECOMMENDATIONS:
_____ No Treatment Recommended
X  Treatment Recommended
_____ Snare/Absorbent Booms
_____ Oil Snares (pom poms)
_____ Manual Pickup
_____ Absorbents (pads, rolls, etc)
_____ Bioremediation
_____ Spot Washing:____ Wands
_____ Tarmat: ____ Breakup
_____ Removal
_____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Manual pickup of mousse patches and bioremediation of area shown on sketch map. Work prior to 5/15 or 7/1 to 8/15 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/1/90
ADEC  EXXON  NOAA  USCG
John Bailey  Andy Teter  Fred Clark  C. A. Halvorsen

DATE: 4/1/90
FIELD SHORELINE COMMENT SHEET

USCG
NAME: James C. Bambill SIGNATURE: James C. Bambill

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS: Pocket beaches located on South End, patchy and coating of oil on the beach.
Bio-the beach.

ADEC
NAME: Brian K. FitzSimons SIGNATURE: Brian K. FitzSimons

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS: Pocket beach located on southern end of segment, consists of patchy coated boulders, pebbles on surface overlaying pebble gravel cobble over bedrock subsurface with subsurface characteristics of oil some OR - possibly bioremediated.

LAND MANAGER
NAME: Carol S. Huber SIGNATURE: Carol S. Huber

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS: Very little sign of oil, some staining of cobbles and boulders. Recommend continued natural cleansing and monitoring.
# SHORELINE OILING SUMMARY

**From Don Bollinger 2152 to SCAT P.05**

**Revision No. 05/12/90**

## SURFACE OIL

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**PAVEMENT:** H F S — sq. m by — cm

**PATTIES/TARBALLS** — BAGS

**NEAR SHORE SHEEN?** NO BR RW SL TL

**OILED DEBRIS**

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**DEBRIS COLLECTED**

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**Photographs:**

- Roll No.: ST-1, 2
- Frames: 185

## SUBSURFACE OIL

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
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<td>C/PI/G</td>
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**COMMENTS**

Very little visible oil in southern half except in the jocket bench closest to the end of the segment. In that sector most of the oil is confined to cracks of bedrock & tops of boulders.

A continuous stain was observed in the northern half along the HWL. However, the steep vertical cliffs prevented landing.

**Reviewed** by DATE 4/7/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST - L5-60

Date (mo/day/yr) 4/1/98

Date (mo/day/yr) 4/1/98

Subdivision N/A

B. Schroeder

Biologist

SHORELINE ECOLOGICAL SUMMARY

(A) Substrate type and % of segments:
- (1) Bedrock
- (2) Boulder
- (3) Cobble
- (4) Pebble
- (5) Sand
- (6) Silt

(B) Overall % of cover of biota (% of segment):
- Dense
- Moderate
- Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Upper-U: mid-M: low tidal-L
- Juveniles/adults (X), new settlement (Q)

BARNACLES

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<tr>
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<td>2</td>
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<tr>
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<td>3</td>
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<tr>
<td>Rare</td>
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<td>4</td>
<td>5</td>
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</table>

MYTILUS

<table>
<thead>
<tr>
<th>Density</th>
<th>1U</th>
<th>1M</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
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<tbody>
<tr>
<td>Dense</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>Moderate</td>
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<td>5</td>
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</tr>
<tr>
<td>Sparse</td>
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<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>Rare</td>
<td></td>
<td></td>
<td>4</td>
<td>5</td>
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GASTROPODS

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<th>1M</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Dense</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
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<td>2</td>
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<td>4</td>
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</tr>
<tr>
<td>Sparse</td>
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<td>4</td>
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<td>4</td>
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FUCUS

<table>
<thead>
<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>Dense</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
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<td>5</td>
</tr>
<tr>
<td>Moderate</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Sparse</td>
<td></td>
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<td>4</td>
<td>5</td>
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<tr>
<td>Rare</td>
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<td></td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments: Tide Range +4.5 to +7. Low intertidal no. No larval phases or settling observed.

No sensitivity designation.

Ecological Considerations: LS-60A is a 70% Brown & Cobble pocket beach with 20% bedrock outcrops. Most of the biota is concentrated on the bedrock. On bedrock were dense patches of adult juvenile Mytilus edulis & moderate densities of adult & newly recruited Fucus. Nucella lamellosa + N. lima occurs rarely on & under boulders overlying bedrock. N. scutata + C. textilis was also found in moderate to sparse density. No...
LS 604 is predominantly composed of relatively conducive boulder and cobble pocket beaches (~78% of segment length) and densely populated bedrock which comprises ~30% of the segment. The bedrock contained dense patches of adult and juvenile Mytilus and adult and juvenile Ensis. Moderate densities of L. Softman and Notoacmea Scutum (~10-20 m⁻²) occurred under boulders overlying the bedrock. Nucella Limpia and Littorina occurred sparsely on boulder overlying bedrock. Due to time of survey, the low intertidal was not observed. Tide levels ~+1.5
XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

MAP KEY: PWS-465
Name: B. Berglund
Date: 4/1/90
Date Entered: 

XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

LS - 60

ADEC SEGMENT LENGTH: 757m
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT LS-60 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>CLOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 3N,0,P,Q | Harbor Seal & Sea Lion Pupping and Molting | Closed to manual pickup prior to 7/1 and after 8/15. Closed to bioremediation prior to 7/1 and after 7/31. |
| 5R | Seabird Colony | Closed to manual pickup and bioremediation prior to 9/1. |

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum prior to 9/1. No personnel within 800m. Aircraft to maintain 800m horizontal and 300m vertical distance from colony. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC

Prepared by

Date 6/14/90

Date 6/15/90
ECOLOGY MAP
SEGMENT LS-60

SUBDIVISION A (1 of 1)

WORK AREA

Seabird Colony

Eagle Nest

1 inch = 1177 feet
SHORELINE EVALUATION

SEGMENT ST/LS-61 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5R Seabird colony (5/1 to 9/1)

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled substrate and biota. See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

OILING CATEGORIZATION:
Wide_0_m: Medium_0_m: Narrow_416_m: V.Light_0_m: No Oil_284_m
Subsurface Oil Observed: Yes___ No__X Maximum Depth____

RECOMMENDATIONS:
X No Treatment Recommended ___ Snare/Absorbent Booms
X Treatment Recommended ___ Oil Snares (pom poms)
X Manual Pickup ___ Absorbents (pads, rolls, etc)
X Bioremediation ___ Spot Washing: ___ Wands
_____ Tarmat: ____ Breakup ___ Beach Cleaner
_____ Removal ___ Other (see comments)

COMMENTS: Recommend manual pick up of oiled vegetation and bioremediate areas shown on attached sketch map. Work should be conducted prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G or USFWS.

TAG COMMENTS:
STATE POSITION - NO TREATMENT RECOMMENDED
OIL REMAINING INSUFFICONT TO WARRANT TREATMENT TO MINIMIZE DISTURBANCE TO SEALS

TAG APPROVAL DATE: 4/14/90
ADEC ___ John Bailey ___ Oil Bureau
EXXON ___ Amy Lee ___ Oil Bureau
NOAA ___ Bud Westhoff ___ Oil Bureau
USCG ___ C.A. Reiter ___ Oil Bureau
### PWS ECOLOGICAL CONSTRAINTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>Salmon stream mouth - fry outmigration (3/1 to 5/15)</td>
</tr>
<tr>
<td>1B</td>
<td>Salmon stream mouth - spawning (7/10 to 8/31)</td>
</tr>
<tr>
<td>1C</td>
<td>Salmon fry nursery area (4/31 to 7/31)</td>
</tr>
<tr>
<td>1D</td>
<td>Esther Hatchery release (4/15 to 8/1)</td>
</tr>
<tr>
<td>1E</td>
<td>Main Bay Hatchery release (4/20 to 5/10)</td>
</tr>
<tr>
<td>1F</td>
<td>Sawmill Bay Hatchery release (4/20 to 5/10)</td>
</tr>
<tr>
<td>1G</td>
<td>Cannery Creek Hatchery release (4/21 to 6/1)</td>
</tr>
<tr>
<td>1H</td>
<td>Remote release site</td>
</tr>
<tr>
<td>1I</td>
<td>Gill net area (6/7 to 8/31)</td>
</tr>
<tr>
<td>1J</td>
<td>Purse seine area (7/21 to 9/30)</td>
</tr>
<tr>
<td>1K</td>
<td>Purse seine hook-off (7/20 to 9/30)</td>
</tr>
<tr>
<td>1L</td>
<td>Net sites (6/11 to 7/25)</td>
</tr>
</tbody>
</table>

For Codes 1C through 1L contact ADF&G for specific dates and locations.

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2M</td>
<td>Herring spawning (4/1 to 6/15)</td>
</tr>
<tr>
<td></td>
<td>Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&amp;G for specific dates and locations.</td>
</tr>
<tr>
<td>3N, 3P</td>
<td>Harbor seal and sea lion pupping (5/15 to 7/1)</td>
</tr>
<tr>
<td>3O, 3Q</td>
<td>Harbor seal and sea lion molting (6/15 to 8/15)</td>
</tr>
<tr>
<td></td>
<td>Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5R</td>
<td>Seabird colony (5/1 to 9/1)</td>
</tr>
<tr>
<td></td>
<td>Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&amp;G and USFWS prior to treatment.</td>
</tr>
<tr>
<td>5S</td>
<td>Shorebird/waterfowl concentration (4/1 to 5/15)</td>
</tr>
<tr>
<td></td>
<td>Restrict all activity to essential minimum, especially air traffic.</td>
</tr>
<tr>
<td>5T</td>
<td>All Bald Eagle nests (3/1 to 6/1)</td>
</tr>
<tr>
<td></td>
<td>Active Bald Eagle nests (3/1 to 9/1)</td>
</tr>
<tr>
<td></td>
<td>Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6U</td>
<td>Recreation: Tent sites (6/1 to 9/15)</td>
</tr>
<tr>
<td>6V</td>
<td>Anchorages (8/1 to 9/15)</td>
</tr>
<tr>
<td>6W</td>
<td>Forest Service cabins (6/1 to 9/15)</td>
</tr>
<tr>
<td>6X</td>
<td>Lodge (6/1 to 9/15)</td>
</tr>
<tr>
<td>6Y</td>
<td>Special use destination</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7Z</td>
<td>Subsistence area: Salmon harvesting (5/1 to 9/30)</td>
</tr>
<tr>
<td>7HH</td>
<td>Finfish harvesting</td>
</tr>
<tr>
<td>7II</td>
<td>Deer harvesting (8/15 to 2/25)</td>
</tr>
<tr>
<td>7JJ</td>
<td>Invertebrate harvesting</td>
</tr>
</tbody>
</table>

For Codes 7Z through 7JJ contact ADF&G and Chonega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

MENT ST: L5-C1 SUBDIVISION: ___________ DATE: 4/1/90

USCG
NAME: Robert Jensen SIGNATURE: Robert Jensen

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:
Some minor amounts of oil evidence found.

ADEC
NAME: Rowann T. Hudnall SIGNATURE: Rowann T. Hudnall

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:
Pocket of tar 15m wide on boulders. (see map)

LAND MANAGER
NAME: U.S. Forest Service SIGNATURE: Lee Kelly

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:
Oil found in stream, semi-scattered. Some sticks on vertical surfaces in pockets. Appears very well weathered.
**SHORELINE OILING SUMMARY**

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oil / Film Color</th>
<th>Impacted Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Pavement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pooled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Stain</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mousse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Film</td>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No Oil</td>
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</tr>
</tbody>
</table>

**SURFACE OIL**

- PAVEMENT: H S No sq. m by cm
- PATTIES / TARBALLS: No BAGS
- NEAR SHORE SHEEN: No BR RW SL TL

**OILED DEBRIS**

- Logs
- Vegetation
- Trash
- Debris

DEBRIS COLLECTED: Yes No

**Photographs:**
- Roll No. St-2-2
- Frames 20 - 59

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below</th>
<th>Oil / Film Color</th>
<th>Pit Zone</th>
<th>ANA</th>
<th>Subsurface Sediments</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>30</td>
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<td></td>
<td></td>
<td></td>
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<td>cb / pb</td>
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<td>50</td>
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<td>30</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>cb / pe</td>
</tr>
</tbody>
</table>

**COMMENTS**

Reviewed: [Signature] Date: 4-6
Little Smith Island, LS-61, April 1, 1990

Segment LS-61 is located on the eastern coast of Little Smith Island, due east of Eleanor Island. The shoreline is exposed to a large fetch to the east that is partially blocked by the presence of Smith Island. The exposure is large such that this segment can receive large amounts of wave energy from the north east or the south east.

The shoreline consists mostly of bedrock cliffs with a talus of large angular boulders at its southern and northern extremities, and a long cobble/boulder beach backed by bedrock cliffs in its central part.

Oiling occurs in the central part as a 1 m wide band of very patchy and discontinuous partially coated boulders and cobbles, and in the northern part, as a patch 12 m wide by 20 m long at the base of boulders with 20% oil coverage.
## SHORELINE ECOLOGICAL SUMMARY

**Segment ST**: 65-61  
**Time (24 hr)**: 1150  
**Biologist**: John Dixon

### (A) Substrate type and % of segments:
1. Bedrock  
2. Boulder  
3. Cobble  
4. Pebble  
5. Sand  
6. Silt

### (B) Overall % cover of biota (% of segment):
- Dense 15  
- Moderate 30  
- Low 55

### (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- **BARNACLES**
  - **Dense**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Moderate**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Sparse**
    - 1U: 5  
    - 1M: 6  
    - 1L: 6
  - **Rare**
    - 1U: 7  
    - 1M: 8  
    - 1L: 9

- **MYTILUS**
  - **Dense**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Moderate**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Sparse**
    - 1U: 5  
    - 1M: 6  
    - 1L: 6
  - **Rare**
    - 1U: 7  
    - 1M: 8  
    - 1L: 9

- **GASTROPODS**
  - **Dense**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Moderate**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Sparse**
    - 1U: 5  
    - 1M: 6  
    - 1L: 6
  - **Rare**
    - 1U: 7  
    - 1M: 8  
    - 1L: 9

- **FUCUS**
  - **Dense**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Moderate**
    - 1U: 2  
    - 1M: 3  
    - 1L: 4
  - **Sparse**
    - 1U: 5  
    - 1M: 6  
    - 1L: 6
  - **Rare**
    - 1U: 7  
    - 1M: 8  
    - 1L: 9

### Wildlife Observations/ General Comments:
This segment has several sectors of boulder/cobble bed which are heavily scoured & relatively depauperate. In areas of rock outcrops, very large ecological considerations: boulders. This is moderate to dense cover of algae in lower zones (Fucus, Fucaria, Halimeda spp, etc). Exposure to wave action favors Fucus in middle to upper areas.

**NOT PRESENT**

**NOT PRESENT**

**NOT PRESENT**

**NOT PRESENT**

**NOT PRESENT**